SHALLOW AND DEEP SOIL GAS INVESTIGATION REPORT
Broadway South Landfill – March 2015

Broadway Pantano Water Quality Assurance Revolving Fund Site
Tucson, Arizona

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June 8, 2017

Project No. 14-2016-2026
ADEQ Task Order ADEQ14-077536:33

Registered Professional Engineer (Civil)
CERTIFICATE NO.
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Date Signed 06/08/2017
ARIZONA, U.S.A.
Expires 09/30/18

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1.0 INTRODUCTION

This Shallow and Deep Soil Gas Investigation Report presents the results of an active soil gas investigation conducted at the Broadway South Landfill (BSL) which is part of the Broadway Pantano Water Quality Assurance Revolving Fund (WQARF) Site (Site). The soil vapor assessment was conducted to evaluate risks associated with vapor intrusion to adjacent properties and potential impacts to groundwater from vapors in the deep vadose zone. This work was completed as part of the Data Gap Evaluation for the Feasibility Study for the Landfill Operable Unit (LOU) investigation. The contents of this document are based on current knowledge of the Site, previous soil gas investigation of deep soil vapor concentrations at the Site, and anticipated field conditions.

2.0 BACKGROUND

Based on the results of Broadway North Landfill (BNL) investigations in 2000 that detected tetrachloroethene (PCE), trichloroethene (TCE), and other contaminants in vadose zone soil gas, the City of Tucson installed a soil vapor extraction (SVE)/air injection system as an Early Response Action to remove volatile organic compounds (VOCs) from the vadose zone. This system operated until 2002, at which time performance monitoring data indicated that continued running of the system was no longer warranted. Six rebound tests have been conducted at the BNL since system shutdown, including one conducted in November 2013 that did not show evidence of rebounding VOC concentrations in the vadose zone. Therefore no additional soil vapor sampling was conducted at BNL during this event.

Prior to the active soil gas sampling events documented in this report, only three rounds of deep soil gas monitoring had been conducted at BSL. Based on soil vapor assessments conducted during the LOU Remedial Investigation (Clear Creek Associates, 2013), there were no unacceptable health risks associated with the concentrations of VOCs in shallow soil gas underlying the BNL or BSL. Furthermore, deep soil gas sampling did not suggest exceedances of Soil Remediation Levels or Groundwater Protection Levels at depth. However, at the BSL, VOC concentrations in soil gas increased in a majority of the nested soil gas probes (i.e., BSDP-1, BSDP-2, BSDP-3, BSDP-4, BP-22 and BP-23) between 2006 and 2013 (**Figure 1**). Groundwater VOC concentrations have also increased at BP-23 since 2009, suggesting that as the groundwater table rises, VOCs in the vadose zone adversely affect groundwater quality. This report documents a fourth round of deep soil gas sampling conducted in the deep vapor probes at BSL in March 2015.

Prior to the sampling events documented in this report, only one round of BSL shallow soil vapor sampling had been conducted. A second round of shallow soil vapor sampling of existing BSL methane probes was performed in March 2015 to satisfy United States Environmental Protection Agency (USEPA) shallow soil gas guidance and determine if Johnson & Ettinger (J&E) model risk analysis is required.

3.0 SAMPLING PROCEDURES

Amec Foster Wheeler Environment & Infrastructure, Inc. (Amec Foster Wheeler) coordinated site access with the Arizona Department of Environmental Quality (ADEQ) and property managers to

limit downtime due to lack of access. Procedures followed for the investigation are detailed in Appendix A of the *Remedial Investigation Work Plan, Broadway Pantano WQARF Site* prepared by Clear Creek Associates on February 1, 2013 and *Technical Memorandum for Proposed Active Soil Gas Investigation Activities, Broadway Pantano WQARF Site, Tucson Arizona* prepared by Amec Foster Wheeler on March 2, 2015. Sampling procedures also followed procedures outlined in the ADEQ Soil Vapor Sampling Guidance, revised May 19, 2011. All appropriate quality assurance & quality control protocol (QA/QC) for proper sealing of the probes, equipment use and operations including necessary equilibration time, vacuum reading, purge volume, flow rate, and proper sample storage and transportation were followed. To avoid cross-contamination, new tubing or tubing dedicated to the individual sample locations was used for each sample collected. A leak detection test was conducted at each soil vapor probe location using the leak check compound, 1,1-Difluoroethane (1,1-DFA), which was analyzed for in the samples and reported as a tentatively identified compound on the analytical report.

During purging, field readings were collected using a photoionization detector and landfill gas meter (GEM 2000 or equivalent). Soil vapor samples were collected in 0.5-liter Summa canisters using a five-minute flow control valve set at a flow rate of less than 200 milliliters per minute. Summa canisters were submitted under chain-of-custody to Airtech Environmental Laboratories (AEL) for analysis of VOCs using USEPA Method TO-15 (Method TO-15). The samples were analyzed using Method TO-15 (full suite) for the shallow soil gas survey and for benzene, toluene, ethylbenzene, total xylenes and select VOCs, including the LOU contaminants of concern (COCs), for the deep soil gas survey. The COCs in the LOU include PCE, TCE, cis-1,2-dichloroethene, vinyl chloride and methylene chloride. The primary COC is PCE.

4.0 RESULTS

4.1 Shallow Soil Gas Survey

Thirteen shallow methane monitoring probes (MW-5, MW-6, MW-7, MW-8, MW-9, PRUD-1, PRUD-2, PRUD-3, PRUD-4, PRUD-16, PRUD-17, PRUD-18, and PRUD-19) shown in **Figure 2** were sampled in March 2015 and analyzed for VOCs using Method TO-15 (full suite). The locations were selected due to their proximity to residential structures (i.e., Broadway Proper and Kenyon Terraces) and non-residential structures/areas (i.e., YMCA and Gollob Park). The shallow soil gas sampling event information is summarized in **Table 1** along with the landfill gas parameter readings. Methane concentrations exceeded the lower explosive limit for this compound at shallow soil gas probes MW-5 and MW-8. The soil vapor sampling forms and chain-of-custodies for the shallow soil gas survey are presented in **Appendix A**.

The results of the shallow soil gas survey are presented in **Tables 2** and **3**. Contaminants of potential concern (COPCs) are listed in the tables. The results were separated into two groups, residential (Table 2) and non-residential (Table 3), based on their proximity to residential and non-residential structures (see Figure 2).

For the residential scenario, COPCs were determined by comparing results to Residential Regional Soil Vapor Screening Levels (RRSVSLs) that were calculated by dividing USEPA resident ambient air Regional Screening Levels (RSLs) by the generic attenuation factor of 0.03

for sub-slab soil gas (USEPA, 2015)[1]. The RSLs used in this analysis corresponded to a target cancer risk of 1 x 10^{-6} and a target hazard quotient of 0.1 to evaluate the potential impact of soil/soil gas VOC contamination to receptors. The analytes detected above the RRSVSL in 2013 and 2015 are highlighted in **Table 2** and shown in **Figure 3** for Broadway Proper and **Figure 4** for Kenyon Terrace. As a result of the screening process, seven VOCs (i.e., 1,2-dichloroethane [1,2-DCA], 1,4-dichlorobenzene [1,4-DCB], benzene, chloroform, ethylbenzene, nonane, and vinyl chloride) were selected as vapor intrusion COPCs for further evaluation. The shallow vapor probe location and maximum concentration of the COPCs are as follows:

- Vinyl chloride MW-08-Dup 15.87 micrograms per cubic meter (µg/m^3)
- 1,2-DCA MW-05 19.68 µg/m^3
- 1,4-DCB MW-05 32.2 µg/m^3
- Benzene MW-05 33.0 µg/m^3
- Chloroform MW-09 16.1 µg/m^3
- Ethylbenzene MW-05 41.2 µg/m^3
- Nonane MW-08-Dup 418 µg/m^3

The highest concentration of PCE (64.4 µg/m^3) was reported in MW-08-Dup but the concentrations was below the RRSVSL of 140 µg/m^3.

To further evaluate the hazard and risk associated with the concentrations of COPCs present at the site, Amec Foster Wheeler used the USEPA's online screening level J&E model for indoor air vapor intrusion (USEPA, 2013) to assess potential hazards and risks from inhalation of volatile compounds under a residential exposure scenario. Details of the method and parameters used to calculate the potential hazards and risks are provided in **Appendix B**. Based on these results, the vapor intrusion pathway does not pose an unacceptable hazard or risk to residential receptors. **Table 1 of Appendix B** presents a summary of the results of the residential receptor risk calculations.

For the non-residential scenario, **Table 3** presents a comparison of shallow soil gas investigation results from probes monitoring non-residential areas to calculated Industrial Regional Soil Vapor Screening Levels (IRSVSLs). IRSVSLs were calculated by dividing the composite worker air RSLs by the generic attenuation factor of 0.03 for sub-slab soil gas (USEPA, 2015). The RSLs used in this analysis corresponded to a target cancer risk of 1 x 10^{-6} and a target hazard quotient of 0.1 to evaluate the potential impact of soil/soil gas VOC contamination to receptors.. None of the COPCs exceeded the IRSVSLs and no further evaluation was performed.

[1] Initial screening for vapor intrusion was performed by dividing the appropriate EPA Regional Screening Level obtained at https://www.epa.gov/risk/regional-screening-levels-rsls-generic-tables by a 0.03 attenuation factor (USEPA, 2015) and then comparing that value to the data collected from the site. Amec Foster Wheeler consulted the online RSL tables in January 2015. On the basis that more than one contaminant was screened, the target hazard quotient of 0.1 EPA RSL table was used to account for potential increased risk due to potential exposure to multiple contaminants.

4.2 Deep Soil Gas Survey

Thirty vapor probes at BSL that were previously sampled by Clear Creek Associates in 2013 were resampled in March 2015. The locations of the deep soil vapor probes are presented in Figure 1. At four sample locations (BP-22-438, BP-23-440, BSDP-1-350 and BDSP-2-350), the groundwater table had submerged the well screen and sample results are not representative of vadose zone conditions. **Table 1** presents a summary of the deep soil gas sampling event, including sample depth and landfill gas readings measured in the field. The soil vapor sampling forms for the deep soil gas survey are presented in Appendix C. As evidenced by the presence of methane and carbon dioxide with low oxygen levels at several of the deep vapor probes, subsurface conditions are characteristic of soil vapor in the vicinity of and below a landfill.

The results of the deep soil gas survey are presented in **Table 4**. PCE and its reductive dechlorination daughter products (TCE, 1,2-DCE and vinyl chloride) were reported above their respective reporting limits in multiple deep vapor probes. A summary of maximum contaminant concentrations observed during the survey with associated sample locations is as follows:

- PCE BSDP-4-50' 21,600 µg/m^3
- TCE BSDP-4-50' 4,260 µg/m3
- Vinyl chloride BSDP-2-100' 122.9 µg/m3
- 1,2-DCE BSDP-2-100' 3,870 µg/m3

Increases in PCE vapor concentrations from 2013 to 2015 were observed in the BSDP-2, BSDP-4, and WR-434A vapor probes at various depths (**Table 4**). The remainder of the reported values were similar to or lower than concentrations observed in 2013. **Figure 1** presents time series plots of PCE vapor concentrations in the deep vapor probes. To evaluate whether contaminants present in sampled soil vapor have the potential to contaminate groundwater at concentrations that exceed Arizona Aquifer Water Quality Standards (AWQSs), results were compared to soil vapor remedial action objectives (RAOs) developed to assess this scenario for soil vapor remedial activities conducted at BNL (HydroGeoChem, Inc., 2001). As shown in **Table 4**, PCE concentrations in the BSDP-4 probes exceeded the RAO of 14,000 µg/m^3. This suggests that PCE present in soil vapor in this vicinity could serve as a potential source of groundwater contamination at a concentration that exceeds the AWQS for PCE. BSDP-4 is located in the vicinity of groundwater monitoring well BP-23 where concentrations of PCE were reported at 35 µg/L in 2011, 40 µg/L in March 2015, 46.6 µg/L in March of 2016, 51.5 µg/L in August of 2016 and 66.9 µg/L in January of 2017. It is notable that BP-23 soil vapor concentrations were less than those observed at BSDP-4 which suggests that the extent of the vapor concentrations serving as a source of groundwater contamination may be limited.

On the basis that PCE concentrations increased in select deep soil vapor probes and exceeded the soil gas RAO for PCE, the site Feasibility Study evaluates additional soil vapor monitoring, deep vapor well installation(s), and SVE source remediation at BSL.

4.3 Quality Assurance/Quality Control

Appendix D presents reports of laboratory analysis for VOCs using Method TO-15 for samples collected during the shallow and deep soil vapor surveys. Soil gas sampling activities followed the QA/QC procedures presented in the work plan and ADEQ guidelines. Results of calibration samples, blank samples, laboratory control samples, surrogates, internal standards, matrix spike/matrix spike duplicate samples, and duplicates were compared to the acceptance criteria specified in the work plan to determine if data are usable to meet the investigation objectives. The findings are summarized in the data verification forms and ADEQ QA/QC soil vapor sampling check list forms presented in **Appendix E**. The leak detection compound (1,1-DFA) was not detected above its reporting limit indicating the samples were collected with no detectable leaks in sample train or vapor probe.

Due to dilution of select shallow soil vapor samples, the detection limit of 1,2-DCB and chloroform exceeded the RSSVSL for MW-08 in March 2015. This did not affect the overall vapor intrusion risk evaluation as concentrations exceeded the RSSVSL in other wells in 2013 and 2015 that were evaluated. The laboratory (AEL) was made aware of the lower reporting limits required for the indoor vapor intrusion evaluation and will attempt to achieve these in future investigations.

Three duplicates were collected and analyzed for 13 shallow soil gas samples and 30 deep soil gas samples collected by Amec Foster Wheeler during the March 2015 site wide sampling event. Maximum relative percent differences between primary and duplicate results were either less than 30 percent or the difference between primary and duplicate soil gas results were less than the reporting limit, indicating acceptable sampling and analytical precision.

5.0 REFERENCES

Amec Foster Wheeler Environment & Infrastructure, Inc., 2015. *Technical Memorandum for Proposed Active Soil Gas Investigation Activities, Broadway Pantano WQARF Site, Tucson Arizona.* March 2, 2015.

Clear Creek Associates, 2013. *Remedial Investigation Work Plan, Broadway Pantano WQARF Site* prepared by Clear Creek Associates on February 1, 2013.

HydroGeoChem, Inc., 2001. *Draft Development of Remedial Closure Criteria for City of Tucson Landfills Undergoing Vadose Zone Remediation,* prepared for City of Tucson Environmental Management, December 28, 2001.

United States Environmental Protection Agency (USEPA), 2013. EPA On-line Tools for Site Assessment Calculation. Accessed at: http://www.epa.gov/athens/learn2model/part-two/onsite/JnE_lite_forward.html

USEPA, 2015. OSWER *Technical Guidance for Assessing and Mitigating the Vapor Intrusion Pathway from Subsurface Vapor Sources to Indoor Air* prepared by U.S. Environmental Protection Agency, Office of Solid Waste and Emergency Response. June 2015.

TABLES

Table 1

March 2015 Soil Vapor Field Measurement Summary
Broadway South Landfill, Broadway Pantano Landfill Operable Unit (LOU)

Well ID	Date	Total Purge Volume	Sample Depth	CH_4	CO_2	O_2	PID
		(liters)	(ft bgs)	%	%	%	%
Shallow Soil Gas Probes							
MW-5	3/11/2015	270	10*	**5.1**	16.4	0.0	1.2
MW-6	3/10/2015	270	10*	0.2	4.4	16.1	0.5
MW-7	3/10/2015	270	10*	0.0	4.8	13.1	0.7
MW-8	3/10/2015	270	10*	**12.3**	13.6	0.4	0.6
MW-9	3/10/2015	270	10*	0.0	7.9	9.5	0.3
Prud-1	3/5/2015	54	10*	0.0	4.4	19.2	0.1
Prud-2	3/9/2015	55	10*	0.0	3.5	17.5	1.2
Prud-3	3/9/2015	55	10*	0.0	4.5	14.1	0.9
Prud-4	3/9/2015	55	9.8*	0.0	10.9	8.2	0.4
Prud-16	3/9/2015	55	15	0.0	13.8	3.2	0.7
Prud-17	3/9/2015	55	10	0.0	5.7	13.4	0.8
Prud-18	3/9/2015	55	10	0.0	5.8	13.8	0.1
Prud-19	3/9/2015	55	10	0.0	6.0	15.0	0.6
Deep Soil Gas Probes							
BP-22-200	3/11/2015	378	200	2.3	14.1	0.0	2.6
BP-22-250	3/11/2015	420	250	2.0	7.3	0.0	1.2
BP-22-300	3/11/2015	462	300	1.3	4.4	1.5	1.1
BP-22-438**	3/11/2015	5266	438	0.1	0.0	4.6	0.5
BP-23-200	3/11/2015	378	200	**9.0**	14.0	4.1	9.7
BP-23-250	3/11/2015	420	250	**11.9**	12.5	0.0	14.3
BP-23-300	3/11/2015	462	300	**13.3**	7.3	0.0	12.0
BP-23-440**	3/11/2015	5424	350	2.9	12.4	4.9	2.4
BSDP-1-100	3/6/2015	381	100	**11.1**	20.4	0.4	0.0
BSDP-1-150	3/6/2015	381	150	**7.4**	18.4	1.1	7.4
BSDP-1-200	3/6/2015	381	200	**7.8**	19.0	0.0	8.2
BSDP-1-248	3/6/2015	424.5	248	**7.7**	18.6	0.0	7.9
BSDP-1-300	3/6/2015	424.5	300	4.5	13.0	2.0	14.5
BSDP-1-350**	3/6/2015	381	350	0.2	0.0	21.0	11.9
BSDP-2-100	3/6/2015	339	100	**10.0**	19.6	0.0	6.4
BSDP-2-150	3/6/2015	381	150	**7.9**	18.9	0.0	6.9
BSDP-2-200	3/6/2015	381	200	**6.3**	17.17	0.0	6.0
BSDP-2-250	3/6/2015	424.5	250	**6.4**	13.9	0.0	6.9
BSDP-2-300	3/6/2015	424.5	300	4.0	8.4	0.0	6.3
BSDP-2-350**	3/6/2015	381	350	0.2	0.4	19.0	9.8
BSDP-3-50	3/10/2015	240	50	**7.6**	18.4	0.0	5.8
BSDP-3-100	3/10/2015	250	100	4.5	16.7	0.0	2.7
BSDP-3-150	3/10/2015	300	150	2.7	14.8	0.0	2.4
BSDP-4-48	3/10/2015	240	48	**9.1**	17.9	0.0	5.8
BSDP-4-100	3/10/2015	250	100	**8.5**	16.5	0.0	2.4
BSDP-4-150	3/10/2015	300	150	**8.9**	14.7	0.0	4.2
WR-434A-50	3/5/2015	510	50	0.0	14.6	5.7	0.0
WR-434A-150	3/5/2015	510	150	0.0	7.5	13.8	0.0
WR-434A-250	3/5/2015	510	250	0.0	0.0	20.9	0.0
WR-434A-350	3/5/2015	510	350	2.1	5.1	0.0	0.0

Notes:

Bold methane values exceed lower explosive limit of 5%

** Estimated depth*

*** Screen saturated; sample results are not representative of subsurface conditions*

CH_4 - Methane

CO_2 - Carbon Dioxide

O_2 - Oxygen

PID - Photoionization Detector

Table 2

Shallow Soil Gas Survey Results, Evaluated for Residential Use
Broadway South Landfill (BSL) - Data Collected in 2013 and 2015

Well Name	Sample Date	Trichloroethene	Tetrachloroethene	Vinyl chloride	1,2-Dichloroethane	1,4-Dichlorobenzene	Acetone	Benzene	Carbon disulfide	Chlorobenzene	Chloroform	Cyclohexane	Freon 12	Ethyl Acetate	Ethylbenzene	Hexane	Nonane	Toluene
		Contaminant Concentration (µg/m^3)																
MW-05	2/21/2013	<2.14	31	<5.11	***<8.10***	<12.0	NR	**17**	NR	<9.24	***<9.73***	NR	20	NR	10	NR	NR	<7.53
MW-05	3/11/2015	<5.37	22.51	**6.04**	**19.68**	**32.21**	<23.80	**33.05**	<12.44	10.67	<4.88	21.40	28.41	<3.60	**41.23**	<7.04	**118**	8.22
MW-06	2/21/2013	<2.14	<2.72	<1.02	<1.62	<2.40	NR	<1.28	NR	<1.85	2.2	NR	<1.98	NR	<1.73	NR	NR	1.8
MW-06	3/10/2015	<5.37	26.31	<2.56	<4.05	<6.01	<23.80	6.76	<12.44	<4.60	**8.00**	6.60	<9.90	16.13	<4.34	7.11	<10.48	<3.77
MW-07	3/4/2013	<2.14	<2.72	<1.02	<1.62	4.3	NR	**13**	NR	<1.85	**5.4**	NR	<1.98	NR	4.3	NR	NR	6
MW-07	3/10/2015	<5.37	<6.78	<2.56	<4.05	<6.01	<23.80	<3.19	72.28	<4.60	<4.88	<3.44	10.2	<3.60	<4.34	<7.04	<10.48	<3.77
MW-08	3/4/2013	<2.14	5.80	<1.02	<1.62	<2.40	NR	1.9	NR	<1.85	**18**	NR	42	NR	2.3	NR	NR	6.6
MW-08	3/10/2015	<13.43	50.17	**11.01**	***<10.13***	<15.03	<59.50	**25.84**	<31.10	<11.50	***<12.20***	36.64	<24.75	<9.00	11.07	121	**307**	15.65
MW-08-D	3/10/2015	<13.43	64.41	**15.87**	***<10.13***	<15.03	<59.50	**31.58**	<31.10	<11.50	***<12.20***	44.38	28.71	<9.00	14.54	154	**418**	17.91
MW-09	3/11/2013	<2.14	<2.72	<1.02	<1.62	5.1	NR	2.3	NR	<1.85	**26**	NR	49	NR	2.9	NR	NR	10
MW-09	3/10/2015	<5.37	19.12	<2.56	<4.05	<6.01	<23.80	<3.19	<12.44	<4.60	**16.10**	6.05	37.52	<3.60	<4.34	16.6	<10.48	7.84
PRUD-02	2/19/2013	<2.14	15	<1.02	<1.62	<2.40	NR	<1.28	NR	<1.85	2	NR	10	NR	4.3	NR	NR	11
PRUD-02	3/9/2015	<5.37	29.56	<2.56	<4.05	<6.01	<23.80	<3.19	17.42	<4.60	<4.88	<3.44	10.49	<3.60	<4.34	<7.04	<10.48	<3.77
PRUD-03	2/19/2013	<2.14	8.80	<1.02	<1.62	<2.40	NR	<1.28	NR	<1.85	**4.9**	NR	7.4	NR	2.8	NR	NR	8.7
PRUD-03	3/9/2015	<5.37	23.46	<2.56	<4.05	<6.01	<23.80	<3.19	<12.44	<4.60	<4.88	<3.44	<9.90	<3.60	<4.34	<7.04	<10.48	<3.77
PRUD-04	2/19/2013	<2.14	<2.72	<1.02	<1.62	<2.40	NR	<1.28	NR	<1.85	<1.95	NR	18	NR	4.2	NR	NR	8.7
PRUD-04	3/9/2015	<5.37	10.17	<2.56	<4.05	<6.01	<23.80	<3.19	<12.44	<4.60	<4.88	<3.44	41.48	<3.60	<4.34	<7.04	<10.48	<3.77
RRSVSL		**7.00**	**140**	**5.66**	**3.66**	**8.66**	**106,667**	**12.0**	**2,433**	**173**	**4.00**	**3,333**	**333**	**243**	**36.7**	**2,433**	**70.0**	**17,333**

Notes:

NR - data not applicable or available

µg/m^3 - microgram per cubic meter

RRSVSL - Residential Regional Soil Vapor Screening Level (calculated by dividing resident ambient air regional screening level [RSL] by a default attenuation factor of 0.03 at a cancer risk = 1E-06 and HQ=0.1) - Environmental Protection Agency RSLs were compiled in January 2015.

Bold text and yellow highlighted values exceed corresponding RRSVSLs

Bold italic text and highlighted values indicate that the contaminant was not detected but that the reporting limit was greater than two times the corresponding RRSVSL

Reference for 2013 data: Appendix C Table C2 of LOU RI Report (Cleer Creek Associates, 2015)

Table 3

Shallow Soil Gas Survey Results, Evaluated for Non-Residential Use
Broadway South Landfill (BSL) - Data Collected in 2013 and 2015

Well Name	Sample Date	Trichloroethene	Tetrachloroethene	Vinyl chloride	1,2-Dichloroethane	1,4-Dichlorobenzene	Acetone	Benzene	Carbon disulfide	Chlorobenzene	Chloroform	Cyclohexane	Freon 12	Ethyl Acetate	Ethylbenzene	Hexane	Nonane	Toluene
		Contaminant Concentration (µg/m^3)																
PRUD-01	2/19/2013	<2.14	41	<1.02	<1.62	<2.40	NR	<1.28	NR	<1.85	3.7	NR	13	NR	4.8	NR	NR	8.4
PRUD-01	3/5/2015	<5.37	21.29	<2.56	<4.05	<6.01	27.56	<3.19	<12.44	<4.60	<4.88	<3.44	<9.90	<3.60	<4.34	<7.04	<10.48	<3.77
PRUD-16	2/19/2013	<2.14	40	<1.02	<1.62	<2.40	NR	<1.28	NR	<1.85	15	NR	<1.98	NR	2.7	NR	NR	8.3
PRUD-16	3/9/2015	<5.37	110.79	<2.56	<4.05	<6.01	<23.80	<3.19	<12.44	<4.60	10.54	<3.44	<9.90	<3.60	<4.34	<7.04	<10.48	<3.77
PRUD-17	2/19/2013	<2.14	14	<1.02	<1.62	<2.40	NR	<1.28	NR	<1.06	4.7	NR	<1.98	NR	3.9	NR	NR	9.8
PRUD-17	3/9/2015	<5.37	41.09	<2.56	<4.05	<6.01	<23.80	<3.19	<12.44	<4.60	5.76	<3.44	<9.90	<3.60	<4.34	<7.04	<10.48	<3.77
PRUD-18	2/19/2013	<2.14	<2.72	<1.02	<1.62	<2.40	NR	<1.28	NR	<1.85	4.1	NR	3.4	NR	4.3	NR	NR	12
PRUD-18	3/9/2015	<5.37	10.03	<2.56	<4.05	<6.01	<23.80	<3.19	<12.44	<4.60	<4.88	<3.44	<9.90	<3.60	<4.34	<7.04	<10.48	<3.77
PRUD-19	3/10/2015	<2.14	<2.72	<1.02	<1.62	<2.40	NR	<1.28	NR	<1.85	3.1	NR	3	NR	4	NR	NR	4.9
PRUD-19	3/10/2015	<5.37	<6.78	<2.56	<4.05	<6.01	<23.80	<3.19	<12.44	<4.60	<4.88	<3.44	<9.90	<3.60	<4.34	<7.04	<10.48	<3.77
IRSVSL		**29.3**	**600**	**93.3**	**15.7**	**36.7**	**466,667**	**53.3**	**10,333**	**733**	**17.7**	**14,667**	**1,467**	**1,033**	**163**	**10,333**	**293**	**73,333**

Notes:

NR - data not applicable or available

µg/m^3 - microgram per cubic meter

IRSVSL - Industrial Regional Soil Vapor Screening Level (calculated by dividing composite worker air regional screening level [RSL] by a default attenuation factor of 0.03 at a cancer risk = 1E-06 and HQ=0.1) - Environmental Protection Agency RSLs were compiled in January 2015.

Reference for 2013 data: Appendix C Table C2 of LOU RI Report (Cleer Creek Associates, 2015)

Table 4

Deep Soil Gas Survey Results, Broadway South Landfill (BSL), March 2015

Well	Date	Sample Identification	Sample Depth	Trichloroethene	Tetrachloroethene	Vinyl Chloride	cis-1,2-Dichloroethene	Benzene	Freon (F-11)	Freon (F-12)	Ethylbenzene	o-Xylene	Toluene
				Contaminant Concentration (µg/m³)									
BP-22	3/11/2015	BP-22-200-SG-031115	200	<5.37	117.7	<2.56	<3.96	<3.19	<5.62	<9.90	<4.34	<4.34	4.98
	3/11/2015	BP-22-250-SG-031115	250	<5.37	61.97	<2.56	<3.96	<3.19	<5.62	<9.90	<4.34	<4.34	<3.77
	3/11/2015	BP-22-300-SG-031115	300	10.2	449.92	<2.56	<3.96	<3.19	<5.62	23.76	<4.34	<4.34	<3.77
	3/11/2015	BP-22-438-SG-031115*	438	26.53	122.85	<2.56	<3.96	3.25	<5.62	<9.90	<4.34	5.47	18.55
BP-23	3/11/2015	BP-23-200-SG-031115	200	<5.37	51.66	<2.56	<3.96	<3.19	<5.62	<9.90	<4.34	<4.34	9.27
	3/11/2015	BP-23-250-SG-031115	250	54.24	827.16	<6.40	<9.90	10.85	<14.05	<24.75	<10.85	<10.85	<9.43
	3/11/2015	BP-23-300-SG-031115	300	74.64	1,190.00	<6.40	<9.90	10.85	<14.05	29.45	12.37	<10.85	11.5
	3/11/2015	BP-23-440-SG-031115*	440	51.02	603.76	<6.40	12.67	<7.98	<14.05	57.67	<10.85	<10.85	15.83
BP-23-D	3/11/2015	BP-23-440-SG-031115-DUP	440	62.83	723.77	<6.40	15.64	<7.98	<14.05	64.85	<10.85	<10.85	19.42
BSDP-01	3/6/2015	BSDP-1-100-SG-030615	100	600.37	828.52	<25.60	510.05	158.22	<56.20	1,560.00	<43.40	<43.40	<37.70
	3/6/2015	BSDP-1-150-SG-030615	150	<5.37	7.86	<2.56	<3.96	<3.19	<5.62	<9.90	<4.34	<4.34	<3.77
	3/6/2015	BSDP-1-200-SG-030615	200	506.39	1,190.00	<12.80	97.81	54.55	<28.10	<49.50	<21.70	38.63	<18.85
	3/6/2015	BSDP-1-248-SG-030615	248	368.38	817.67	<12.80	53.86	28.07	<28.10	<49.50	<21.70	<21.70	<18.85
	3/6/2015	BSDP-1-300-SG-030615	300	10.95	52.75	<2.56	<3.96	<3.19	<5.62	<9.90	<4.34	<4.34	<3.77
	3/6/2015	BSDP-1-350-SG-030615*	350	42.42	258.59	<2.56	<3.96	8.55	<5.62	<9.90	<4.34	8.33	<3.77
BSDP-02	3/6/2015	BSDP-2-100-SG-030615	100	854.9	1,960.00	122.88	3,870.00	204.8	<56.20	2,020.00	<43.40	<43.40	<37.70
	3/6/2015	BSDP-2-150-SG-030615	150	1,650.00	4,439.54	52.22	1,110.00	201.61	<56.20	3,110.00	<43.40	<43.40	<37.70
	3/6/2015	BSDP-2-200-SG-030615	200	1,760.00	5,680.00	27.14	419.76	253.92	92.17	4,600.00	<43.40	<43.40	<37.70
	3/6/2015	BSDP-2-250-SG-030615	250	2,380.00	10,900.00	<64.00	<99.00	303.05	334.39	13,800.00	<108.50	<108.50	<94.25
	3/6/2015	BSDP-2-300-SG-030615	300	1,440.00	10,800.00	<64.00	<99.00	84.54	519.85	18,500.00	<108.50	<108.50	<94.25
	3/6/2015	BSDP-2-350-SG-030615*	350	32.43	391.07	12.08	7.05	<3.19	<5.62	9.6525 J	<4.34	<4.34	6.86
BSDP-02-D	3/6/2015	BSDP-2-350-SG-030615-DUP*	350	39.42	492.09	14.8	7.6	<3.19	<5.62	<9.90	<4.34	<4.34	6.94
BSDP-03	3/10/2015	BSDP-3-50-SG-031015	50	1,040.00	955.98	30.72	833.18	63.16	<56.20	1,500.00	<43.40	<43.40	<37.70
	3/10/2015	BSDP-3-100-SG-031015	100	962.3	2,440.00	28.67	870.41	43.38	<56.20	2,560.00	<43.40	<43.40	<37.70
	3/10/2015	BSDP-3-150-SG-031015	150	490.82	2,960.15	<25.60	205.92	<31.90	86.55	2,790.00	<43.40	<43.40	<37.70

Table 4

Deep Soil Gas Survey Results, Broadway South Landfill (BSL), March 2015

Well	Date	Sample Identification	Sample Depth	Trichloroethene	Tetrachloroethene	Vinyl Chloride	cis-1,2-Dichloroethene	Benzene	Freon (F-11)	Freon (F-12)	Ethylbenzene	o-Xylene	Toluene
BSDP-04	3/10/2015	BSDP-4-48-SG-031015	48	4,260.00	**21,600.00**	<128.00	2,650.00	354.09	309.1	12,600.00	<217.00	<217.00	<188.50
	3/10/2015	BSDP-4-100-SG-031015	100	3,620.00	**20,500.00**	<256.00	2,250.00	408.32	<562.00	16,100.00	<434.00	<434.00	<377.00
	3/10/2015	BSDP-4-150-SG-031015	150	3,050.16	**21,500.00**	<256.00	887.04	510.4	651.92	26,300.00	<434.00	<434.00	<377.00
WR-434A	3/5/2015	WR-434A-50-SG-030515	434	7.52	163.94	<2.56	<3.96	24.37	<5.62	110.68	<4.34	<4.34	<3.77
	3/5/2015	WR-434A-150-SG-030515	434	10.53	80	<2.56	<3.96	6.06	<5.62	14.85	4.95	5.64	4.45
	3/5/2015	WR-434A-250-SG-030515	250	68.31	484.5	<2.56	148.58	4.34	<5.62	<9.90	<4.34	<4.34	<3.77
	3/5/2015	WR-434A-350-SG-030515	350	933.31	12,300.00	<25.60	91.08	<31.90	755.33	17,600.00	<43.40	<43.40	<37.70
Remedial Action Objective (RAO)				**6,000**	**14,000**	**176,000**	**67,000**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**

Notes:

µg/m³ - micrograms per cubic meter

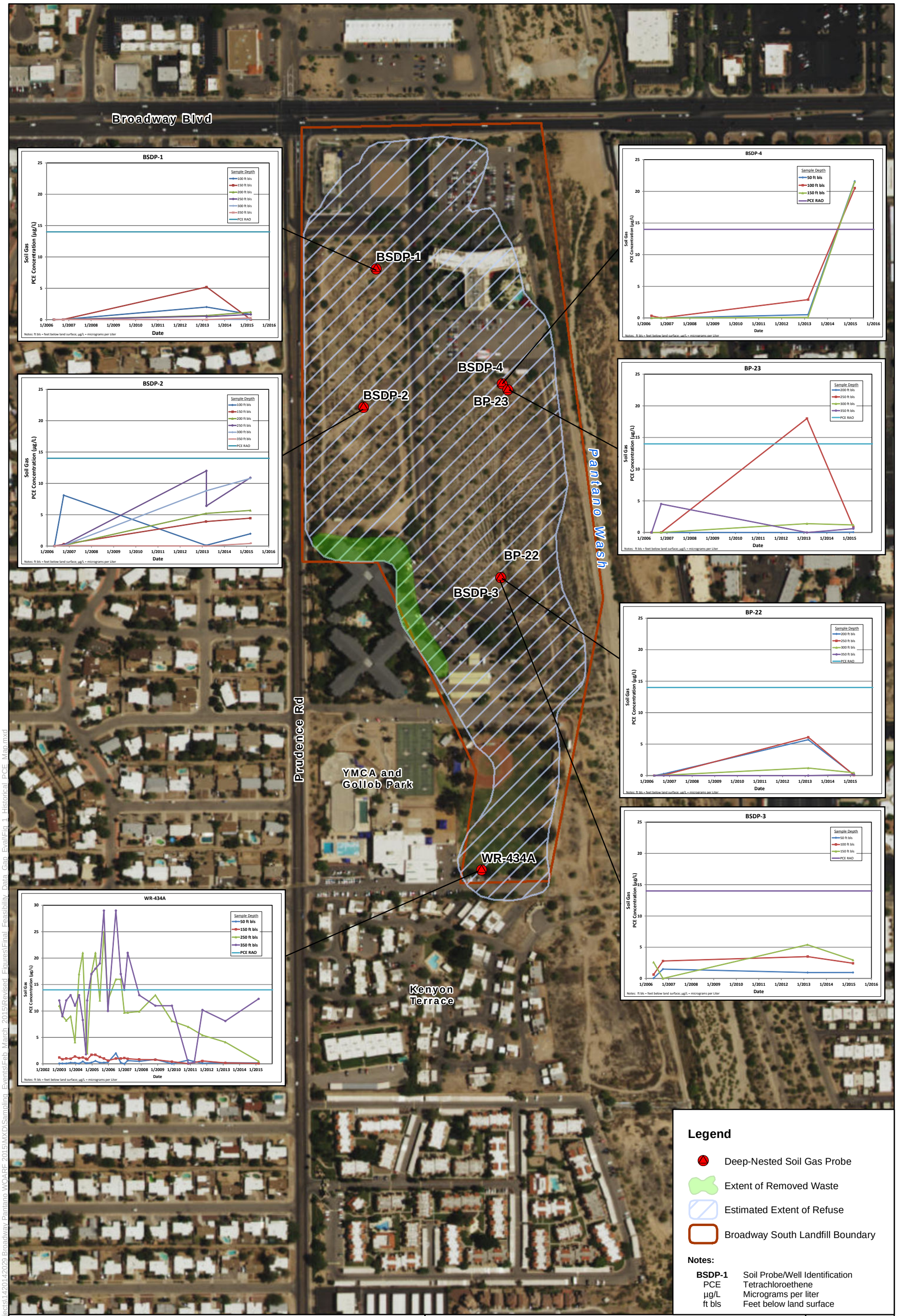
NA - not applicable

* Screen saturated; sample results are not representative of subsurface conditions

- Grey text indicates result was less than the reporting limit

- Bold values exceed the RAO calculated for VOCs in the vadose zone at Broadway North Landfill (HydroGeochem, 2001)

FIGURES



0 150 300 600 Feet

Job No.:	14-2016-2026
PM:	AY
Date:	6/6/2017
Scale:	1" =300'

N

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Final Feasibility Study Data Gap Evaluation
Broadway Pantano WQARF Site
Tucson, Arizona

Broadway South Landfill
Deep Soil Gas PCE Concentration Map

FIGURE
1

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Path: X:\Projects\2014 Projects\142014029 Broadway Pantano WQARF 2015\MXD\Sampling_Events\Feb_March_2015\Revised_Figures\Final_Feasibility_Data_Gap_Eval\Fig_1_Historical_PCE_Map.mxd

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Job No.:	14-2016-2026
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Scale:	1" =300'

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Final Feasibility Study Data Gap Evaluation
Broadway Pantano WQARF Site
Tucson, Arizona

Broadway South Landfill
Shallow Soil Gas Probe Locations

FIGURE
2

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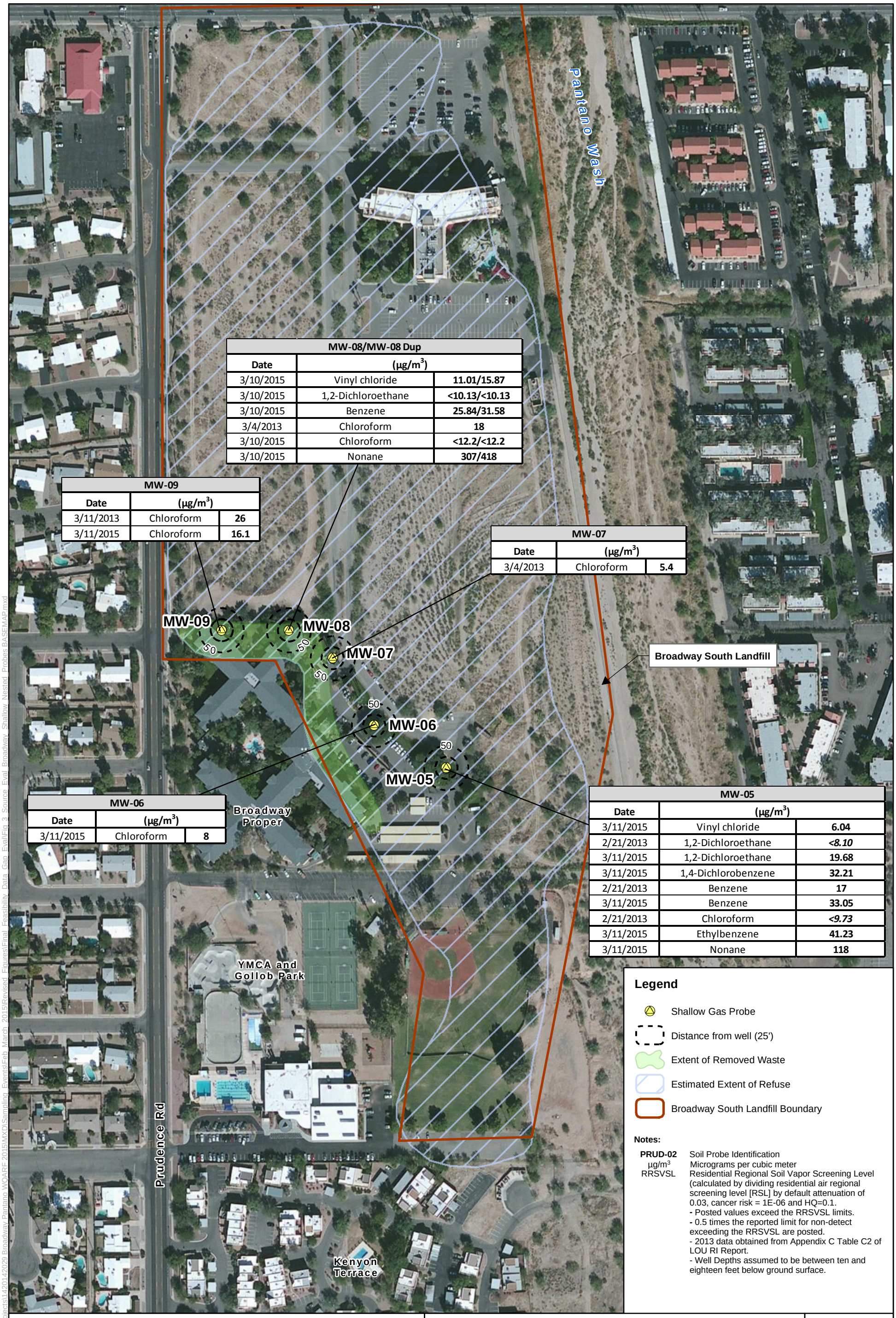
Path: X:\Projects\2014 Projects\142014\2029 Broadway Pantano WQARF 2015\MXD\Sampling_Events\Feb_March_2015\Revised_Figures\Final_Feasibility_Data_Gap_Eval\Fig_2_Shallow_Nested_Probes.mxd



MW-08/MW-08 Dup		
Date	(µg/m³)	
3/10/2015	Vinyl chloride	**11.01/15.87**
3/10/2015	1,2-Dichloroethane	**<10.13/<10.13**
3/10/2015	Benzene	**25.84/31.58**
3/4/2013	Chloroform	**18**
3/10/2015	Chloroform	**<12.2/<12.2**
3/10/2015	Nonane	**307/418**

MW-09		
Date	(µg/m³)	
3/11/2013	Chloroform	**26**
3/11/2015	Chloroform	**16.1**

MW-07		
Date	(µg/m³)	
3/4/2013	Chloroform	**5.4**

MW-06		
Date	(µg/m³)	
3/11/2015	Chloroform	**8**

MW-05		
Date	(µg/m³)	
3/11/2015	Vinyl chloride	**6.04**
2/21/2013	1,2-Dichloroethane	***<8.10***
3/11/2015	1,2-Dichloroethane	**19.68**
3/11/2015	1,4-Dichlorobenzene	**32.21**
2/21/2013	Benzene	**17**
3/11/2015	Benzene	**33.05**
2/21/2013	Chloroform	***<9.73***
3/11/2015	Ethylbenzene	**41.23**
3/11/2015	Nonane	**118**

Legend

- Shallow Gas Probe
- Distance from well (25')
- Extent of Removed Waste
- Estimated Extent of Refuse
- Broadway South Landfill Boundary

Notes:

PRUD-02 Soil Probe Identification
µg/m³ Micrograms per cubic meter
RRSVSL Residential Regional Soil Vapor Screening Level (calculated by dividing residential air regional screening level [RSL] by default attenuation of 0.03, cancer risk = 1E-06 and HQ=0.1.
- Posted values exceed the RRSVSL limits.
- 0.5 times the reported limit for non-detect exceeding the RRSVSL are posted.
- 2013 data obtained from Appendix C Table C2 of LOU RI Report.
- Well Depths assumed to be between ten and eighteen feet below ground surface.

0 100 200 400 Feet

Job No.:	14-2016-2026
PM:	AY
Date:	6/6/2017
Scale:	1" =200'

N

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Final Feasibility Study Data Gap Evaluation
Broadway Pantano WQARF Site
Tucson, Arizona

Residential Regional Soil Vapor Screening Levels in Vicinity of Broadway Proper, March 2015

FIGURE **3**

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Path: X:\Projects\2014 Projects\142014202\9 Broadway Pantano WQARF 2015\MXD\Sampling_Events\Feb_March_2015\Revised_Figures\Final_Feasibility_Data_Gap_Eval\Fig_3_Source_Eval_Broadway_Shallow_Nested_Probes_BASEMAP.mxd

	PRUD-03	
Date	(µg/m³)	
2/19/2013	Chloroform	4.9

Notes:

PRUD-02	Soil Probe Identification
µg/m³	Micrograms per cubic meter
RRSVSL	Residential Regional Soil Vapor Screening Level (calculated by dividing residential air regional screening level [RSL] by default attenuation of 0.03, cancer risk = 1E-06 and HQ=0.1.

- Posted values exceed the RRSVSL limits.
- 0.5 times the reported limit for non-detect exceeding the RRSVSL are posted.
- 2013 data obtained from Appendix C Table C2 of LOU RI Report.
- Well Depths assumed to be between ten and eighteen feet below ground surface.

0 100 200 400 Feet

Job No.:	14-2016-2026
PM:	AY
Date:	6/6/2017
Scale:	1" =200'

N

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Final Feasibility Study Data Gap Evaluation
Broadway Pantano WQARF Site
Tucson, Arizona

Residential Regional Soil Vapor Screening Levels in Vicinity of Kenyon Terrace, March 2015

FIGURE **4**

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Path: X:\Projects\14201\42029 Broadway Pantano WQARF 2015\MXD\Sampling_Events\Feb_March_2015\Revised_Figures\Final_Feasibility_Data_Gap_Eval\Fig_4_Source_Eval_Kenyon_Shallow_Nested_Probes.mxd

APPENDIX A

FIELD FORMS AND CHAIN-OF-CUSTODY FORMS, SHALLOW SOIL GAS

Soil Vapor Sampling Form – Summa Canisters

Well ID: MW-5

Site Location: B.P

Well Coordinates: –

Well Diameter: 4"

Well Depth: 20

Total Purge Volume: 270L

Date: 3·11·15

Project #: 14-2014-2029

Samplers: Eric Miller

Sample ID: MW-5-SG-031115

QA Sample ID: –

Weather: 65-75

Well Evacuation

Time	Elapsed Time (min)	Purge Rate (cf/min)	Volume Purged (cf)	Vacuum (in. water)	Landfill Gas Concentrations CH4	CO2	O2	PID
initial	–	–	–	–	0.0	0.0	20.3	0.0
1457 - 1501.5	4.5	20L	90	0	5.3	16.4	0.0	0.9
1501.5 - 1506	↓	↓	↓	0	5.1	16.4	0.0	1.2
1506 - 1510.5	↓	↓	↓	0	5.1	16.4	0.0	1.2

Sample Collection

Summa Canister Serial Number: E2371

Summa Canister Lab Number: E2371

Flow Regulator and Vacuum Gauge Serial Number: 115

Vacuum Pump Start Time: 1457

Vacuum Pump Stop Time: 1510.5

Open Summa Time: 1513

Close Summa Time: 1518

Sample Time: 1513

Pre-Fill Summa Canister Vacuum (in. Hg): –

Post-Fill Summa Canister Vacuum (in. Hg): –

Notes: Full Suite Located exactly 8' South~~west~~ east of curb corner
↳ white, 4" PVC cap

Sampler's Signature Eric Miller Date: 3·11·15

Soil Vapor Sampling Form – Summa Canisters

Well ID: MW-6

Site Location: BP

Well Coordinates: –

Well Diameter: 4"

Well Depth: 20'

Total Purge Volume: 270L

Date: 3.10.15

Project #: 14-2014-2029

Samplers: Eric Miller

Sample ID: MW-6-SG-031015

QA Sample ID: –

Weather: 65-75

Well Evacuation

Time	Elapsed Time (min)	Purge Rate (cf/min)	Volume Purged (cf)	Vacuum (in. water)	Landfill Gas Concentrations CH4	CO2	O2	PID
initial	–	–	–	–	0.0	6.4	14.9	0.3
1041 - 1045.5	4.5	20L	90	0	0.0	5.7	15.7	0.6
1045.5 - 1050	↓	↓	↓	0	0.0	4.1	16.5	0.5
1050 - 1054.5	↓	↓	↓	0	0.2	4.4	16.1	0.5

Sample Collection

Summa Canister Serial Number: E2087

Summa Canister Lab Number: E2087

Flow Regulator and Vacuum Gauge Serial Number: 106

Vacuum Pump Start Time: 1041

Vacuum Pump Stop Time: 1054.5

Open Summa Time: 1057

Close Summa Time: 1102

Sample Time: 1057

Pre-Fill Summa Canister Vacuum (in. Hg): –

Post-Fill Summa Canister Vacuum (in. Hg): –

Notes: FULL SUITE

Sampler's Signature E. Miller Date: 3.10.15

Soil Vapor Sampling Form – Summa Canisters

Well ID: MW-7

Site Location: B.P

Well Coordinates: -

Well Diameter: 4"

Well Depth: 20'

Total Purge Volume: 270 L

Date: 3·10·15

Project #: 14-2014-2029

Samplers: ERIC MILLER

Sample ID: MW-7-SG-031015

QA Sample ID: —

Weather: 65-75

Well Evacuation

Time	Elapsed Time (min)	Purge Rate (cf/min)	Volume Purged (cf)	Vacuum (in. water)	Landfill Gas Concentrations CH4	CO2	O2	PID
initial	-	-	-	-	0.0	0.0	19.9	0.0
1007 - 1011.5	4.5	20 L	90	0	0.0	3.0	15.8	0.1
1011.5 - 1016	↓	↓	↓	0	0.0	3.9	14.2	0.4
1016 - 1020.5				0	0.0	4.8	13.1	0.7

Sample Collection

Summa Canister Serial Number: E2387

Summa Canister Lab Number: E2387

Flow Regulator and Vacuum Gauge Serial Number: 070

Vacuum Pump Start Time: 1007

Vacuum Pump Stop Time: 1020.5

Open Summa Time: 1023

Close Summa Time: 1028

Sample Time: 1023

Pre-Fill Summa Canister Vacuum (in. Hg): —

Post-Fill Summa Canister Vacuum (in. Hg): -

Notes: FULL SUITE Grass area

Sampler's Signature E. Miller Date: 3·10·15

Soil Vapor Sampling Form – Summa Canisters

Well ID: MW-8

Site Location: B.P

Well Coordinates: -

Well Diameter: 4"

Well Depth: 20'

Total Purge Volume: 270 L

Date: 3.10.15

Project #: 14-2014-2029

Samplers: Eric Miller

Sample ID: MW-8-SG-031015

QA Sample ID: MW-8-SG-031015-DUP

Weather: 65-75

Well Evacuation

Time	Elapsed Time (min)	Purge Rate (cf/min)	Volume Purged (cf)	Vacuum (in. water)	* Landfill Gas Concentrations CH4	CO2	O2	PID
Initial	–	–	–	–	4.5	9.2	7.4	2.1
930 - 934.5	4.5	20 L	90	0	11.5	13.7	0.5	1.0
934.5 - 939	↓	↓	↓	0	11.9	13.6	0.5	0.8
939 - 943.5	↓	↓	↓	0	12.3	13.6	0.4	0.6

Sample Collection

	PARENT	DUPLICATE
Summa Canister Serial Number:	1881	E2350
Summa Canister Lab Number:	1881	E2350
Flow Regulator and Vacuum Gauge Serial Number:	140	126
Vacuum Pump Start Time:	930	930
Vacuum Pump Stop Time:	943.5	943.5
Open Summa Time:	945	945
Close Summa Time:	950	950
Sample Time:	945	945
Pre-Fill Summa Canister Vacuum (in. Hg):	–	–
Post-Fill Summa Canister Vacuum (in. Hg):	–	–

Notes: FULL SUITE, Gravel lot AEL equipment # SPL-5

Sampler's Signature E. Miller Date: 3.10.15

Soil Vapor Sampling Form – Summa Canisters

Well ID: MW-9

Site Location: B.P

Well Coordinates: –

Well Diameter: 4"

Well Depth: 20'

Total Purge Volume: 270 L

Date: 3.10.15

Project #: 14-2014-2029

Samplers: Eric Miller

Sample ID: MW-9-SG-031015

QA Sample ID: –

Weather: 65-75

Well Evacuation

Time	Elapsed Time (min)	Purge Rate (cf/min)	Volume Purged (cf)	Vacuum (in. water)	Landfill Gas Concentrations CH4	CO2	O2	PID
initial	–	–	–	–	0.0	0.1	19.7	0.0
900 - 904.5	4.5	20 L	90	0	0.0	4.3	14.6	0.4
904.5 - 909	↓	↓	90	0	0.0	5.9	12.3	0.3
909 - 913.5	↓	↓	90	0	0.0	7.9	9.5	0.3

Sample Collection

Summa Canister Serial Number: E2103

Summa Canister Lab Number: E2103

Flow Regulator and Vacuum Gauge Serial Number: 116

Vacuum Pump Start Time: 900

Vacuum Pump Stop Time: 913.5

Open Summa Time: 915

Close Summa Time: 920

Sample Time: 915

Pre-Fill Summa Canister Vacuum (in. Hg): –

Post-Fill Summa Canister Vacuum (in. Hg): –

Notes: Full Suite, Vacant Lot

Sampler's Signature E. Mlh Date: 3.10.15

Soil Vapor Sampling Form – Summa Canisters

Well ID: PROD-1

Site Location: YMCA/PARK

Well Coordinates: –

Well Diameter: .5

Well Depth: 18'

Total Purge Volume: 54 L

Date: 3.5.15

Project #: 14-2014-2029

Samplers: ERIC MILLER

Sample ID: PROD-1 SG-030515

QA Sample ID: –

Weather: 60-70 F

Well Evacuation AEL PUMP

Time	Elapsed Time (min)	Purge Rate (cf/min)	Volume Purged (cf)	Vacuum (in. water)	Landfill Gas Concentrations CH4	CO2	O2	PID 108min
1000 - 1036	36	.5 L	18	0	0.0	3.8	19.4	1.5 / ~~0.9~~
1036 - 1112	36	.5 L	18	0	0.0	4.1	19.2	0.2 / ~~0.1~~
1112 - 1148	36	.5 L	18	0	0.0	4.4	19.2	0.1
		~~.5~~						
		~~.5~~						
		~~.5~~						
		~~.5~~						
		~~.5~~						
		~~.5~~						

Sample Collection

Summa Canister Serial Number: EZ364

Summa Canister Lab Number: ↓

Flow Regulator and Vacuum Gauge Serial Number: 110

Vacuum Pump Start Time: 1000

Vacuum Pump Stop Time: 1148

Open Summa Time: 1150

Close Summa Time: 1155

Sample Time: 1150

Pre-Fill Summa Canister Vacuum (in. Hg): –

Post-Fill Summa Canister Vacuum (in. Hg): –

Notes: FULL LIST / GRASS

Sampler's Signature E. Miller Date: 3.5.15

Soil Vapor Sampling Form – Summa Canisters

Well ID: PRUD-2

Site Location: Yorka Packing

Well Coordinates: –

Well Diameter: .5"

Well Depth: 10

Total Purge Volume: 55 L

Date: 3.9.15

Project #: 14-2014-2029

Samplers: Eric Miller

Sample ID: RPUD-2-SG-030915

QA Sample ID: –

Weather: 65-75

Well Evacuation

Time	Elapsed Time (min)	Purge Rate (cf/min)	Volume Purged (cf)	Vacuum (in. water)	Landfill Gas Concentrations CH4	CO2	O2	PID
initial	-	-	-	-	0.0	4.2	19.1	0.4
1430 - 1434	4	5	20	0	0.0	3.8	16.0	0.9
1434 - 1438	4	↓	20	0	0.0	3.6	17.1	1.0
1438 - 1441	3		15	0	0.0	3.5	17.5	1.2

Sample Collection

Summa Canister Serial Number: E2407

Summa Canister Lab Number: E2407

Flow Regulator and Vacuum Gauge Serial Number: 082

Vacuum Pump Start Time: 1430

Vacuum Pump Stop Time: 1441

Open Summa Time: 1443

Close Summa Time: 1448

Sample Time: 1443

Pre-Fill Summa Canister Vacuum (in. Hg): –

Post-Fill Summa Canister Vacuum (in. Hg): –

Notes: FULL SUITE

Sampler's Signature E. Miller Date: 3.9.15

Soil Vapor Sampling Form – Summa Canisters

Well ID: PROD-3

Site Location: South of YMCA lot

Well Coordinates: APT #601

Well Diameter: .5

Well Depth: 10

Total Purge Volume: 55L

Date: 3.9.15

Project #: 14-2014-2029

Samplers: Eric Miller

Sample ID: PROD-3-SG-030915

QA Sample ID: –

Weather: 65-75

Well Evacuation

Time	Elapsed Time (min)	Purge Rate (cf/min)	Volume Purged (cf)	Vacuum (in. water)	Landfill Gas Concentrations CH4	CO2	O2	PID
initial	–	–	–	–	0.0	4.6	14.0	2.3
1540 - 1544	4	5	20	0	0.0	4.6	14.1	0.8
1544 - 1548	4	↓	20	0	0.0	4.6	14.1	0.9
1548 - 1551	3		15	0	0.0	4.5	14.1	0.9

Sample Collection

Summa Canister Serial Number: E2393

Summa Canister Lab Number: E2393

Flow Regulator and Vacuum Gauge Serial Number: 050

Vacuum Pump Start Time: EM ~~1340~~ 1540

Vacuum Pump Stop Time: EM ~~1351~~ ~~1355~~ 1541

Open Summa Time: EM ~~1353~~ 1553

Close Summa Time: EM ~~1358~~ 1558

Sample Time: EM ~~1353~~ 1553

Pre-Fill Summa Canister Vacuum (in. Hg): –

Post-Fill Summa Canister Vacuum (in. Hg): –

Notes: FULL SUITE

Sampler's Signature: E. Miller Date: 3.9.15

Soil Vapor Sampling Form – Summa Canisters

Well ID: PRUD-4

Site Location: South of YMCA Lot

Well Coordinates: undevelop lot in community

Well Diameter: .5

Well Depth: 10

Total Purge Volume: 55 L

Date: 3.9.15

Project #: 14-2014-2029

Samplers: Eric Miller

Sample ID: PRUD-4-SG-030915

QA Sample ID: –

Weather: 65-75

Well Evacuation

Time	Elapsed Time (min)	Purge Rate (cf/min)	Volume Purged (cf)	Vacuum (in. water)	Landfill Gas Concentrations CH4	CO2	O2	PID
Initial	–	–	–	–	0.0	11.1	8.4	0.4
1511 – 1515	4	5	20	0	0.0	11.1	8.3	0.8
1515 – 1519	4	↓	20	0	0.0	10.9	8.6	0.5
1519 – 1522	3		15	0	0.0	10.9	8.2	0.4

Sample Collection

Summa Canister Serial Number: E2094

Summa Canister Lab Number: E2094

Flow Regulator and Vacuum Gauge Serial Number: 136

Vacuum Pump Start Time: 1511

Vacuum Pump Stop Time: 1522

Open Summa Time: 1525

Close Summa Time: 1530

Sample Time: 1525

Pre-Fill Summa Canister Vacuum (in. Hg): –

Post-Fill Summa Canister Vacuum (in. Hg): –

Notes: Full Suite

Sampler's Signature E. Miller Date: 3.9.15

Soil Vapor Sampling Form – Summa Canisters

Well ID: PRUD-16

Site Location: YMCA/Park

Well Coordinates: -

Well Diameter: .5

Well Depth: 15

Total Purge Volume: 55 L

Date: 3·9·15

Project #: 14-2014-2029

Samplers: Eric Miller

Sample ID: PRUD-16-SG-030915

QA Sample ID: -

Weather: 65-75

Well Evacuation

Time	Elapsed Time (min)	Purge Rate (cf/min)	Volume Purged (cf)	Vacuum (in. water)	Landfill Gas Concentrations CH4	CO2	O2	PID
Initial	-	-	-	0	0.0	13.8	3.3	1.0
1745 - 1749	4	5	20	0	0.0	13.6	3.3	0.6
1749 - 1753	4	5	20	0	0.0	13.8	3.2	0.7
1753 - 1756	3	5	15	0				

Sample Collection

Summa Canister Serial Number: 1886

Summa Canister Lab Number: 1886

Flow Regulator and Vacuum Gauge Serial Number: 137

Vacuum Pump Start Time: 1745

Vacuum Pump Stop Time: ~~1757~~ 1756

Open Summa Time: 1800

Close Summa Time: 1805

Sample Time: 1800

Pre-Fill Summa Canister Vacuum (in. Hg): —

Post-Fill Summa Canister Vacuum (in. Hg): —

Notes: FULL SUITE

Sampler's Signature E Miller Date: 3·9·15

Soil Vapor Sampling Form – Summa Canisters

Well ID: PRUD-17

Site Location: YMCA / Park

Well Coordinates: -

Well Diameter: .5

Well Depth: 10

Total Purge Volume: 55L

Date: 3.9.15

Project #: 14-2014-2029

Samplers: ERIC MILLER

Sample ID: PRUD-17-SG-030915

QA Sample ID: -

Weather: 65-75

Well Evacuation

Time	Elapsed Time (min)	Purge Rate (cf/min)	Volume Purged (cf)	Vacuum (in. water)	Landfill Gas Concentrations CH4	CO2	O2	PID
initial	-	-	-	-	0.0	6.7	10.6	0.1
1719 - 1723	4	5	20	0	0.0	6.2	11.9	0.7
1723 - 1727	4	5	20	0	0.0	5.9	12.5	0.8
1727 - 1730	3	5	15	0	0.0	5.7	13.4	0.8

Sample Collection

Summa Canister Serial Number: E2294

Summa Canister Lab Number: E2294

Flow Regulator and Vacuum Gauge Serial Number: 074

Vacuum Pump Start Time: 1719

Vacuum Pump Stop Time: 1730

Open Summa Time: 1733

Close Summa Time: 1738

Sample Time: 1733

Pre-Fill Summa Canister Vacuum (in. Hg): —

Post-Fill Summa Canister Vacuum (in. Hg): —

Notes: FULL SUITE

Sampler's Signature E. Miller Date: 3.9.15

Soil Vapor Sampling Form – Summa Canisters

Well ID: PROD-18

Site Location: YMCA / PARK

Well Coordinates: –

Well Diameter: .5

Well Depth: 10

Total Purge Volume: 55 L

Date: 3.9.15

Project #: 14-2014-2029

Samplers: Eric Miller

Sample ID: PROD-18-SG-030915

QA Sample ID: –

Weather: 65-75

Well Evacuation

Time	Elapsed Time (min)	Purge Rate (cf/min)	Volume Purged (cf)	Vacuum (in. water)	Landfill Gas Concentrations CH4	CO2	O2	PID
initial	–	–	–	–	0.0	6.0	13.5	0.0
1652 - 1656	4	5	20	0	0.0	5.8	13.9	0.1
1656 - 1700	4	5	20	0	0.0	5.8	13.9	0.2
1700 - 1703	3	5	15	0	0.0	5.8	13.8	0.1

Sample Collection

Summa Canister Serial Number: 1817

Summa Canister Lab Number: 1817

Flow Regulator and Vacuum Gauge Serial Number: 073

Vacuum Pump Start Time: 1652

Vacuum Pump Stop Time: 1703

Open Summa Time: 1705

Close Summa Time: 1710

Sample Time: 1705

Pre-Fill Summa Canister Vacuum (in. Hg): –

Post-Fill Summa Canister Vacuum (in. Hg): –

Notes: FULL SUITE

Sampler's Signature E. Miller Date: 3.9.15

Soil Vapor Sampling Form – Summa Canisters

Well ID: PROD - 19

Site Location: YMCA / PARK

Well Coordinates: -

Well Diameter: .5

Well Depth: 10

Total Purge Volume: 55 L

Date: 3.9.15

Project #: 14-2014-2029

Samplers: Eric Miller

Sample ID: PROD-19-SG-030915

QA Sample ID: -

Weather: 65-75

Well Evacuation

Time	Elapsed Time (min)	Purge Rate (cf/min)	Volume Purged (cf)	Vacuum (in. water)	Landfill Gas Concentrations CH4	CO2	O2	PID
Initial	-	-	-	-	0.0	6.3	16.4 ~~14.1~~	0.1
1616 - 1620	4	5	20	0	0.0	6.2	15.0	0.1
1620 - 1624	4	↓	20	0	0.0	6.1	15.0	0.3
1624 - 1627	3		15	0	0.0	6.0	15.0	0.6

Sample Collection

Summa Canister Serial Number: E2412

Summa Canister Lab Number: E2412

Flow Regulator and Vacuum Gauge Serial Number: 037

Vacuum Pump Start Time: 1616

Vacuum Pump Stop Time: 1627

Open Summa Time: 1630

Close Summa Time: 1635

Sample Time: 1630

Pre-Fill Summa Canister Vacuum (in. Hg): -

Post-Fill Summa Canister Vacuum (in. Hg): -

Notes: FULL SUITE

Sampler's Signature E. Mlh Date: 3.9.15

Airtech Environmental Laboratories (AEL)

Chain of Custody

4620 E.Elwood Street, Suite 13, Phoenix, AZ 85040 480-968-5888 (phone) 480-966-1888 (fax)

Customer: AMEC	Page 1 of ____		AEL Lab #
Address: 4600 E WASHINGTON ST #600	Sampler: ERIC MILLER	Phone: 602.300.8313	
	Project Name: BROADWAY PANTANA	Project Number: 14-2014-2029	
City, State, Zip: PHOENIX, AZ	Project location: TUCSON, AZ		
Contact: Alex Y.	P.O. Number:		
Phone: / Fax:	Fax Results: Y N		
E-Mail Address: Alex.Yiannakakis@amec.com	E-Mail Results: (Y) N		

Sample Receipt

Temperature_____ °C

Custody Seals: Yes_____ No_____

Custody Seals Intact: Yes_____ No_____

Total # of Containers:_____

Turn Around Request

____ 24 Hours ____ 48 Hours

____ 72 Hours

____ 5 working Day

X Standard 10 Working Days

Sample Type

SVE: soil vapor extraction

A: ambient air

I: indoor air

(S) soil vapor

W: water

GW: ground water

WW: waste water

Analyses Requested

Sample Information

AEL Lab #	Serial # Canister	Serial # Grab	Canister (L) or bag	Grab (Min)	Client's Sample Identification	Sampled Date	Sampled Time	Sample Type	Number of Containers	TO-15 full list	TO-15 TPH(GRO)	TO-15 Selet List	8260B AZ Vapor full list	8260B Vapor select list	8015 GRO	8260B Water			
	E2407	082	6 (1) bag	1 2 (5)	PROD-7-SG-030915	3.9.15	1443	S	1	X									
	E2094	136	6 (1) bag	1 2 (5)	PROD-4-SG-030915	↓	1525	↓	↓	X									
	E2393	050	6 (1) bag	1 2 (5)	PROD-3-SG-030915	↓	1553	↓	↓	X									
	E2412	037	6 (1) bag	1 2 (5)	PROD-19-SG-030915	↓	1630	↓	↓	X									
	1817	073	6 (1) bag	1 2 (5)	PROD-18-SG-030915	↓	1705	↓	↓	X									
	E2294	074	6 (1) bag	1 2 (5)	PROD-17-SG-030915	↓	1733	↓	↓	X									
	1886	137	6 (1) bag	1 2 (5)	PROD-16-SG-030915	↓	1800	↓	↓	X									
	E2103	116	6 (1) bag	1 2 (5)	MW-9-SG-031015	3.10.15	915	↓	↓	X									
	1881	140	6 (1) bag	1 2 (5)	MW-8-SG-031015	↓	945	↓	↓	X									
	E2350	126	6 (1) bag	1 2 (5)	MW-8-SG-031015-DUP	↓	945	↓	↓	X									

Instructions / Special Requirements:

Date:	Time:	Samples Relinquished By:	Received By:
3.12.15	820	E. Miller	[signature]

Airtech Environmental Laboratories (AEL)

Chain of Custody

4620 E.Elwood Street, Suite 13, Phoenix, AZ 85040 480-968-5888 (phone) 480-966-1888 (fax)

Customer:	AMEC F/W	Page 1 of 2	AEL Lab #
Address:	4600 E WASHINGTON ST #600	Sampler: ERIC MILLER Phone: 602.300.8313	
		Project Name: BROADWAY PANTANA Project Number: 14-2014-2029	
City, State, Zip:	PHOENIX, AZ	Project location: TUCSON, AZ	
Contact:	ALEX Y	P.O. Number:	
Phone:	Fax:	Fax Results: Y N	
E-Mail Address:	Alex.Yiannakakis@amec.com	E-Mail Results: (Y) N	

Sample Receipt

Temperature_____ °C
Custody Seals: Yes_____ No_____
Custody Seals Intact: Yes_____ No_____
Total # of Containers:_____

Turn Around Request

_____ 24 Hours _____ 48 Hours
_____ 72 Hours
_____ 5 working Day
(✓) Standard 10 Working Days

Sample Type

SVE: soil vapor extraction
A: ambient air
I: indoor air
S: soil vapor
W: water
GW: ground water
WW: waste water

Analyses Requested

Sample Information

AEL Lab #	Serial # Canister	Serial # Grab	Canister (L) or bag	Grab (Min)	Client's Sample Identification	Sampled Date	Sampled Time	Sample Type	Number of Containers	TO-15 full list	TO-15 TPH(GRO)	TO-15 Selet List	8260B AZ Vapor full list	8260B Vapor select list	8015 GRO	8260B Water	TO-15 (SHORT LIST)		
	E2364	110	6 (1) bag	1 2 (5)	ARUD-1-SG-030515	3.5.15	1150	S	1	X									
	1877	006	6 (1) bag	1 2 (5)	WR-434A-50-SG-030515	↓	1322	↓	↓								X		
	E2404	020	6 (1) bag	1 2 (5)	WR-434A-150-SG-030515	↓	1410	↓	↓								X		
	1881	109	6 (1) bag	1 2 (5)	WR-434A-250-SG-030515	↓	1445	↓	↓								X		
	E2283	069	6 (1) bag	1 2 (5)	WR-434A-350-SG-030515	↓	1515	↓	↓								X		
	1800	147	6 (1) bag	1 2 (5)	BSAP-1-100-SG-030615	3.6.15	830	S	1								X		
	1807	080	6 (1) bag	1 2 (5)	BSAP-1-150-SG-030615	↓	903	↓	↓								X		
	0606	004	6 (1) bag	1 2 (5)	BSAP-1-200-SG-030615	↓	935	↓	↓								X		
	E2365	121	6 (1) bag	1 2 (5)	BSAP-1-248-SG-030615	↓	1020	↓	↓								X		
	1852	095	6 (1) bag	1 2 (5)	BSAP-1-300-SG-030615	↓	1050	↓	↓								X		

Instructions / Special Requirements:

Date:	Time:	Samples Relinquished By:	Received By:
3.9.15	650	E. McCh	[signature]

Airtech Environmental Laboratories (AEL)

Chain of Custody

4620 E.Elwood Street, Suite 13, Phoenix, AZ 85040 480-968-5888 (phone) 480-966-1888 (fax)

Customer: AMEC F/W	Page 2 of 2		AEL Lab #
Address: 4600 EAST WASHINGTON #600	Sampler: ERIC MILLER	Phone: 602.300.8313	
	Project Name: BROADWAY PANTANA	Project Number: 142014 2027	
City, State, Zip: PHOENIX, AZ	Project location: TUCSON, AZ		
Contact: Alex Y.	P.O. Number:		
Phone: Fax:	Fax Results: Y N		
E-Mail Address: Alex.Yiannakakis@amec.com	E-Mail Results: Y N		

Sample Receipt

Temperature_____ °C

Custody Seals: Yes_____ No_____

Custody Seals Intact: Yes_____ No_____

Total # of Containers:_____

Turn Around Request

_____ 24 Hours _____ 48 Hours

_____ 72 Hours

_____ 5 working Day

X Standard 10 Working Days

Sample Type

SVE: soil vapor extraction GW: ground water

A: ambient air WW: waste water

I: indoor air

S: soil vapor

W: water

Sample Information

AEL Lab #	Serial # Canister	Serial # Grab	Canister (L) or bag	Grab (Min)	Client's Sample Identification	Sampled Date	Sampled Time	Sample Type	Number of Containers	TO-15 full list	TO-15 TPH(GRO)	TO-15 Selet List	8260B AZ Vapor full list	8260B Vapor select list	8015 GRO	8260B Water	TO-15 (SHORT LIST)		
	1835	067	6 1 bag	1 2 5	BSDP-1-350-SG-030615	3.6.15	1115	S	1								X		
	E2293	032	6 1 bag	1 2 5	BSDP-2-100-SG-030615	↓	1232	↓	↓								X		
	1879	053	6 1 bag	1 2 5	BSDP-2-150-SG-030615	↓	1258	↓	↓								X		
	1878	040	6 1 bag	1 2 5	BSDP-2-200-SG-030615	↓	1323	↓	↓								X		
	1856	139	6 1 bag	1 2 5	BSDP-2-250-SG-030615	↓	1350	↓	↓								X		
	E2367	134	6 1 bag	1 2 5	BSDP-2-300-SG-030615	↓	1420	↓	↓								X		
	1842	120	6 1 bag	1 2 5	BSDP-2-350-SG-030615	↓	1450	↓	↓								X		
	E2104	122	6 1 bag	1 2 5	BSDP-2-350-SG-030615-DUP	↓	1450	↓	↓								X		
			6 1 bag	1 2 5															
			6 1 bag	1 2 5															

Instructions / Special Requirements:

Date:	Time:	Samples Relinquished By:	Received By:
3.9.15	650	E. Miller	[illegible]

Airtech Environmental Laboratories (AEL)

Chain of Custody

4620 E.Elwood Street, Suite 13, Phoenix, AZ 85040 480-968-5888 (phone) 480-966-1888 (fax)

Customer: AMEC F/W	Page 2 of 3		AEL Lab #
Address: 4600 E WASHINGTON ST #600	Sampler: ERIC MILLER	Phone: 602.300.8313	15-C013
	Project Name: BROADWAY PANTANA	Project Number: 14-2014-2029	
City, State, Zip: PHOENIX, AZ	Project location: TUCSON, AZ		
Contact: Alex Y.	P.O. Number:		
Phone: / Fax:	Fax Results: Y N		
E-Mail Address: Alex.Yiannakakis@amec.com	E-Mail Results: Y N		

Sample Receipt	Turn Around Request	Sample Type
Temperature_____ °C	____ 24 Hours ____ 48 Hours	SVE: soil vapor extraction GW: ground water
Custody Seals: Yes____ No____	____ 72 Hours	A: ambient air WW: waste water
Custody Seals Intact: Yes____ No____	____ 5 working Day	I: indoor air
Total # of Containers:_____	X Standard 10 Working Days	S soil vapor
		W: water

Sample Information

AEL Lab #	Serial # Canister	Serial # Grab	Canister (L) or bag	Grab (Min)	Client's Sample Identification	Sampled Date	Sampled Time	Sample Type	Number of Containers	TO-15 full list	TO-15 TPH(GRO)	TO-15 Selet List	8260B AZ Vapor full list	8260B Vapor select list	8015 GRO	8260B Water	TO-15 (SHORT LIST)		
11	E2387	070	6 1 bag	1 2 5	MW-7-SG-031015	3.10.15	1023	S	1	X									
12	E2087	106	6 1 bag	1 2 5	MW-6-SG-031015		1057			X									
13	E2391	055	6 1 bag	1 2 5	BSDP-3-50 SG-031015		1235										X		
14	E2397	132	6 1 bag	1 2 5	BSDP-3-100 SG-031015		1300										X		
15	1809	145	6 1 bag	1 2 5	BSDP-3-150 SG-031015		1327										X		
16	1793	047	6 1 bag	1 2 5	BSDP-4-~~50~~ SG-031015		1400		50								X		
17	1865	127	6 1 bag	1 2 5	BSDP-4-100 SG-031015		1433										X		
18	E2352	078	6 1 bag	1 2 5	BSDP-4-150 SG-031015		1503										X		
19	1839	107	6 1 bag	1 2 5	BP-23-200-SG-031115	3.11.15	750										X		
20	016	1794	6 1 bag	1 2 5	BP-23-250-SG-031115		820										X		

Instructions / Special Requirements:

Date:	Time:	Samples Relinquished By:	Received By:
3.12.15	820	E. Miller	[signature]

Airtech Environmental Laboratories (AEL)

Chain of Custody

4620 E.Elwood Street, Suite 13, Phoenix, AZ 85040 480-968-5888 (phone) 480-966-1888 (fax)

Customer: AMEC FW	Page 3 of 3		AEL Lab #
Address: 4600 E WASHINGTON ST #600	Sampler: ERIC MILLER	Phone: 6023008313	15C013
	Project Name: BROADWAY PANTANA	Project Number: 14-2014-2029	
City, State, Zip: PHOENIX, AZ	Project location: TUCSON, AZ		
Contact: Alex Y.	P.O. Number:		
Phone: / Fax:	Fax Results: Y N		
E-Mail Address: Alex.Yiannakakis@amec.com	E-Mail Results: Y N		

Sample Receipt	Turn Around Request	Sample Type
Temperature_____ °C	____ 24 Hours ____ 48 Hours	SVE: soil vapor extraction GW: ground water
Custody Seals: Yes_____ No_____	____ 72 Hours	A: ambient air WW: waste water
Custody Seals Intact: Yes_____ No_____	____ 5 working Day	I: indoor air
Total # of Containers:_____	X Standard 10 Working Days	S: soil vapor
		W: water

Sample Information

AEL Lab #	Serial # Canister	Serial # Grab	Canister (L) or bag	Grab (Min)	Client's Sample Identification	Sampled Date	Sampled Time	Sample Type	Number of Containers	TO-15 full list	TO-15 TPH(GRO)	TO-15 Selet List	8260B AZ Vapor full list	8260B Vapor select list	8015 GRO	8260B Water	TO-15 (SHORT LIST)		
21	E2370	018	6 1 bag	1 2 5	BP-23-300-SG-031115	3.11.15	850	S	1								X		
22	1858	091	6 1 bag	1 2 5	BP-23-~~250~~ 245-SG-031115		955			350							X		
23	1864	081	6 1 bag	1 2 5	BP-23-~~445-SG-031115-DUP~~		955			350							X		
24	E2089	024	6 1 bag	1 2 5	BP-22-200-SG-031115		1049										X		
25	E2406	045	6 1 bag	1 2 5	BP-22-250-SG-031115		1110										X		
26	1816	142	6 1 bag	1 2 5	BP-22-300-SG-031115		1145			350							X		
27	~~E2406~~ 1797 EM	~~1444~~ 128 EM	6 1 bag	1 2 5	BP-22-~~435-SG-031115~~		1243			EM							X		
28	E2371	115	6 1 bag	1 2 5	MW-5-SG-031115		1513			X									
			6 1 bag	1 2 5															
			6 1 bag	1 2 5															

Instructions / Special Requirements:

Date:	Time:	Samples Relinquished By:	Received By:
3.12.15	820	E. Miller	[signature]

APPENDIX B

VAPOR INTRUSION EVALUATION

Conceptual Site Model

The primary potential exposure pathway for the Broadway South Landfill (BSL) is inhalation of indoor air following vapor intrusion. The assumed receptors are current and future residents because residential homes are currently located in the near vicinity. Potential sources for contaminants to enter the environment from the BSL are through subsurface releases. Contaminants may infiltrate or percolate through the subsurface to soil and water, and can be rereleased into the environment via soil vapor. A conceptual exposure model for the site is provided in Figure 1.

Exposure Assessment

Constituents of potential concern (COPCs) were selected by comparison to Residential Soil Vapor Screening Levels that were calculated by dividing the January 2015 United States Environmental Protection Agency (USEPA) residential indoor air Regional Screening Levels (RSLs) by an attenuation factor of 0.03 (USEPA, 2015). The target cancer risk for the RSLs was set to 1×10^{-6} and the target hazard quotients to 0.1 (refer to Table 2 in the main text). As a result of the screening process, seven volatile chemicals (1,2-dichloroethane, 1,4-dichlorobenzene, benzene, chloroform, ethylbenzene, nonane, and vinyl chloride) were selected as vapor intrusion COPCs for further evaluation.

For this residential exposure scenario, it was assumed that residents would be exposed for 350 days per year for 30 years. The averaging time for carcinogenic risks is assumed to be a 70-year lifetime, while the averaging time for non-carcinogenic hazards is 30 years.

The hazards and risks were calculated using USEPA's online screening level Johnson & Ettinger (J&E) model for indoor air intrusion (USEPA, 2013) and was used to assess potential hazards and risks from inhalation of volatile compounds under a residential exposure scenario. The exposure area for the purposes of the J&E Model was assumed to be a residential structure with a basement and with a footprint of 100 square meters and floor height of 3.66 meters (residential model default values). The air exchange rate was assumed to be 0.25 per hour (model default). Based on site-specific soil parameters, the soil type underlying the site was assumed to be loamy sand. The average annual soil/groundwater temperature was assumed to be 71 degrees Fahrenheit, which is typical for the Tucson area. Current chemical and physical parameters and current inhalation toxicity values for each COPC were entered into the on-line J&E Model in order to generate chemical-specific estimates of systemic hazard and carcinogenic risk.

Toxicity Assessment

USEPA's January 2015 RSL table (USEPA 2015) provided current inhalation toxicity values, including the inhalation unit risk (carcinogenic risks) and chronic inhalation reference concentration (non-carcinogenic hazards) for the COPCs. These toxicity values were used with residential exposure assumptions to estimate potential hazards and risks to residential receptors exposed to vapors in the surrounding area. The toxicity values used in the risk assessment are listed in the modeling outputs in Attachment A of this appendix.

Risk Characterization

Residential Receptor – Table 1 summarizes the results of the residential receptor risk calculations. The estimated risk and hazards for residential receptor include:

- Risk of $4x10^{-7}$ for petroleum related compounds: benzene, 1,4-dichlorobenzene, ethylbenzene, and nonane
- Risk of $5x10^{-7}$ for non-petroleum related compounds: chloroform, 1,2-dichloroethane, and vinyl chloride
- Cumulative Hazard Index (HI) of 0.02 for petroleum related compounds:
- Cumulative HI of 0.004 for non-petroleum related compounds

Uncertainty Analysis

The vapor intrusion assessment assumes uniform exposure across the site although soil gas concentrations vary by location. The maximum detected concentrations from the six soil vapor samples were used to model site indoor air concentrations, which would tend to overestimate hazards and risks for site residents. The assessment also assumes residential receptors will be exposed over a 30-year period for 350 days per year. These assumptions would tend to overestimate risks because the median occupancy in a home is approximately nine years (USEPA, 2011).

Conclusions

The hazard indices are less than one and the cumulative incremental risks are less than $1x10^{-6}$ (Table 1). Based on these results, the vapor intrusion pathway would not pose an unacceptable hazard or risk to residential receptors, and would not be of concern to human health currently or in the future.

References:

United States Environmental Protection Agency (USEPA), 2011. *Exposure Factors Handbook: 2011 Edition* (EPA/600/R-09/052F).

USEPA 2013. EPA On-line Tools for Site Assessment Calculation. Accessed at: http://www.epa.gov/athens/learn2model/part-two/onsite/JnE_lite_forward.html

USEPA 2015. Regional Screening Table. Accessed at: http://www.epa.gov/region9/superfund/prg/

TABLES

Table 1

Summary of Risk for Broadway South Landfill

Area / Receptor	Parameter	Hazard Quotient [a]	Excess Cancer Risk [a]
Residential [b]	Benzene	0.0016	1.6E-07
	1,4-Dichlorobenzene	0.000044	1.6E-07
	Ethylbenzene	0.000051	5.3E-08
	Nonane	0.018	NA
		Petroleum HI: 0.02	**TCR:** 4.E-07
	Chloroform	0.00018	1.7E-07
	1,2-Dichloroethane	0.004	3.0E-07
	Vinyl chloride	0.00023	4.1E-08
		Non-Petroleum HI: 0.004	**TCR:** 5.E-07

Notes:

NA - Not applicable

HI - Hazard Index

[a] High Indoor Air Prediction Indoor Air Simulation Results calculated with Screening-Level Johnson and Ettinger Model

[b] Assumes residential exposure for 350 days/year for 30 years

PREPARED BY/DATE: SAG 04/30/15

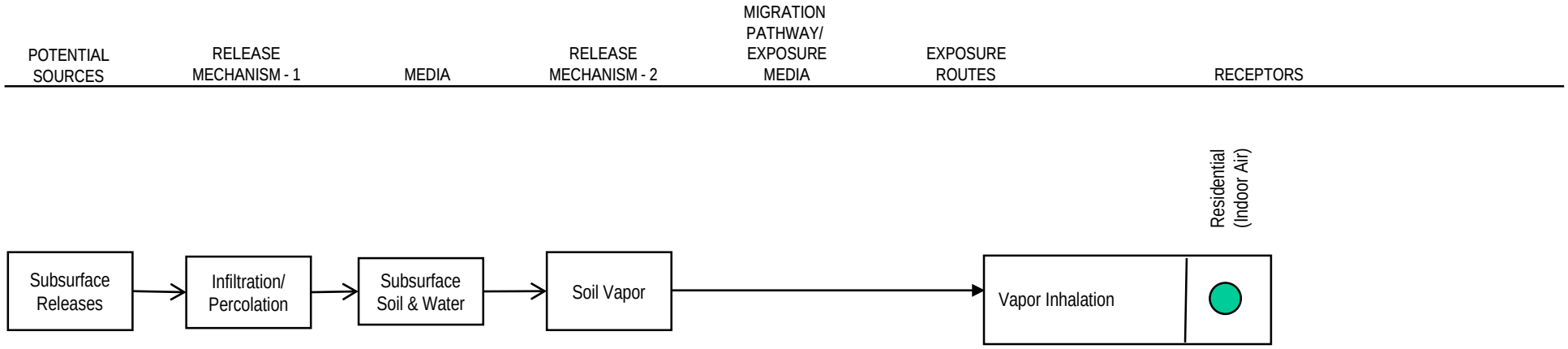
CHECKED BY/DATE: LMS 5/5/15

FIGURES

FIGURE 1

CONCEPTUAL SITE MODEL

BROADWAY SOUTH LANDFILL, TUCSON, ARIZONA



Potentially complete exposure pathway evaluated in HHRA

PREPARED/DATE: SAG 05/01/15
CHECKED/DATE: LMS 05/05/15

1420142029

ATTACHMENT A

MODELING OUTPUTS

INDOOR AIR SIMULATION RESULTS

Screening-Level Johnson and Ettinger Model

Site Name: Broadway South Landfill
Report Date: Wed Apr 29 14:15:17 EDT 2015
Report Generated From: http://www.epa.gov/athens/learn2model/part-two/onsite/JnE_lite_forward.htm
Type of sample: SOIL GAS Concentration = 19.68[µg/m^3]
Depth of soil gas sample: 14.6ft +/- 0.2ft
Average soil/ground water temperature: 71F

CHEMICAL PROPERTIES
Chemical of Concern: 1,2-Dichloroethane CAS Number: 107062
Molecular Weight: 98.96 [g/mole] Henrys Constant: 0.048 [unitless]
Diffusivity in Air: 0.086 [cm^2/sec] Diffusivity in Water: 1.1e-5 [cm^2/sec]
Unit Risk Factor: 0.000026 [(µg/m^3)$^{-1}$] Reference Concentration: 0.007 [mg/m^3]

SOIL PROPERTIES
Soil Type: Loamy Sand Total Porosity: 0.39
Unsaturated Zone Moisture Content:
low= 0.049 best estimate= 0.076 high= 0.1
Capillary Zone Moisture Content: 0.303 Height of Capillary Rise: 0.188 [m]
Soil-Gas Flow Rate into Building: 5 [L/min]

BUILDING PROPERTIES
Building Type: Basement Air Exchange Rate: 0.25[hr^{-1}]
Building Mixing Height: 3.66[m] Building Footprint Area: 100[m^2]
Subsurface Foundation Area: 180[m^2] Building Crack Ratio: 0.0002[unitless]
Foundation Slab Thickness: 0.1[m]

EXPOSURE PARAMETERS
Exposure Duration: carcinogens 30 [years] non-carcinogens: 30 [years]
Exposure Frequency: carcinogens 350 [days/year] non-carcinogens: 365 [days/year]
Averaging Time: carcinogens 70 [years] non-carcinogens: 30 [years]

JOHNSON & ETTINGER SIMULATION RESULTS
Effective Diffusion Coefficient (D_{eff}): 0.01194[cm^2/s]
Soil Gas to Indoor Air Attenuation Factor (α_{SG}) = 0.001203

[1]Low Indoor Air Prediction: 0.01968 [µg/m^3] or 0.004866 [ppbv]
Cancer Risk of this concentration: 2.103e-7 Hazard Risk of this concentration: 0.002812

Best Estimate Indoor Air Prediction: 0.02368[µg/m^3] or 0.005854 [ppbv]
Cancer Risk of this concentration: 2.530e-7 Hazard Risk of this concentration: 0.003383

[2]High Indoor Air Prediction: 0.02814[µg/m^3] or 0.006958 [ppbv]
Cancer Risk of this concentration: 3.007e-7 Hazard Risk of this concentration: 0.004021

Based on parameter analysis: Advection is the dominant mechanism across foundation.

[1]"Low Prediction" concentrations produced with HIGHEST moisture content and DEEPEST depth to contamination.

[2]"High Prediction" concentrations produced with LOWEST moisture content and SHALLOWEST depth to contamination.

INDOOR AIR SIMULATION RESULTS

Screening-Level Johnson and Ettinger Model

Site Name: Broadway South Landfill
Report Date: Wed Apr 29 14:20:32 EDT 2015
Report Generated From: http://www.epa.gov/athens/learn2model/part-two/onsite/JnE_lite_forward.htm
Type of sample: SOIL GAS Concentration = 32.21[µg/m^3]
Depth of soil gas sample: 14.6ft +/- 0.2ft
Average soil/ground water temperature: 71F

CHEMICAL PROPERTIES
Chemical of Concern: 1,4-Dichlorobenzene CAS Number: 106467
Molecular Weight: 147 [g/mole] Henrys Constant: 0.099 [unitless]
Diffusivity in Air: 5.5e-2 [cm^2/sec] Diffusivity in Water: 8.7e-6 [cm^2/sec]
Unit Risk Factor: 0.000011 [(µg/m^3)$^{-1}$] Reference Concentration: 0.8 [mg/m^3]

SOIL PROPERTIES
Soil Type: Loamy Sand Total Porosity: 0.39
Unsaturated Zone Moisture Content:
low= 0.049 best estimate= 0.076 high= 0.1
Capillary Zone Moisture Content: 0.303 Height of Capillary Rise: 0.188 [m]
Soil-Gas Flow Rate into Building: 5 [L/min]

BUILDING PROPERTIES
Building Type: Basement Air Exchange Rate: 0.25[hr^{-1}]
Building Mixing Height: 3.66[m] Building Footprint Area: 100[m^2]
Subsurface Foundation Area: 180[m^2] Building Crack Ratio: 0.0002[unitless]
Foundation Slab Thickness: 0.1[m]

EXPOSURE PARAMETERS
Exposure Duration: carcinogens 30 [years] non-carcinogens: 30 [years]
Exposure Frequency: carcinogens 350 [days/year] non-carcinogens: 365 [days/year]
Averaging Time: carcinogens 70 [years] non-carcinogens: 30 [years]

JOHNSON & ETTINGER SIMULATION RESULTS
Effective Diffusion Coefficient (D_{eff}): 0.007639[cm^2/s]
Soil Gas to Indoor Air Attenuation Factor (α_{SG}) = 0.0008868

[1]Low Indoor Air Prediction: 0.02315 [µg/m^3] or 0.003852 [ppbv]
Cancer Risk of this concentration: 1.046e-7 Hazard Risk of this concentration: 2.893e-5

Best Estimate Indoor Air Prediction: 0.02856[µg/m^3] or 0.004754 [ppbv]
Cancer Risk of this concentration: 1.291e-7 Hazard Risk of this concentration: 3.571e-5

[2]High Indoor Air Prediction: 0.03495[µg/m^3] or 0.005818 [ppbv]
Cancer Risk of this concentration: 1.580e-7 Hazard Risk of this concentration: 4.369e-5

Based on parameter analysis: Advection is the dominant mechanism across foundation.

[1]"Low Prediction" concentrations produced with HIGHEST moisture content and DEEPEST depth to contamination.

[2]"High Prediction" concentrations produced with LOWEST moisture content and SHALLOWEST depth to contamination.

INDOOR AIR SIMULATION RESULTS

Screening-Level Johnson and Ettinger Model

Site Name: Broadway South Landfill
Report Date: Wed Apr 29 13:47:17 EDT 2015
Report Generated From: http://www.epa.gov/athens/learn2model/part-two/onsite/JnE_lite_forward.htm
Type of sample: SOIL GAS Concentration = 33.05[µg/m^3]
Depth of soil gas sample: 14.6ft +/- 0.2ft
Average soil/ground water temperature: 71F

CHEMICAL PROPERTIES
Chemical of Concern: Benzene CAS Number: 71432
Molecular Weight: 78.11 [g/mole] Henrys Constant: 0.23 [unitless]
Diffusivity in Air: 9.0e-2 [cm^2/sec] Diffusivity in Water: 1.0e-5 [cm^2/sec]
Unit Risk Factor: 0.0000078 [(µg/m^3)$^{-1}$] Reference Concentration: 0.03 [mg/m^3]

SOIL PROPERTIES
Soil Type: Loamy Sand Total Porosity: 0.39
Unsaturated Zone Moisture Content:
low= 0.049 best estimate= 0.076 high= 0.1
Capillary Zone Moisture Content: 0.303 Height of Capillary Rise: 0.188 [m]
Soil-Gas Flow Rate into Building: 5 [L/min]

BUILDING PROPERTIES
Building Type: Basement Air Exchange Rate: 0.25[hr^{-1}]
Building Mixing Height: 3.66[m] Building Footprint Area: 100[m^2]
Subsurface Foundation Area: 180[m^2] Building Crack Ratio: 0.0002[unitless]
Foundation Slab Thickness: 0.1[m]

EXPOSURE PARAMETERS
Exposure Duration: carcinogens 30 [years] non-carcinogens: 30 [years]
Exposure Frequency: carcinogens 350 [days/year] non-carcinogens: 365 [days/year]
Averaging Time: carcinogens 70 [years] non-carcinogens: 30 [years]

JOHNSON & ETTINGER SIMULATION RESULTS
Effective Diffusion Coefficient (D_{eff}): 0.0125[cm^2/s]
Soil Gas to Indoor Air Attenuation Factor (α_{SG}) = 0.001238

[1]Low Indoor Air Prediction: 0.03410 [µg/m^3] or 0.01068 [ppbv]
Cancer Risk of this concentration: 1.093e-7 Hazard Risk of this concentration: 0.001137

Best Estimate Indoor Air Prediction: 0.04092[µg/m^3] or 0.01282 [ppbv]
Cancer Risk of this concentration: 1.312e-7 Hazard Risk of this concentration: 0.001364

[2]High Indoor Air Prediction: 0.04848[µg/m^3] or 0.01518 [ppbv]
Cancer Risk of this concentration: 1.554e-7 Hazard Risk of this concentration: 0.001616

Based on parameter analysis: Advection is the dominant mechanism across foundation.

[1]"Low Prediction" concentrations produced with HIGHEST moisture content and DEEPEST depth to contamination.

[2]"High Prediction" concentrations produced with LOWEST moisture content and SHALLOWEST depth to contamination.

INDOOR AIR SIMULATION RESULTS

Screening-Level Johnson and Ettinger Model

Site Name: Broadway South Landfill
Report Date: Thu Apr 30 09:13:27 EDT 2015
Report Generated From: http://www.epa.gov/athens/learn2model/part-two/onsite/JnE_lite_forward.htm
Type of sample: SOIL GAS Concentration = 16.10[µg/m^3]
Depth of soil gas sample: 19.4ft +/- 0.2ft
Average soil/ground water temperature: 71F

CHEMICAL PROPERTIES
Chemical of Concern: Chloroform CAS Number: 67663
Molecular Weight: 119.38 [g/mole] Henrys Constant: 0.15 [unitless]
Diffusivity in Air: 0.077 [cm^2/sec] Diffusivity in Water: 1.1e-5 [cm^2/sec]
Unit Risk Factor: 0.000023 [(µg/m^3)$^{-1}$] Reference Concentration: 0.098 [mg/m^3]

SOIL PROPERTIES
Soil Type: Loamy Sand Total Porosity: 0.39
Unsaturated Zone Moisture Content:
low= 0.049 best estimate= 0.076 high= 0.1
Capillary Zone Moisture Content: 0.303 Height of Capillary Rise: 0.188 [m]
Soil-Gas Flow Rate into Building: 5 [L/min]

BUILDING PROPERTIES
Building Type: Basement Air Exchange Rate: 0.25[hr^{-1}]
Building Mixing Height: 3.66[m] Building Footprint Area: 100[m^2]
Subsurface Foundation Area: 180[m^2] Building Crack Ratio: 0.0002[unitless]
Foundation Slab Thickness: 0.1[m]

EXPOSURE PARAMETERS
Exposure Duration: carcinogens 30 [years] non-carcinogens: 30 [years]
Exposure Frequency: carcinogens 350 [days/year] non-carcinogens: 365 [days/year]
Averaging Time: carcinogens 70 [years] non-carcinogens: 30 [years]

JOHNSON & ETTINGER SIMULATION RESULTS
Effective Diffusion Coefficient (D_{eff}): 0.01069[cm^2/s]
Soil Gas to Indoor Air Attenuation Factor (α_{SG}) = 0.000921

[1]Low Indoor Air Prediction: 0.01208 [µg/m^3] or 0.002475 [ppbv]
Cancer Risk of this concentration: 1.142e-7 Hazard Risk of this concentration: 1.233e-4

Best Estimate Indoor Air Prediction: 0.01483[µg/m^3] or 0.003039 [ppbv]
Cancer Risk of this concentration: 1.402e-7 Hazard Risk of this concentration: 1.513e-4

[2]High Indoor Air Prediction: 0.01805[µg/m^3] or 0.003699 [ppbv]
Cancer Risk of this concentration: 1.706e-7 Hazard Risk of this concentration: 1.842e-4

Based on parameter analysis: Advection is the dominant mechanism across foundation.

[1]"Low Prediction" concentrations produced with HIGHEST moisture content and DEEPEST depth to contamination.

[2]"High Prediction" concentrations produced with LOWEST moisture content and SHALLOWEST depth to contamination.

INDOOR AIR SIMULATION RESULTS

Screening-Level Johnson and Ettinger Model

Site Name: Broadway South Landfill
Report Date: Thu Apr 30 08:38:15 EDT 2015
Report Generated From: http://www.epa.gov/athens/learn2model/part-two/onsite/JnE_lite_forward.htm
Type of sample: SOIL GAS Concentration = 41.23[µg/m^3]
Depth of soil gas sample: 14.6ft +/- 0.2ft
Average soil/ground water temperature: 71F

CHEMICAL PROPERTIES
Chemical of Concern: Ethylbenzene CAS Number: 100414
Molecular Weight: 106.17 [g/mole] Henrys Constant: 0.32 [unitless]
Diffusivity in Air: 6.8e-2 [cm^2/sec] Diffusivity in Water: 8.5e-6 [cm^2/sec]
Unit Risk Factor: 0.0000025 [(µg/m^3)$^{-1}$] Reference Concentration: 1 [mg/m^3]

SOIL PROPERTIES
Soil Type: Loamy Sand Total Porosity: 0.39
Unsaturated Zone Moisture Content:
low= 0.049 best estimate= 0.076 high= 0.1
Capillary Zone Moisture Content: 0.303 Height of Capillary Rise: 0.188 [m]
Soil-Gas Flow Rate into Building: 5 [L/min]

BUILDING PROPERTIES
Building Type: Basement Air Exchange Rate: 0.25[hr^{-1}]
Building Mixing Height: 3.66[m] Building Footprint Area: 100[m^2]
Subsurface Foundation Area: 180[m^2] Building Crack Ratio: 0.0002[unitless]
Foundation Slab Thickness: 0.1[m]

EXPOSURE PARAMETERS
Exposure Duration: carcinogens 30 [years] non-carcinogens: 30 [years]
Exposure Frequency: carcinogens 350 [days/year] non-carcinogens: 365 [days/year]
Averaging Time: carcinogens 70 [years] non-carcinogens: 30 [years]

JOHNSON & ETTINGER SIMULATION RESULTS
Effective Diffusion Coefficient (D_{eff}): 0.009444[cm^2/s]
Soil Gas to Indoor Air Attenuation Factor (α_{SG}) = 0.001031

[1]Low Indoor Air Prediction: 0.03482 [µg/m^3] or 0.008025 [ppbv]
Cancer Risk of this concentration: 3.578e-8 Hazard Risk of this concentration: 3.482e-5

Best Estimate Indoor Air Prediction: 0.04249[µg/m^3] or 0.009791 [ppbv]
Cancer Risk of this concentration: 4.365e-8 Hazard Risk of this concentration: 4.249e-5

[2]High Indoor Air Prediction: 0.05131[µg/m^3] or 0.01182 [ppbv]
Cancer Risk of this concentration: 5.271e-8 Hazard Risk of this concentration: 5.131e-5

Based on parameter analysis: Advection is the dominant mechanism across foundation.

[1]"Low Prediction" concentrations produced with HIGHEST moisture content and DEEPEST depth to contamination.

[2]"High Prediction" concentrations produced with LOWEST moisture content and SHALLOWEST depth to contamination.

INDOOR AIR SIMULATION RESULTS

Screening-Level Johnson and Ettinger Model

Site Name: Broadway South Landfill
Report Date: Thu Apr 30 09:48:37 EDT 2015
Report Generated From: http://www.epa.gov/athens/learn2model/part-two/onsite/JnE_lite_forward.htm
Type of sample: SOIL GAS Concentration = 418[µg/m^3]
Depth of soil gas sample: 18.5ft +/- 0.2ft
Average soil/ground water temperature: 71F

CHEMICAL PROPERTIES
Chemical of Concern: CAS Number: empty
Molecular Weight: 128.2 [g/mole] Henrys Constant: 140 [unitless]
Diffusivity in Air: 0.051 [cm^2/sec] Diffusivity in Water: 6.8e-6 [cm^2/sec]
Unit Risk Factor: 0 [(µg/m^3)$^{-1}$] Reference Concentration: 0.02 [mg/m^3]

SOIL PROPERTIES
Soil Type: Loamy Sand Total Porosity: 0.39
Unsaturated Zone Moisture Content:
low= 0.049 best estimate= 0.076 high= 0.1
Capillary Zone Moisture Content: 0.303 Height of Capillary Rise: 0.188 [m]
Soil-Gas Flow Rate into Building: 5 [L/min]

BUILDING PROPERTIES
Building Type: Basement Air Exchange Rate: 0.25[hr^{-1}]
Building Mixing Height: 3.66[m] Building Footprint Area: 100[m^2]
Subsurface Foundation Area: 180[m^2] Building Crack Ratio: 0.0002[unitless]
Foundation Slab Thickness: 0.1[m]

EXPOSURE PARAMETERS
Exposure Duration: carcinogens 30 [years] non-carcinogens: 30 [years]
Exposure Frequency: carcinogens 350 [days/year] non-carcinogens: 365 [days/year]
Averaging Time: carcinogens 70 [years] non-carcinogens: 30 [years]

JOHNSON & ETTINGER SIMULATION RESULTS
Effective Diffusion Coefficient (D_{eff}): 0.007083[cm^2/s]
Soil Gas to Indoor Air Attenuation Factor (α_{SG}) = 0.0006997

[1]Low Indoor Air Prediction: 0.2341 [µg/m^3] or 0.04467 [ppbv]
Cancer Risk of this concentration: 0. Hazard Risk of this concentration: 0.01170

Best Estimate Indoor Air Prediction: 0.2925[µg/m^3] or 0.05582 [ppbv]
Cancer Risk of this concentration: 0. Hazard Risk of this concentration: 0.01462

[2]High Indoor Air Prediction: 0.3635[µg/m^3] or 0.06937 [ppbv]
Cancer Risk of this concentration: 0. Hazard Risk of this concentration: 0.01818

Based on parameter analysis: Advection is the dominant mechanism across foundation.

[1]"Low Prediction" concentrations produced with HIGHEST moisture content and DEEPEST depth to contamination.
[2]"High Prediction" concentrations produced with LOWEST moisture content and SHALLOWEST depth to contamination.

INDOOR AIR SIMULATION RESULTS

Screening-Level Johnson and Ettinger Model

Site Name: Broadway South Landfill
Report Date: Wed Apr 29 13:59:05 EDT 2015
Report Generated From: http://www.epa.gov/athens/learn2model/part-two/onsite/JnE_lite_forward.htm
Type of sample: SOIL GAS Concentration = 15.87[µg/m^3]
Depth of soil gas sample: 18.5ft +/- 0.2ft
Average soil/ground water temperature: 71F

CHEMICAL PROPERTIES
Chemical of Concern: Vinyl chloride (chloroethene) CAS Number: 75014
Molecular Weight: 62.5 [g/mole] Henrys Constant: 1.1 [unitless]
Diffusivity in Air: 0.11 [cm^2/sec] Diffusivity in Water: 1.2e-5 [cm^2/sec]
Unit Risk Factor: 0.0000044 [(µg/m^3)$^{-1}$] Reference Concentration: 0.1 [mg/m^3]

SOIL PROPERTIES
Soil Type: Loamy Sand Total Porosity: 0.39
Unsaturated Zone Moisture Content:
low= 0.049 best estimate= 0.076 high= 0.1
Capillary Zone Moisture Content: 0.303 Height of Capillary Rise: 0.188 [m]
Soil-Gas Flow Rate into Building: 5 [L/min]

BUILDING PROPERTIES
Building Type: Basement Air Exchange Rate: 0.25[hr^{-1}]
Building Mixing Height: 3.66[m] Building Footprint Area: 100[m^2]
Subsurface Foundation Area: 180[m^2] Building Crack Ratio: 0.0002[unitless]
Foundation Slab Thickness: 0.1[m]

EXPOSURE PARAMETERS
Exposure Duration: carcinogens 30 [years] non-carcinogens: 30 [years]
Exposure Frequency: carcinogens 350 [days/year] non-carcinogens: 365 [days/year]
Averaging Time: carcinogens 70 [years] non-carcinogens: 30 [years]

JOHNSON & ETTINGER SIMULATION RESULTS
Effective Diffusion Coefficient (D_{eff}): 0.01528[cm^2/s]
Soil Gas to Indoor Air Attenuation Factor (α_{SG}) = 0.00121

[1]Low Indoor Air Prediction: 0.01601 [µg/m^3] or 0.006265 [ppbv]
Cancer Risk of this concentration: 2.894e-8 Hazard Risk of this concentration: 1.601e-4

Best Estimate Indoor Air Prediction: 0.01921[µg/m^3] or 0.007519 [ppbv]
Cancer Risk of this concentration: 3.473e-8 Hazard Risk of this concentration: 1.921e-4

[2]High Indoor Air Prediction: 0.02278[µg/m^3] or 0.008917 [ppbv]
Cancer Risk of this concentration: 4.119e-8 Hazard Risk of this concentration: 2.278e-4

Based on parameter analysis: Advection is the dominant mechanism across foundation.

[1]"Low Prediction" concentrations produced with HIGHEST moisture content and DEEPEST depth to contamination.

[2]"High Prediction" concentrations produced with LOWEST moisture content and SHALLOWEST depth to contamination.

APPENDIX C

FIELD FORMS AND CHAIN-OF-CUSTODY FORMS, DEEP SOIL GAS

Soil Vapor Sampling Form – Summa Canisters

Well ID: BP-22-200

Site Location: B.P

Well Coordinates: –

Well Diameter: 1"

Well Depth: 200

Total Purge Volume: 378L

Date: 3.11.15

Project #: 14-2014-2029

Samplers: Eric Miller

Sample ID: BP-22-200-SG-031115

QA Sample ID: –

Weather: 65-75

Well Evacuation

Time	Elapsed Time (min)	Purge Rate (cf/min)	Volume Purged (cf)	Vacuum (in. water)	Landfill Gas Concentrations CH4	CO2	O2	PID
initial	–	–	–	–	0.0	0.0	20.3	0.0
1028 - 1032.5	4.5	28	126	0	2.2	14.1	0.0	2.1
1032.5 - 1037	↓	↓	↓	0	2.2	14.1	0.0	2.1
1037 - 1041.5				0	2.3	14.1	0.0	2.6

Sample Collection

Summa Canister Serial Number: E2089

Summa Canister Lab Number: E2089

Flow Regulator and Vacuum Gauge Serial Number: 024

Vacuum Pump Start Time: 1028

Vacuum Pump Stop Time: 1041.5

Open Summa Time: 1044

Close Summa Time: 1049

Sample Time: 1044

Pre-Fill Summa Canister Vacuum (in. Hg): –

Post-Fill Summa Canister Vacuum (in. Hg): –

Notes: SHORT LIST C.P.U.L

Sampler's Signature E. Miller Date: 3.11.15

Soil Vapor Sampling Form – Summa Canisters

Well ID: BP-22-250

Site Location: B.P

Well Coordinates: -

Well Diameter: 1"

Well Depth: 250

Total Purge Volume: 420

Date: 3.11.15

Project #: 14-2014-2029

Samplers: Eric Miller

Sample ID: BP-22-250-SG-031115

QA Sample ID: —

Weather: 65-75

Well Evacuation

Time	Elapsed Time (min)	Purge Rate (cf/min)	Volume Purged (cf)	Vacuum (in. water)	Landfill Gas Concentrations CH4	CO2	O2	PID
Initial	-	-	-	-	0.0	0.0	20.4	0.1
1054 - 1059	5	28L	140	0	2.1	6.7	0.1	0.9
1059 - 1104	↓	↓	↓	0	2.0	7.3	0.0	1.2
1104 - 1109				0	2.0	7.3	0.0	1.2

Sample Collection

Summa Canister Serial Number: E2406

Summa Canister Lab Number: E2406

Flow Regulator and Vacuum Gauge Serial Number: 045

Vacuum Pump Start Time: 1054

Vacuum Pump Stop Time: 1109

Open Summa Time: 1110

Close Summa Time: 1115

Sample Time: 1110

Pre-Fill Summa Canister Vacuum (in. Hg): —

Post-Fill Summa Canister Vacuum (in. Hg): —

Notes: SHORT LIST C.P.U.L.

Sampler's Signature E. Miller Date: 3.11.15

Soil Vapor Sampling Form – Summa Canisters

Well ID: BP-22-300

Site Location: B.P

Well Coordinates: -

Well Diameter: 1"

Well Depth: 300

Total Purge Volume: 462 L

Date: 3.11.15

Project #: 14-2014-2029

Samplers: Eric Miller

Sample ID: BP-22-300-SG-031115

QA Sample ID: —

Weather: 65-75

Well Evacuation

Time	Elapsed Time (min)	Purge Rate (cf/min)	Volume Purged (cf)	Vacuum (in. water)	Landfill Gas Concentrations CH4	CO2	O2	PID
initial	-	-	-	—	0.0	0.1	20.3	1.2
1125 - 1130.5	5.5	28L	154	0	0.0	3.7	5.6	1.1
1130.5 - 1136	↓	↓	↓	0	0.9	3.9	1.3	1.1
1136 - 1141.5	↓	↓	↓	0	1.3	4.4	1.5	1.1

Sample Collection

Summa Canister Serial Number: 1816

Summa Canister Lab Number: 1816

Flow Regulator and Vacuum Gauge Serial Number: 142

Vacuum Pump Start Time: 1125

Vacuum Pump Stop Time: 1141.5

Open Summa Time: 1145

Close Summa Time: 1150

Sample Time: 1145

Pre-Fill Summa Canister Vacuum (in. Hg): —

Post-Fill Summa Canister Vacuum (in. Hg): —

Notes: SHORT LIST C.P.U.L

Sampler's Signature E. Miller Date: 3.11.15

Soil Vapor Sampling Form – Summa Canisters

Well ID: BP-22-~~403~~ 438

Site Location: B.P

Well Coordinates: –

Well Diameter: 4"

Well Depth: 438

Total Purge Volume: 5266 L

Date: 3.11.15

Project #: 14-2014-2029

Samplers: Eric Miller

Sample ID: BP-22-438-SG-031415

QA Sample ID: –

Weather: 65-75

Well Evacuation

Time	Elapsed Time (min)	Purge Rate (cf/min)	Volume Purged (cf)	Vacuum (in. water)	Landfill Gas Concentrations CH4	CO2	O2	PID
Initial	–	–	–	–	0.0	0.0	19.8	0.1
1055 - 1210.5	15.5	4scfm	1755	0	0.1	0.0	5.7	0.6
1210.5 - 1226	↓	↓	↓	.5	0.1	0.0	2.9	0.7
1226 - 1241.5				.5	0.1	0.0	4.6	0.5

Sample Collection

Summa Canister Serial Number: ~~E2408~~ 1797

Summa Canister Lab Number: ~~E2408~~ 1797

Flow Regulator and Vacuum Gauge Serial Number: ~~1444~~ 128

Vacuum Pump Start Time: 1155

Vacuum Pump Stop Time: 1241.5

Open Summa Time: 1243

Close Summa Time: 1248

Sample Time: 1243

Pre-Fill Summa Canister Vacuum (in. Hg): –

Post-Fill Summa Canister Vacuum (in. Hg): –

Notes: SHORT LIST

Sampler's Signature E. Miller Date: 3.11.15

Soil Vapor Sampling Form – Summa Canisters

Well ID: BP-23-200

Site Location: BP

Well Coordinates: -

Well Diameter: 1"

Well Depth: 200

Total Purge Volume: ~~400 L~~ 378 L

Date: 3.11.15

Project #: 14-2014-2029

Samplers: Eric Miller

Sample ID: BP-23-200-SG-031115

QA Sample ID: -

Weather: 65-75

Well Evacuation

Time	Elapsed Time (min)	Purge Rate (cf/min)	Volume Purged (cf)	Vacuum (in. water)	Landfill Gas Concentrations CH4	CO2	O2	PID
initial	-	-	-	-	0.0	0.0	21.5	0.0
7:33 - 737.5	4.5	28	126	0	9.5	14.7	0.4	8.6
737.5 - 742	↓	↓	126	0	9.2	14.1	2.8	8.7
742 - 746.5	↓	↓	126	0	9.0	14.0	4.1	9.7

Sample Collection

Summa Canister Serial Number: 1839

Summa Canister Lab Number: 1839

Flow Regulator and Vacuum Gauge Serial Number: 107

Vacuum Pump Start Time: 733

Vacuum Pump Stop Time: 746.5

Open Summa Time: EM ~~749~~ 750

Close Summa Time: 755

Sample Time: 750

Pre-Fill Summa Canister Vacuum (in. Hg): -

Post-Fill Summa Canister Vacuum (in. Hg): -

Notes: SHORT LIST C.P.U.L

Sampler's Signature E. Miller Date: 3.11.15

Soil Vapor Sampling Form – Summa Canisters

Well ID: BP-23-250

Site Location: BP

Well Coordinates: –

Well Diameter: 1"

Well Depth: 250

Total Purge Volume: ~~400~~ 420 L

Date: 3.11.15

Project #: 14-2014-2029

Samplers: Eric Miller

Sample ID: BP-23-250-SG-031115

QA Sample ID: –

Weather: 65-75

Well Evacuation

Time	Elapsed Time (min)	Purge Rate (cf/min)	Volume Purged (cf)	Vacuum (in. water)	Landfill Gas Concentrations CH4	CO2	O2	PID
initial	–	–	–	–	0.0	0.1	20.7	0.0
802 - 807	5	28 L	140	0	11.7	12.5	0.0	10.9
807 - 812	↓	↓	↓	0	11.7	12.5	0.0	12.8
812 - 817	↓	↓	↓	0	11.9	12.5	0.0	14.3

Sample Collection

Summa Canister Serial Number: 1794

Summa Canister Lab Number: 1794

Flow Regulator and Vacuum Gauge Serial Number: 016

Vacuum Pump Start Time: 802

Vacuum Pump Stop Time: (EM) ~~815~~ 817

Open Summa Time: 820

Close Summa Time: 825

Sample Time: 820

Pre-Fill Summa Canister Vacuum (in. Hg): –

Post-Fill Summa Canister Vacuum (in. Hg): –

Notes: SHORT LIST C.P.U.L

Sampler's Signature E. Miller Date: 3.11.15

Soil Vapor Sampling Form – Summa Canisters

Well ID: BP-23-300

Site Location: B.P.

Well Coordinates: –

Well Diameter: 1"

Well Depth: 300

Total Purge Volume: ~~438~~ 462 L

Date: 3.11.15

Project #: 14-2014-2029

Samplers: Eric Miller

Sample ID: BP-23-300-SG-031115

QA Sample ID: —

Weather: 65-75

Well Evacuation

Time	Elapsed Time (min)	Purge Rate (cf/min)	Volume Purged (cf)	Vacuum (in. water)	Landfill Gas Concentrations CH4	CO2	O2	PID
initial	–	–	–	–	0.0	0.0	20.3	0.4
831 - 836.5	5.5	28	154	0	13.2	7.4	0.0	11.8
836.5 - 842	↓	↓	↓	0	13.3	7.3	0.0	11.9
842 - 847.5				0	13.3	7.3	0.0	12.0

Sample Collection

Summa Canister Serial Number: E2370

Summa Canister Lab Number: E2370

Flow Regulator and Vacuum Gauge Serial Number: 018

Vacuum Pump Start Time: 831

Vacuum Pump Stop Time: 847.5

Open Summa Time: 850

Close Summa Time: 855

Sample Time: 850

Pre-Fill Summa Canister Vacuum (in. Hg): –

Post-Fill Summa Canister Vacuum (in. Hg): –

Notes: SHORT LIST C.P.U.L

Sampler's Signature E. Miller Date: 3.11.15

Soil Vapor Sampling Form – Summa Canisters

Well ID: BP-23-440

Site Location: B.P

Well Coordinates: –

Well Diameter: 4"

Well Depth: (EM) ~~350~~ 440

Total Purge Volume: ~~5323~~ 5424 L

Date: 3.11.15

Project #: 14-2014-2029

Samplers: Eric Miller

Sample ID: BP-23-~~350~~ 440-SG-031115

QA Sample ID: BP-23-440-SG-031115-DUP

Weather: 65-75

Well Evacuation 113.26

Time	Elapsed Time (min)	Purge Rate (cf/min)	Volume Purged (cf)	Vacuum (in. water)	Landfill Gas Concentrations CH4	CO2	O2	PID
initial	–	–	–	–	0.1	1.0	18.5	0.7
905 - 921	16	4 scfm	1810	1	2.5	12.1	5.4	2.9
921 - 937	16	↓	1810	1.5	2.6	12.1	5.4	2.6
937 - 953	16		1810	1.5	2.9	12.4	4.9	2.4

Sample Collection

	PARENT	DUPLICATE
Summa Canister Serial Number:	1858	1864
Summa Canister Lab Number:	1858	1864
Flow Regulator and Vacuum Gauge Serial Number:	091	081
Vacuum Pump Start Time:	905	905
Vacuum Pump Stop Time:	953	953
Open Summa Time:	955	955
Close Summa Time:	1000	1000
Sample Time:	955	955
Pre-Fill Summa Canister Vacuum (in. Hg):	–	–
Post-Fill Summa Canister Vacuum (in. Hg):	–	–

Notes: SHORT ~~FULL~~ (EM) SUITE AEL equipment # SPL-2

* Maximum flow provided by vacuum is 4.10 SCFM (4 scfm)

Sampler's Signature E. Miller Date: 3.11.15

Soil Vapor Sampling Form – Summa Canisters

Well ID: BSDP-1-100-

Site Location: B.P

Well Coordinates: –

Well Diameter: 1"

Well Depth: 100

Total Purge Volume: 381 L

Date: 3·6·15

Project #: 14-2014-2029

Samplers: Eric Miller

Sample ID: BSDP-1-100-SG-030615

QA Sample ID: –

Weather: 60-70

Well Evacuation

Initial = – – – 0.3

Time	Elapsed Time (min)	Purge Rate (cf/min)	Volume Purged (cf)	Vacuum (in. water)	Landfill Gas Concentrations CH4	CO2	O2	PID
815 - 819.5	4.5	1 (scfm)	127	0	6.9	19.1	0.5	0.1
819.5 - 824	↓	↓	↓	0	10.5	20.3	0.4	0.0
824 - 828.5	↓	↓	↓	0	11.1	20.4	0.4	0.0

Sample Collection

Summa Canister Serial Number: 1800

Summa Canister Lab Number: 1800

Flow Regulator and Vacuum Gauge Serial Number: 147

Vacuum Pump Start Time: 815

Vacuum Pump Stop Time: 828.5

Open Summa Time: 830

Close Summa Time: 835

Sample Time: 830

Pre-Fill Summa Canister Vacuum (in. Hg): –

Post-Fill Summa Canister Vacuum (in. Hg): –

Notes: SHORT LIST C.P on undeveloped lot (C.P = Concrete Pad)

Sampler's Signature E. Miller Date: 3·6·15

Soil Vapor Sampling Form – Summa Canisters

Well ID: BSDP-1-150

Site Location: B.P.

Well Coordinates: –

Well Diameter: 1"

Well Depth: 150

Total Purge Volume: 381L

Date: 3·6·15

Project #: 14-2014-2029

Samplers: Eric Miller

Sample ID: BSDP-1-150-SG-030615

QA Sample ID: –

Weather: 60-70

Well Evacuation

Time	Elapsed Time (min)	Purge Rate (cf/min)	Volume Purged (cf)	Vacuum (in. water)	Landfill Gas Concentrations CH4	CO2	O2	PID
Initial	–	–	–	–	0.0	0.0	20.5	7.4
846 - 850.5	4.5	1 (scfm)	127	0	7.3 ~~0.0~~ EM	18.2 ~~0.0~~ EM	EM ~~7~~ 1.3	8.8
850.5 - 855	↓	↓	↓	0	7.4	18.5	1.1	8.2
855 - 859.5				0	7.4	18.4	1.1	7.4

Sample Collection

Summa Canister Serial Number: 1807

Summa Canister Lab Number: 1807

Flow Regulator and Vacuum Gauge Serial Number: 080

Vacuum Pump Start Time: 846

Vacuum Pump Stop Time: 859.5

Open Summa Time: 903

Close Summa Time: 908

Sample Time: 903

Pre-Fill Summa Canister Vacuum (in. Hg): –

Post-Fill Summa Canister Vacuum (in. Hg): –

Notes: SHORT LIST C.P on undeveloped lot

Sampler's Signature E. Miller Date: 3·6·15

Soil Vapor Sampling Form – Summa Canisters

Well ID: BSDP-1-200

Site Location: B.P

Well Coordinates: –

Well Diameter: 1"

Well Depth: 200

Total Purge Volume: 381 L

Date: 3.6.15

Project #: 14-2014-2029

Samplers: Eric Miller

Sample ID: BSDP-1-200-SG-030615

QA Sample ID: –

Weather: 60-70

Well Evacuation

Time	Elapsed Time (min)	Purge Rate (cf/min)	Volume Purged (cf)	Vacuum (in. water)	Landfill Gas Concentrations CH4	CO2	O2	PID
initial	–	–	–	–	0.1	0.0	20.2	0.1
920 - 924.5	4.5	1 (scfm)	127	0	7.8	19.1	0.0	7.4
924.5 - 929	↓	↓	↓	0	7.9	19.1	0.0	8.0
929 - 933.5	↓	↓	↓	0	7.8	19.0	0.0	8.2

Sample Collection

Summa Canister Serial Number: 0606

Summa Canister Lab Number: 0606

Flow Regulator and Vacuum Gauge Serial Number: 004

Vacuum Pump Start Time: 920

Vacuum Pump Stop Time: 933.5

Open Summa Time: 935

Close Summa Time: 940

Sample Time: 935

Pre-Fill Summa Canister Vacuum (in. Hg): –

Post-Fill Summa Canister Vacuum (in. Hg): –

Notes: SHORT LIST C.P on undeveloped lot

Sampler's Signature E. Miller Date: 3.6.15

Soil Vapor Sampling Form – Summa Canisters

Well ID: BSAP-1-248

Site Location: B.P

Well Coordinates: –

Well Diameter: 1"

Well Depth: 248

Total Purge Volume: 424.5 L

Date: 3.6.15

Project #: 14-2014-2029

Samplers: Eric Miller

Sample ID: BSAP-1-248-SG-030615

QA Sample ID: –

Weather: 60-70

Well Evacuation

Time	Elapsed Time (min)	Purge Rate (cf/min)	Volume Purged (cf)	Vacuum (in. water)	Landfill Gas Concentrations CH4	CO2	O2	PID
initial	–	–	–	–	0.1	0.0	19.3	0.7
1002 - 1007	5	1 scfm	141.5	0	7.6	18.5	0.0	7.6
1007 - 1012	↓	↓	↓	0	7.7	18.5	0.0	8.0
1012 - 1017				0	7.7	18.6	0.0	7.9

Sample Collection

Summa Canister Serial Number: E2365

Summa Canister Lab Number: E2365

Flow Regulator and Vacuum Gauge Serial Number: 121

Vacuum Pump Start Time: 1002

Vacuum Pump Stop Time: 1017

Open Summa Time: 1020

Close Summa Time: 1025

Sample Time: 1020

Pre-Fill Summa Canister Vacuum (in. Hg): –

Post-Fill Summa Canister Vacuum (in. Hg): –

Notes: SHORT LIST C.P. on undeveloped lot

Sampler's Signature E. Miller Date: 3.6.15

Soil Vapor Sampling Form – Summa Canisters

Well ID: BSDP-1-300.

Site Location: B.P.

Well Coordinates: –

Well Diameter: 1"

Well Depth: 300

Total Purge Volume: 424.5 L

Date: 3.6.15

Project #: 14-2014-2029

Samplers: Eric Miller

Sample ID: BSDP-1-300-SG-030615

QA Sample ID: –

Weather: 60-70

Well Evacuation

Time	Elapsed Time (min)	Purge Rate (cf/min)	Volume Purged (cf)	Vacuum (in. water)	Landfill Gas Concentrations CH4	CO2	O2	PID
initial	–	–	–	–	0.1	0.0	19.9	1.2
1033 - 1038	5	1 scfm	141.5	~~0~~ 1	4.4	12.9	2.0	11.7
1038 - 1043	↓	↓	↓	~~0~~ 1	4.8	13.7	1.3	13.2
1043 - 1048	↓	↓	↓	~~0~~ 1	4.5	13.0	2.0	14.5

Sample Collection

Summa Canister Serial Number: 1852

Summa Canister Lab Number: 1852

Flow Regulator and Vacuum Gauge Serial Number: 095

Vacuum Pump Start Time: 1033

Vacuum Pump Stop Time: 1048

Open Summa Time: 1050

Close Summa Time: 1055

Sample Time: 1050

Pre-Fill Summa Canister Vacuum (in. Hg): –

Post-Fill Summa Canister Vacuum (in. Hg): –

Notes: SHORT LIST C.P on undeveloped lot, tight screen

Sampler's Signature E. Miller Date: 3.6.15

Soil Vapor Sampling Form – Summa Canisters

Well ID: BSDP-1-350

Site Location: B.P

Well Coordinates: -

Well Diameter: 1"

Well Depth: 350

Total Purge Volume: 381 L

Date: 3·6·15

Project #: 14-2014-2029

Samplers: Eric Miller

Sample ID: BSDP-1-350-SG-030615

QA Sample ID: -

Weather: 60-70

Well Evacuation

Time	Elapsed Time (min)	Purge Rate (cf/min)	Volume Purged (cf)	Vacuum (in. water)	Landfill Gas Concentrations CH4	CO2	O2	PID
Initial	-	-	-	-	0.2	0.3	20.2	3.5
1100 - 1104.5	4.5	1 (scfm)	127	2	0.2	0.0	21.0	13.1
1104.5 - 1109	↓	↓	↓	2	0.2	0.0	20.9	10.7
1109 - 1113.5	↓	↓	↓	2	0.2	0.0	21.0	11.9

Sample Collection

Summa Canister Serial Number: 1835

Summa Canister Lab Number: 1835

Flow Regulator and Vacuum Gauge Serial Number: 067

Vacuum Pump Start Time: 1100

Vacuum Pump Stop Time: 1113.5

Open Summa Time: 1115

Close Summa Time: 1120

Sample Time: 1115

Pre-Fill Summa Canister Vacuum (in. Hg): -

Post-Fill Summa Canister Vacuum (in. Hg): -

Notes: (Short list), C.P on undeveloped lot, tight screen

Sampler's Signature E. Miller Date: 3·6·15

Soil Vapor Sampling Form – Summa Canisters

Well ID: BSDP-Z-100

Site Location: B.P.

Well Coordinates: –

Well Diameter: 1"

Well Depth: 100

Total Purge Volume: 339L

Date: 3·6·15

Project #: 14-2014-2029

Samplers: Eric Miller

Sample ID: BSDP-Z-100-SG-030615

QA Sample ID: –

Weather: 60-70

Well Evacuation

Time	Elapsed Time (min)	Purge Rate (cf/min)	Volume Purged (cf)	Vacuum (in. water)	Landfill Gas Concentrations CH4	CO2	O2	PID
Initial	4	~~1(scfm)~~	—	—	0.1	0.0	21.0	1.3
1217 - 1221	4	1(scfm)	113	0	10.0	19.2	0.0	7.0
1221 - 1225	↓	↓	↓	0	10.0	19.7	0.0	8.6
1225 - 1229				0	10.0	19.6	00	6.4

Sample Collection

Summa Canister Serial Number: E2293

Summa Canister Lab Number: E2293

Flow Regulator and Vacuum Gauge Serial Number: 032

Vacuum Pump Start Time: 1217

Vacuum Pump Stop Time: 1229

Open Summa Time: 1232

Close Summa Time: 1237

Sample Time: 1232

Pre-Fill Summa Canister Vacuum (in. Hg): –

Post-Fill Summa Canister Vacuum (in. Hg): –

Notes: SHORT LIST C.P on V.L.

Sampler's Signature E. Miller Date: 3·6·15

Soil Vapor Sampling Form – Summa Canisters

Well ID: BSDP-2-150

Site Location: B.P

Well Coordinates: -

Well Diameter: 1"

Well Depth: 150

Total Purge Volume: 381 L

Date: 3·6·15

Project #: 14-2014-2029

Samplers: Eric Miller

Sample ID: BSDP-2-150-SG-030615

QA Sample ID: -

Weather: 60-70

Well Evacuation

Time	Elapsed Time (min)	Purge Rate (cf/min)	Volume Purged (cf)	Vacuum (in. water)	Landfill Gas Concentrations CH4	CO2	O2	PID
initial	-	-	-	-	0.1	0.0	20.4	1.5
1242 - 1246.5	4.5	1 scfm	127	0	8.1	19.0	0.0	6.6
1246.5 - 1251	↓	↓	↓	0	8.0	18.9	0.0	7.3
1251 - 1255.5	↓	↓	↓	0	7.9	18.9	0.0	6.9

Sample Collection

Summa Canister Serial Number: 1879

Summa Canister Lab Number: 1879

Flow Regulator and Vacuum Gauge Serial Number: 053

Vacuum Pump Start Time: 1242

Vacuum Pump Stop Time: 1255.5

Open Summa Time: 1258

Close Summa Time: 1303

Sample Time: 1258

Pre-Fill Summa Canister Vacuum (in. Hg): -

Post-Fill Summa Canister Vacuum (in. Hg): -

Notes: SHORT LIST C.P on U.L.

Sampler's Signature E. Mlh Date: 3·6·15

Soil Vapor Sampling Form – Summa Canisters

Well ID: BSDP-2-200

Site Location: B.P

Well Coordinates: -

Well Diameter: 1"

Well Depth: 200

Total Purge Volume: 381 L

Date: 3.6.15

Project #: 14-2014-2029

Samplers: Eric Miller

Sample ID: BSDP-2-200-SG-030615

QA Sample ID: -

Weather: 60-70

Well Evacuation

Time	Elapsed Time (min)	Purge Rate (cf/min)	Volume Purged (cf)	Vacuum (in. water)	Landfill Gas Concentrations CH4	CO2	O2	PID
Initial	-	-	-	-	0.1	0.3	20.0	2.5
1308 - 1312.5	4.5	1 scfm	127	0	6.2	17.5	0.2	5.7
1312.5 - 1317	↓	↓	↓	0	6.2	17.5	0.1	5.4
1317 - 1321.5	↓	↓	↓	0	6.3	17.17	0.0	6.0

Sample Collection

Summa Canister Serial Number: 1878

Summa Canister Lab Number: 1878

Flow Regulator and Vacuum Gauge Serial Number: 040

Vacuum Pump Start Time: 1308

Vacuum Pump Stop Time: 1321.5

Open Summa Time: 1323

Close Summa Time: 1328

Sample Time: 1323

Pre-Fill Summa Canister Vacuum (in. Hg): -

Post-Fill Summa Canister Vacuum (in. Hg): -

Notes: SHORT LIST C.P on O.L.

Sampler's Signature E. Miller Date: 3.6.15

Soil Vapor Sampling Form – Summa Canisters

Well ID: BSDP-2-250

Site Location: B.P.

Well Coordinates: -

Well Diameter: 1"

Well Depth: 250

Total Purge Volume: ~~242.5~~ L 424.5 L

Date: 3·6·15

Project #: 14-2014-2029

Samplers: Eric Miller

Sample ID: BSDP-2-250-SG-030615

QA Sample ID: —

Weather: 60-70

Well Evacuation

Time	Elapsed Time (min)	Purge Rate (cf/min)	Volume Purged (cf)	Vacuum (in. water)	Landfill Gas Concentrations CH4	CO2	O2	PID
initial	—	—	—	—	0.4	0.6	19.0	2.7
1333 - 1338	5	1 scfm	141.5	0	6.5	14.0	0.0	6.3
1338 - 1343	↓	↓	↓	0	6.5	14.0	0.0	7.0
1343 - 1348				0	6.4	13.9	0.0	6.9

Sample Collection

Summa Canister Serial Number: 1856

Summa Canister Lab Number: 1856

Flow Regulator and Vacuum Gauge Serial Number: 139

Vacuum Pump Start Time: 1333

Vacuum Pump Stop Time: 1348

Open Summa Time: 1350

Close Summa Time: 1355

Sample Time: 1350

Pre-Fill Summa Canister Vacuum (in. Hg): —

Post-Fill Summa Canister Vacuum (in. Hg): —

Notes: SHORT LIST C.P on U.L.

Sampler's Signature E. Miller Date: 3·6·15

Soil Vapor Sampling Form – Summa Canisters

Well ID: BSDP-2-300

Site Location: B.P.

Well Coordinates: -

Well Diameter: 1"

Well Depth: 300

Total Purge Volume: 424.5 L

Date: 3·6·15

Project #: 14-2014-2029

Samplers: Eric Miller

Sample ID: BSDP-2-300-SG-030615

QA Sample ID: -

Weather: 60-70

Well Evacuation

Time	Elapsed Time (min)	Purge Rate (cf/min)	Volume Purged (cf)	Vacuum (in. water)	Landfill Gas Concentrations CH4	CO2	O2	PID
initial	-	-	-	-	0.1	1.2	19.0	2.1
1402 - 1407	5	1 (cfm)	141.5	0	4.9	9.7	0.9	7.7
1407 - 1412	↓	↓	↓	0	4.1	9.3	0.2	6.5
1412 - 1417	↓	↓	↓	0	4.0	8.4	0.0	6.3

Sample Collection

Summa Canister Serial Number: E2367

Summa Canister Lab Number: E2367

Flow Regulator and Vacuum Gauge Serial Number: 134

Vacuum Pump Start Time: 1402

Vacuum Pump Stop Time: 1417

Open Summa Time: 1420

Close Summa Time: 1425

Sample Time: 1420

Pre-Fill Summa Canister Vacuum (in. Hg): -

Post-Fill Summa Canister Vacuum (in. Hg): -

Notes: SHORT LIST C.P on O.L.

Sampler's Signature E. Mill Date: 3·6·15

Soil Vapor Sampling Form – Summa Canisters

Well ID: BSDP-2-350-

Site Location: B.P

Well Coordinates: –

Well Diameter: 1"

Well Depth: 350

Total Purge Volume: 381 L

Date: 3.6.15

Project #: 14-2014-2029

Samplers: ERIC MILLER

Sample ID: BSDP-2-350-SG-030615-

QA Sample ID: BSDP-2-350-SG-030615-DUP

Weather: 60-70

Well Evacuation

Time	Elapsed Time (min)	Purge Rate (cf/min)	Volume Purged (cf)	Vacuum (in. water)	Landfill Gas Concentrations CH4	CO2	O2	PID
initial	–	–	–	–	0.4	0.2	19.0	4.3
1430 - 1434.5	4.5	1 scfm	127	2	0.2	0.2	19.1	10.2
1434.5 - 1439	↓	↓	↓	2	0.2	0.3	19.1	10.3
1439 - 1443.5	↓	↓	↓	2	0.2	0.4	19.0	9.8

Sample Collection

	PARENT	DUPLICATE
Summa Canister Serial Number:	1842	E2104
Summa Canister Lab Number:	1842	E2104
Flow Regulator and Vacuum Gauge Serial Number:	120	122
Vacuum Pump Start Time:	1430	1430
Vacuum Pump Stop Time:	1443.5	1443.5
Open Summa Time:	~~1430~~ 1450	1450
Close Summa Time:	1455	1455
Sample Time:	1450	1450
Pre-Fill Summa Canister Vacuum (in. Hg):	–	–
Post-Fill Summa Canister Vacuum (in. Hg):	–	–

Notes: SHORT LIST AEL EQUIPMENT #SPL-4

Sampler's Signature E. Miller Date: 3.6.15

Soil Vapor Sampling Form – Summa Canisters

Well ID: BSDP-3-50

Site Location: BP

Well Coordinates: –

Well Diameter: 1"

Well Depth: 50

Total Purge Volume: 240 L

Date: 3.10.15

Project #: 14-2014-2029

Samplers: Eric Miller

Sample ID: BSDP-3-50-031015

QA Sample ID: –

Weather: 65-75

Well Evacuation

Time	Elapsed Time (min)	Purge Rate (cf/min)	Volume Purged (cf)	Vacuum (in. water)	Landfill Gas Concentrations CH4	CO2	O2	PID
initial	–	~~80~~	–	–	0.0	0.0	16.4	2.7
1220 - 1224	4	20	80	0	7.6	18.3	0.2	5.0
1224 - 1228	4	20	80	0	7.5	18.3	0.1	5.3
1228 - 1232	4	20	80	0	7.6	18.4	0.0	5.8

Sample Collection

Summa Canister Serial Number: E2391

Summa Canister Lab Number: E2391

Flow Regulator and Vacuum Gauge Serial Number: 055

Vacuum Pump Start Time: 1220

Vacuum Pump Stop Time: 1232

Open Summa Time: 1235

Close Summa Time: 1240

Sample Time: 1235

Pre-Fill Summa Canister Vacuum (in. Hg): –

Post-Fill Summa Canister Vacuum (in. Hg): –

Notes: SHORT LIST C.P.U.L.

Sampler's Signature E. Miller Date: 3.10.15

Soil Vapor Sampling Form – Summa Canisters

Well ID: BSAP-3-100

Site Location: B.P

Well Coordinates: -

Well Diameter: 1"

Well Depth: 100

Total Purge Volume: 250 L

Date: 3.10.15

Project #: 14-2014-2029

Samplers: ERIC MILLER

Sample ID: BSAP-3-100-031015

QA Sample ID: -

Weather: 65-75

Well Evacuation

Time	Elapsed Time (min)	Purge Rate (cf/min)	Volume Purged (cf)	Vacuum (in. water)	Landfill Gas Concentrations CH4	CO2	O2	PID
initial	-	-	-	-	0.0	0.0	19.8	0.1
1245 - 1249	4	20	80	0	4.2	16.8	0.0	2.5
1249 - 1253	4	20	80	0	4.2	16.7	0.0	2.8
1253 - 1257.5	4.5	20	90	0	4.5	16.7	00	2.7

Sample Collection

Summa Canister Serial Number: E2397

Summa Canister Lab Number: E2397

Flow Regulator and Vacuum Gauge Serial Number: 132

Vacuum Pump Start Time: 1245

Vacuum Pump Stop Time: 1257.5

Open Summa Time: 1300

Close Summa Time: 1305

Sample Time: 1300

Pre-Fill Summa Canister Vacuum (in. Hg): -

Post-Fill Summa Canister Vacuum (in. Hg): -

Notes: SHORTLIST C.P.U.L

Sampler's Signature E. Miller Date: 3.10.15

Soil Vapor Sampling Form – Summa Canisters

Well ID: BSDP-3-150

Site Location: B.P

Well Coordinates: –

Well Diameter: 1"

Well Depth: 150

Total Purge Volume: 300 L

Date: 3·10·15

Project #: 14-2014-2029

Samplers: Eric Miller

Sample ID: BSDP-3-150-031015

QA Sample ID: –

Weather: 65-75

Well Evacuation

Time	Elapsed Time (min)	Purge Rate (cf/min)	Volume Purged (cf)	Vacuum (in. water)	Landfill Gas Concentrations CH4	CO2	O2	PID
initial	–	–	–	–	0.1	0.4	19.9	0.6
1310 - 1315	5	20	100	0	2.8	14.8	0.0	2.6
1315 - 1320	↓	20	↓	0	2.7	14.8	0.0	2.9
1320 - ~~1330~~ 1325	↓	20	↓	0	2.7	14.8	0.0	2.4

Sample Collection

Summa Canister Serial Number: 1809

Summa Canister Lab Number: 1809

Flow Regulator and Vacuum Gauge Serial Number: 145

Vacuum Pump Start Time: 1310

Vacuum Pump Stop Time: 1325

Open Summa Time: 1327

Close Summa Time: 1332

Sample Time: 1327

Pre-Fill Summa Canister Vacuum (in. Hg): –

Post-Fill Summa Canister Vacuum (in. Hg): –

Notes: SHORT LIST C.P.U.L

Sampler's Signature E. Miller Date: 3·10·15

Soil Vapor Sampling Form – Summa Canisters

Well ID: BSDP-4-48

Site Location: B.P

Well Coordinates: –

Well Diameter: 1"

Well Depth: 48

Total Purge Volume: 240L

Date: 3.10.15

Project #: 14-2014-2029

Samplers: Eric Miller

Sample ID: BSDP-4-48-031015

QA Sample ID: –

Weather: 65-75

Well Evacuation

Time	Elapsed Time (min)	Purge Rate (cf/min)	Volume Purged (cf)	Vacuum (in. water)	Landfill Gas Concentrations CH4	CO2	O2	PID
Initial	–	–	–	–	0.6	5.1	12.6	2.0
1346 - 1350	4	20	80	0	9.1	17.9	0.0	6.1
1350 - 1354	4	20	80	0	9.1	17.9	0.0	6.0
1354 - 1358	4	20	80	0	9.1	17.9	0.0	5.8

Sample Collection

Summa Canister Serial Number: 1793

Summa Canister Lab Number: 1793

Flow Regulator and Vacuum Gauge Serial Number: 047

Vacuum Pump Start Time: 1346

Vacuum Pump Stop Time: 1358

Open Summa Time: 1400

Close Summa Time: 1405

Sample Time: 1400

Pre-Fill Summa Canister Vacuum (in. Hg): –

Post-Fill Summa Canister Vacuum (in. Hg): –

Notes: SHORT LIST C.P.U.L.

Sampler's Signature E. Miller Date: 3.10.15

Soil Vapor Sampling Form – Summa Canisters

Well ID: BSDP-4-100

Site Location: B.P

Well Coordinates: –

Well Diameter: 1"

Well Depth: 100

Total Purge Volume: 250 L

Date: 3.10.15

Project #: 14-2014-2029

Samplers: Eric Miller

Sample ID: BSDP-4-100-031015

QA Sample ID: –

Weather: 65-75

Well Evacuation

Time	Elapsed Time (min)	Purge Rate (cf/min)	Volume Purged (cf)	Vacuum (in. water)	Landfill Gas Concentrations CH4	CO2	O2	PID
initial	–	–	–	–	1.5	2.3	15.5	0.8
1419 - 1423	4	20	80	0	8.7	16.7	0.0	1.2
1423 - 1427	4	↓	80	0	8.6	16.7	0.0	1.9
1427 - 1431.5	4.5		90	0	8.5	16.5	0.0	2.4

Sample Collection

Summa Canister Serial Number: 1865

Summa Canister Lab Number: 1865

Flow Regulator and Vacuum Gauge Serial Number: 127

Vacuum Pump Start Time: 1419

Vacuum Pump Stop Time: 1431.5

Open Summa Time: 1433

Close Summa Time: 1438

Sample Time: 1433

Pre-Fill Summa Canister Vacuum (in. Hg): –

Post-Fill Summa Canister Vacuum (in. Hg): –

Notes: SHORT LIST C.P.UL.

Sampler's Signature E. Miller Date: 3.10.15

Soil Vapor Sampling Form – Summa Canisters

Well ID: BSDP-4-150

Site Location: B.P

Well Coordinates: -

Well Diameter: 1"

Well Depth: 150'

Total Purge Volume: 300 L

Date: 3.10.15

Project #: 14-2014-2029

Samplers: Eric Miller

Sample ID: BSDP-4-150-031015

QA Sample ID: -

Weather: 65-75

Well Evacuation

Time	Elapsed Time (min)	Purge Rate (cf/min)	Volume Purged (cf)	Vacuum (in. water)	Landfill Gas Concentrations CH4	CO2	O2	PID
Initial	-	-	-	-	8.5	14.7	1.0	0.1
1445 - 1450	5	200	100	0	9.0	14.8	0.0	~~0.9~~ 3.9
1450 - 1455	↓	↓	↓	0	8.9	14.7	0.0	3.6
1455 - 1500				0	8.9	14.7	0.0	4.2

Sample Collection

Summa Canister Serial Number: E2352

Summa Canister Lab Number: E2352

Flow Regulator and Vacuum Gauge Serial Number: 078

Vacuum Pump Start Time: 1445

Vacuum Pump Stop Time: 1500

Open Summa Time: 1503

Close Summa Time: 1508

Sample Time: 1503

Pre-Fill Summa Canister Vacuum (in. Hg): -

Post-Fill Summa Canister Vacuum (in. Hg): -

Notes: SHORT LIST C.P.U.L

Sampler's Signature E. Miller Date: 3.10.15

Soil Vapor Sampling Form – Summa Canisters

Well ID: WR-434A-50

Site Location: YMCA / Park

Well Coordinates: –

Well Diameter: .5

Well Depth: 50

Total Purge Volume: (EM) ~~475~~ / 510 L

Date: 3.5.15

Project #: 14-2014-2029

Samplers: Eric Miller

Sample ID: WR-434A-50-SG-030515

QA Sample ID: –

Weather: 60-70

Well Evacuation (28.317L)

Time	Elapsed Time (min)	Purge Rate (cf/min)	Volume Purged (cf)	Vacuum (in. water)	Landfill Gas Concentrations CH4	CO2	O2	PID
Initial	–	–	–	–	0.0	11.6	5.0	1.6
1302 - 1308	6	1 scfm	170	0	0.0	12.8	5.3	0.4
1308 - 1314	6	↓	170	0	0.0	13.5	5.4	0.0
1314 - 1320	6	↓	170	0	0.0	14.6	5.7	0.0

Sample Collection

Summa Canister Serial Number: 1877

Summa Canister Lab Number: 1877

Flow Regulator and Vacuum Gauge Serial Number: 006

Vacuum Pump Start Time: 1302

Vacuum Pump Stop Time: 1320

Open Summa Time: 1322

Close Summa Time: 1327

Sample Time: 1322

Pre-Fill Summa Canister Vacuum (in. Hg): –

Post-Fill Summa Canister Vacuum (in. Hg): –

Notes: Short list / Concrete pad on grass

Sampler's Signature E. Miller Date: 3.5.15

Soil Vapor Sampling Form – Summa Canisters

Well ID: WR-434A-150

Site Location: YMCA / PARK

Well Coordinates: –

Well Diameter: .5

Well Depth: 150

Total Purge Volume: 510 ~~500~~ L

Date: 3·5·15

Project #: 14-2014-2029

Samplers: Eric Miller

Sample ID: WR-434A-150-SG-030515

QA Sample ID: –

Weather: 60-70

Well Evacuation

Time	Elapsed Time (min)	Purge Rate (cf/min)	Volume Purged (cf)	Vacuum (in. water)	Landfill Gas Concentrations CH4	CO2	O2	PID
initial	–	–	–	–	0.0	0.0	21.0	0.4
1345 - 1351	6	1 (scfm)	170	0	0.0	6.8	12.5	0.2
1351 - 1357	6	1 (scfm)	170	0	0.0	7.2	13.2	0.0
1357 - 1403	6	1 (scfm)	170	0	0.0	7.5	13.8	0.0

Sample Collection

Summa Canister Serial Number: E2404

Summa Canister Lab Number: E2404

Flow Regulator and Vacuum Gauge Serial Number: 020

Vacuum Pump Start Time: 1345

Vacuum Pump Stop Time: 1403

Open Summa Time: 1410

Close Summa Time: 1415

Sample Time: 1410

Pre-Fill Summa Canister Vacuum (in. Hg): –

Post-Fill Summa Canister Vacuum (in. Hg): –

Notes: SHORT LIST / Concrete pad on grass

Sampler's Signature E Miller Date: 3·5·15

Soil Vapor Sampling Form – Summa Canisters

Well ID: WR-434A-250

Site Location: YMCA/PARK

Well Coordinates: –

Well Diameter: .5

Well Depth: 250

Total Purge Volume: EM ~~500L~~ 510L

Date: 3.5.15

Project #: 14-2014-2029

Samplers: Eric Miller

Sample ID: WR-434A-250-SG-030515

QA Sample ID: –

Weather: 60-70

Well Evacuation

Time	Elapsed Time (min)	Purge Rate (cf/min)	Volume Purged (cf)	Vacuum (in. water)	Landfill Gas Concentrations CH4	CO2	O2	PID
Initial	–	–	–	–	0.0	0.0	20.9	2.0
1425 - 1431	6	1 (scfm)	170	0	1.6	19.9	0.5	0.1
1431 - 1437	↓	↓	170	0	0.0	0.0	18.9	0.0
1437 - 1443 ~~1503~~	↓	↓	170	0	0.0	0.0	20.9	0.0

Sample Collection

Summa Canister Serial Number: 1881

Summa Canister Lab Number: 1881

Flow Regulator and Vacuum Gauge Serial Number: 109

Vacuum Pump Start Time: 1425

Vacuum Pump Stop Time: 1443

Open Summa Time: 1445

Close Summa Time: 1450

Sample Time: 1445

Pre-Fill Summa Canister Vacuum (in. Hg): –

Post-Fill Summa Canister Vacuum (in. Hg): –

Notes: SHORT LIST / Concrete pad on grass

Sampler's Signature: E. Miller

Date: 3.5.15

Soil Vapor Sampling Form – Summa Canisters

Well ID: WR-434A-350

Site Location: YMCA / PARK

Well Coordinates: –

Well Diameter: .5

Well Depth: 350

Total Purge Volume: 510L

Date: 3.5.15

Project #: 14-2014-2029

Samplers: ERIC MILLER

Sample ID: WR-434A-350-SG-030515

QA Sample ID: –

Weather: 60-70

Well Evacuation

Time	Elapsed Time (min)	Purge Rate (cf/min)	Volume Purged (cf)	Vacuum (in. water)	Landfill Gas Concentrations CH4	CO2	O2	PID
initial	–	–	–	–	0.1	0.0	21.0	0.0
1455 - 1501	6	1 (scfm)	170	0	2.3	5.0	0.0	0.0
1501 - 1507	6	↓	170	0	2.3	5.0	0.0	0.0
1507 - 1513	6	↓	170	0	2.1	5.1	0.0	0.0

Sample Collection

Summa Canister Serial Number: E2283

Summa Canister Lab Number: E2283

Flow Regulator and Vacuum Gauge Serial Number: 069

Vacuum Pump Start Time: 1455

Vacuum Pump Stop Time: 1513

Open Summa Time: 1515

Close Summa Time: 1520

Sample Time: 1515

Pre-Fill Summa Canister Vacuum (in. Hg): –

Post-Fill Summa Canister Vacuum (in. Hg): –

Notes: SHORT LIST / Concrete pad on grass

Sampler's Signature E. Miller Date: 3.5.15

Airtech Environmental Laboratories (AEL)

Chain of Custody

4620 E.Elwood Street, Suite 13, Phoenix, AZ 85040 480-968-5888 (phone) 480-966-1888 (fax)

Customer: AMEC	Page 1 of ____		AEL Lab #
Address: 4600 E WASHINGTON ST #600	Sampler: ERIC MILLER	Phone: 602.300.8313	
	Project Name: BROADWAY PANTANA	Project Number: 14-2014-2029	
City, State, Zip: PHOENIX, AZ	Project location: TUCSON, AZ		
Contact: Alex Y.	P.O. Number:		
Phone: / Fax:	Fax Results: Y N		
E-Mail Address: Alex.Yiannakakis@amec.com	E-Mail Results: (Y) N		

Sample Receipt

Temperature_____ °C

Custody Seals: Yes_____ No_____

Custody Seals Intact: Yes_____ No_____

Total # of Containers:_____

Turn Around Request

____ 24 Hours ____ 48 Hours

____ 72 Hours

____ 5 working Day

X Standard 10 Working Days

Sample Type

SVE: soil vapor extraction

A: ambient air

I: indoor air

(S) soil vapor

W: water

GW: ground water

WW: waste water

Analyses Requested

Sample Information

AEL Lab #	Serial # Canister	Serial # Grab	Canister (L) or bag	Grab (Min)	Client's Sample Identification	Sampled Date	Sampled Time	Sample Type	Number of Containers	TO-15 full list	TO-15 TPH(GRO)	TO-15 Selet List	8260B AZ Vapor full list	8260B Vapor select list	8015 GRO	8260B Water			
	E2407	082	6 (1) bag	1 2 (5)	PROD-7-SG-030915	3.9.15	1443	S	1	X									
	E2094	136	6 (1) bag	1 2 (5)	PROD-4-SG-030915	↓	1525	↓	↓	X									
	E2393	050	6 (1) bag	1 2 (5)	PROD-3-SG-030915	↓	1553	↓	↓	X									
	E2412	037	6 (1) bag	1 2 (5)	PROD-19-SG-030915	↓	1630	↓	↓	X									
	1817	073	6 (1) bag	1 2 (5)	PROD-18-SG-030915	↓	1705	↓	↓	X									
	E2294	074	6 (1) bag	1 2 (5)	PROD-17-SG-030915	↓	1733	↓	↓	X									
	1886	137	6 (1) bag	1 2 (5)	PROD-16-SG-030915	↓	1800	↓	↓	X									
	E2103	116	6 (1) bag	1 2 (5)	MW-9-SG-031015	3.10.15	915	↓	↓	X									
	1881	140	6 (1) bag	1 2 (5)	MW-8-SG-031015	↓	945	↓	↓	X									
	E2350	126	6 (1) bag	1 2 (5)	MW-8-SG-031015-DUP	↓	945	↓	↓	X									

Instructions / Special Requirements:

Date:	Time:	Samples Relinquished By:	Received By:
3.12.15	820	E. Miller	[signature]

Airtech Environmental Laboratories (AEL)

Chain of Custody

4620 E.Elwood Street, Suite 13, Phoenix, AZ 85040 480-968-5888 (phone) 480-966-1888 (fax)

Customer:	AMEC F/W	Page 1 of 2	AEL Lab #
Address:	4600 E WASHINGTON ST #600	Sampler: ERIC MILLER Phone: 602.300.8313	
		Project Name: BROADWAY PANTANA Project Number: 14-2014-2029	
City, State, Zip:	PHOENIX, AZ	Project location: TUCSON, AZ	
Contact:	ALEX Y	P.O. Number:	
Phone:	Fax:	Fax Results: Y N	
E-Mail Address:	Alex.Yiannakakis@amec.com	E-Mail Results: (Y) N	

Sample Receipt

Temperature_____ °C
Custody Seals: Yes_____ No_____
Custody Seals Intact: Yes_____ No_____
Total # of Containers:_____

Turn Around Request

_____ 24 Hours _____ 48 Hours
_____ 72 Hours
_____ 5 working Day
(✓) Standard 10 Working Days

Sample Type

SVE: soil vapor extraction
A: ambient air
I: indoor air
S: soil vapor
W: water
GW: ground water
WW: waste water

Analyses Requested

Sample Information

AEL Lab #	Serial # Canister	Serial # Grab	Canister (L) or bag	Grab (Min)	Client's Sample Identification	Sampled Date	Sampled Time	Sample Type	Number of Containers	TO-15 full list	TO-15 TPH(GRO)	TO-15 Selet List	8260B AZ Vapor full list	8260B Vapor select list	8015 GRO	8260B Water	TO-15 (SHORT LIST)		
	E2364	110	6 (1) bag	1 2 (5)	ARUD-1-SG-030515	3.5.15	1150	S	1	X									
	1877	006	6 (1) bag	1 2 (5)	WR-434A-50-SG-030515	↓	1322	↓	↓								X		
	E2404	020	6 (1) bag	1 2 (5)	WR-434A-150-SG-030515	↓	1410	↓	↓								X		
	1881	109	6 (1) bag	1 2 (5)	WR-434A-250-SG-030515	↓	1445	↓	↓								X		
	E2283	069	6 (1) bag	1 2 (5)	WR-434A-350-SG-030515	↓	1515	↓	↓								X		
	1800	147	6 (1) bag	1 2 (5)	BSAP-1-100-SG-030615	3.6.15	830	S	1								X		
	1807	080	6 (1) bag	1 2 (5)	BSAP-1-150-SG-030615	↓	903	↓	↓								X		
	0606	004	6 (1) bag	1 2 (5)	BSAP-1-200-SG-030615	↓	935	↓	↓								X		
	E2365	121	6 (1) bag	1 2 (5)	BSAP-1-248-SG-030615	↓	1020	↓	↓								X		
	1852	095	6 (1) bag	1 2 (5)	BSAP-1-300-SG-030615	↓	1050	↓	↓								X		

Instructions / Special Requirements:

Date:	Time:	Samples Relinquished By:	Received By:
3.9.15	650	E. McCh	[signature]

Airtech Environmental Laboratories (AEL)

Chain of Custody

4620 E.Elwood Street, Suite 13, Phoenix, AZ 85040 480-968-5888 (phone) 480-966-1888 (fax)

Customer: AMEC F/W	Page 2 of 2		AEL Lab #
Address: 4600 EAST WASHINGTON #600	Sampler: ERIC MILLER	Phone: 602.300.8313	
	Project Name: BROADWAY PANTANA	Project Number: 142014 2027	
City, State, Zip: PHOENIX, AZ	Project location: TUCSON, AZ		
Contact: Alex Y.	P.O. Number:		
Phone: Fax:	Fax Results: Y N		
E-Mail Address: Alex.Yiannakakis@amec.com	E-Mail Results: Y N		

Sample Receipt

Temperature_____ °C

Custody Seals: Yes_____ No_____

Custody Seals Intact: Yes_____ No_____

Total # of Containers:_____

Turn Around Request

_____ 24 Hours _____ 48 Hours

_____ 72 Hours

_____ 5 working Day

X Standard 10 Working Days

Sample Type

SVE: soil vapor extraction GW: ground water

A: ambient air WW: waste water

I: indoor air

S: soil vapor

W: water

Sample Information

AEL Lab #	Serial # Canister	Serial # Grab	Canister (L) or bag	Grab (Min)	Client's Sample Identification	Sampled Date	Sampled Time	Sample Type	Number of Containers	TO-15 full list	TO-15 TPH(GRO)	TO-15 Selet List	8260B AZ Vapor full list	8260B Vapor select list	8015 GRO	8260B Water	TO-15 (SHORT LIST)		
	1835	067	6 1 bag	1 2 5	BSDP-1-350-SG-030615	3.6.15	1115	S	1								X		
	E2293	032	6 1 bag	1 2 5	BSDP-2-100-SG-030615	↓	1232	↓	↓								X		
	1879	053	6 1 bag	1 2 5	BSDP-2-150-SG-030615	↓	1258	↓	↓								X		
	1878	040	6 1 bag	1 2 5	BSDP-2-200-SG-030615	↓	1323	↓	↓								X		
	1856	139	6 1 bag	1 2 5	BSDP-2-250-SG-030615	↓	1350	↓	↓								X		
	E2367	134	6 1 bag	1 2 5	BSDP-2-300-SG-030615	↓	1420	↓	↓								X		
	1842	120	6 1 bag	1 2 5	BSDP-2-350-SG-030615	↓	1450	↓	↓								X		
	E2104	122	6 1 bag	1 2 5	BSDP-2-350-SG-030615-DUP	↓	1450	↓	↓								X		
			6 1 bag	1 2 5															
			6 1 bag	1 2 5															

Instructions / Special Requirements:

Date:	Time:	Samples Relinquished By:	Received By:
3.9.15	650	E. Miller	[illegible]

Airtech Environmental Laboratories (AEL)

Chain of Custody

4620 E.Elwood Street, Suite 13, Phoenix, AZ 85040 480-968-5888 (phone) 480-966-1888 (fax)

Customer: AMEC F/W	Page 2 of 3		AEL Lab #
Address: 4600 E WASHINGTON ST #600	Sampler: ERIC MILLER	Phone: 602.300.8313	15-C013
	Project Name: BROADWAY PANTANA	Project Number: 14-2014-2029	
City, State, Zip: PHOENIX, AZ	Project location: TUCSON, AZ		
Contact: Alex Y.	P.O. Number:		
Phone: / Fax:	Fax Results: Y N		
E-Mail Address: Alex.Yiannakakis@amec.com	E-Mail Results: Y N		

Sample Receipt	Turn Around Request	Sample Type
Temperature_____ °C	____ 24 Hours ____ 48 Hours	SVE: soil vapor extraction GW: ground water
Custody Seals: Yes____ No____	____ 72 Hours	A: ambient air WW: waste water
Custody Seals Intact: Yes____ No____	____ 5 working Day	I: indoor air
Total # of Containers:_____	X Standard 10 Working Days	S soil vapor
		W: water

Sample Information

AEL Lab #	Serial # Canister	Serial # Grab	Canister (L) or bag	Grab (Min)	Client's Sample Identification	Sampled Date	Sampled Time	Sample Type	Number of Containers	TO-15 full list	TO-15 TPH(GRO)	TO-15 Selet List	8260B AZ Vapor full list	8260B Vapor select list	8015 GRO	8260B Water	TO-15 (SHORT LIST)		
11	E2387	070	6 1 bag	1 2 5	MW-7-SG-031015	3.10.15	1023	S	1	X									
12	E2087	106	6 1 bag	1 2 5	MW-6-SG-031015		1057			X									
13	E2391	055	6 1 bag	1 2 5	BSDP-3-50 SG-031015		1235										X		
14	E2397	132	6 1 bag	1 2 5	BSDP-3-100 SG-031015		1300										X		
15	1809	145	6 1 bag	1 2 5	BSDP-3-150 SG-031015		1327										X		
16	1793	047	6 1 bag	1 2 5	BSDP-4-~~50~~ SG-031015		1400		50								X		
17	1865	127	6 1 bag	1 2 5	BSDP-4-100 SG-031015		1433										X		
18	E2352	078	6 1 bag	1 2 5	BSDP-4-150 SG-031015		1503										X		
19	1839	107	6 1 bag	1 2 5	BP-23-200-SG-031115	3.11.15	750										X		
20	016	1794	6 1 bag	1 2 5	BP-23-250-SG-031115		820										X		

Instructions / Special Requirements:

Date:	Time:	Samples Relinquished By:	Received By:
3.12.15	820	E. Miller	[signature]

Airtech Environmental Laboratories (AEL)

Chain of Custody

4620 E.Elwood Street, Suite 13, Phoenix, AZ 85040 480-968-5888 (phone) 480-966-1888 (fax)

Customer: AMEC FW	Page 3 of 3		AEL Lab #
Address: 4600 E WASHINGTON ST #600	Sampler: ERIC MILLER	Phone: 6023008313	15C013
	Project Name: BROADWAY PANTANA	Project Number: 14-2014-2029	
City, State, Zip: PHOENIX, AZ	Project location: TUCSON, AZ		
Contact: Alex Y.	P.O. Number:		
Phone: / Fax:	Fax Results: Y N		
E-Mail Address: Alex.Yiannakakis@amec.com	E-Mail Results: Y N		

Sample Receipt	Turn Around Request	Sample Type
Temperature_____ °C	____ 24 Hours ____ 48 Hours	SVE: soil vapor extraction GW: ground water
Custody Seals: Yes_____ No_____	____ 72 Hours	A: ambient air WW: waste water
Custody Seals Intact: Yes_____ No_____	____ 5 working Day	I: indoor air
Total # of Containers:_____	X Standard 10 Working Days	S: soil vapor
		W: water

Sample Information

AEL Lab #	Serial # Canister	Serial # Grab	Canister (L) or bag	Grab (Min)	Client's Sample Identification	Sampled Date	Sampled Time	Sample Type	Number of Containers	TO-15 full list	TO-15 TPH(GRO)	TO-15 Selet List	8260B AZ Vapor full list	8260B Vapor select list	8015 GRO	8260B Water	TO-15 (SHORT LIST)		
21	E2370	018	6 1 bag	1 2 5	BP-23-300-SG-031115	3.11.15	850	S	1								X		
22	1858	091	6 1 bag	1 2 5	BP-23-~~250~~ 245-SG-031115		955			350							X		
23	1864	081	6 1 bag	1 2 5	BP-23-~~445-SG-031115-DUP~~		955			350							X		
24	E2089	024	6 1 bag	1 2 5	BP-22-200-SG-031115		1049										X		
25	E2406	045	6 1 bag	1 2 5	BP-22-250-SG-031115		1110										X		
26	1816	142	6 1 bag	1 2 5	BP-22-300-SG-031115		1145			350							X		
27	~~E2406~~ 1797 EM	~~1444~~ 128 EM	6 1 bag	1 2 5	BP-22-~~435-SG-031115~~		1243			EM							X		
28	E2371	115	6 1 bag	1 2 5	MW-5-SG-031115		1513			X									
			6 1 bag	1 2 5															
			6 1 bag	1 2 5															

Instructions / Special Requirements:

Date:	Time:	Samples Relinquished By:	Received By:
3.12.15	820	E. Miller	[signature]

APPENDIX D

ANALYTICAL REPORTS

Airtech Environmental Laboratories (AEL)
4620 E.Elwood St., Suite 13, Phoenix, AZ 85040 480-968-5888 Fax 480-966-1888

Date: March 17, 2015

Client:	Alex Yiannakakis	Work Order #:	15C006
Company:	AMEC F/W	Project Name:	Broadway Pantana
Address:	4600 E Washington St #600	Project Number:	14.2014-2029
	Phoenix, AZ 85040	Received Date:	3/9/2015

Dear Client:

Airtech Environmental Laboratories received eighteen (18) samples for analysis.

All analyses met laboratory QA/QC with any exceptions addressed in the Case Narrative.

If you have any questions or concerns regarding your samples analysis, please contact the laboratory at 480-968-5888

Sincerely,

Yu Min Shi
Technical Director
Airtech Environmental Labs

Arizona ADHS License No. AZ0740

Airtech Environmental Laboratories (AEL)
4620 E.Elwood St., Suite 13, Phoenix, AZ 85040 480-968-5888 Fax 480-966-1888

Date: March 17, 2015

Client:	Alex Yiannakakis	Work Order #:	15C006
Company:	AMEC F/W	Project Name:	Broadway Pantana
Address:	4600 E Washington St #600	Project Number:	14.2014-2029
	Phoenix, AZ 85040	Received Date:	3/9/2015

SAMPLE SUMMARY

LAB ID	CLIENT ID	METHOD	SAMPLE DATE	SAMPLE TIME
15C006-01	PRUD-1-SG-030515	TO-15	3/5/2015	1150
15C006-02	WR-434A-50-SG-030515	TO-15	3/5/2015	1322
15C006-03	WR-434A-150-SG-030515	TO-15	3/5/2015	1410
15C006-04	WR-434A-250-SG-030515	TO-15	3/5/2015	1445
15C006-05	WR-434A-350-SG-030515	TO-15	3/5/2015	1515
15C006-06	BSDP-1-100-SG-030615	TO-15	3/6/2015	830
15C006-07	BSDP-1-150-SG-030615	TO-15	3/6/2015	903
15C006-08	BSDP-1-200-SG-030615	TO-15	3/6/2015	935
15C006-09	BSDP-1-248-SG-030615	TO-15	3/6/2015	1020
15C006-10	BSDP-1-300-SG-030615	TO-15	3/6/2015	1050
15C006-11	BSDP-1-350-SG-030615	TO-15	3/6/2015	1115
15C006-12	BSDP-2-100-SG-030615	TO-15	3/6/2015	1232
15C006-13	BSDP-2-150-SG-030615	TO-15	3/6/2015	1258
15C006-14	BSDP-2-200-SG-030615	TO-15	3/6/2015	1323
15C006-15	BSDP-2-250-SG-030615	TO-15	3/6/2015	1350
15C006-16	BSDP-2-300-SG-030615	TO-15	3/6/2015	1420
15C006-17	BSDP-2-350-SG-030615	TO-15	3/6/2015	1450
15C006-18	BSDP-2-350-SG-030615-DUP	TO-15	3/6/2015	1450

Airtech Environmental Laboratories (AEL)
4620 E.Elwood St., Suite 13, Phoenix, AZ 85040 480-968-5888 Fax 480-966-1888

Date: March 17, 2015

Client:	Alex Yiannakakis	Work Order #:	15C006
Company:	AMEC F/W	Project Name:	Broadway Pantana
Address:	4600 E Washington St #600	Project Number:	14.2014-2029
	Phoenix, AZ 85040	Received Date:	03/09/15

Case Narrative

All samples and QC associated with your samples met the quality control objectives.
Data qualifiers in this report are in accordance with ADEQ Data Qualifiers.

T4: Tentatively identified compound. Concentration is estimated and based on the closest internal standard.

Airtech Environmental Laboratories (AEL) - AZ 0740
4620 E.Elwood St., Suite 13, Phoenix, AZ 85040 480-968-5888 Fax 480-966-1888

Client:	AMEC F/W	**Client Sample ID:**	N/A
Project:	Broadway Pantana	**Project Number:**	14.2014-2029
Lab Order:	15C006	**Collection:**	N/A
Lab ID:	Kits QC	**Matrix:**	Air

		Canister				Grab Sampler	
		Type		Vacuum	Vacuum	Type	
	Client	1.0 liter		before sampled	after sampled	5 minute-fill 1.0L canister	
AEL#	ID	SN#	Clean Batch#	Hg inch	psia	SN#	Clean Batch#
15C006-01	PRUD-1-SG-030515	E2364	1412-09	29.1	13.52	110	1412-09
15C006-02	WR-434A-50-SG-030515	1877	1412-09	29.1	13.76	006	1412-09
15C006-03	WR-434A-150-SG-030515	E2404	1412-09	29.1	8.44	020	1412-09
15C006-04	WR-434A-250-SG-030515	1888	1502-08	29.1	13.14	109	1502-08
15C006-05	WR-434A-350-SG-030515	E2283	1502-08	29.1	13.72	069	1502-08
15C006-06	BSDP-1-100-SG-030615	1800	1502-04	29.1	12.85	147	1502-04
15C006-07	BSDP-1-150-SG-030615	1807	1502-04	29.1	13.08	080	1502-04
15C006-08	BSDP-1-200-SG-030615	0606	1502-03	29.1	12.74	004	1502-03
15C006-09	BSDP-1-248-SG-030615	E2365	1412-09	29.1	12.85	121	1412-09
15C006-10	BSDP-1-300-SG-030615	1852	1502-08	29.1	12.31	095	1502-08
15C006-11	BSDP-1-350-SG-030615	1835	1409-08	29.1	13.22	067	1409-08
15C006-12	BSDP-2-100-SG-030615	E2293	1412-09	29.1	12.74	032	1412-09
15C006-13	BSDP-2-150-SG-030615	1879	1502-08	29.1	13.26	053	1502-08
15C006-14	BSDP-2-200-SG-030615	1878	1412-08	29.1	13.35	040	1412-08
15C006-15	BSDP-2-250-SG-030615	1856	1502-08	29.1	12.22	139	1502-08
15C006-16	BSDP-2-300-SG-030615	E2367	1412-08	29.1	11.62	134	1412-08
15C006-17	BSDP-2-350-SG-030615	1842	1409-08	29.1	8.32	120	1409-08
15C006-18	BSDP-2-350-SG-030615-DUP	E2104	1412-07	29.1	12.90	122	1412-07

Airtech Environmental Laboratories (AEL) - AZ 0740

4620 E.Elwood St., Suite 13, Phoenix, AZ 85040 480-968-5888 Fax 480-966-1888

Client:	AMEC F/W	**Client Sample ID:**	PRUD-1-SG-030515
Project:	Broadway Pantana	**Project Number:**	14.2014-2029
Lab Order:	15C006	**Collection:**	3/5/2015
Lab ID:	01	**Matrix:**	Soil Vapor

	ppbv		ug/M^3				Date	
Analyses	**Result**	**Limit**	**Result**	**Limit**	**Qual**	**DF**	**Analyzed**	**CAS#**
VOLATILE ORGANICS IN AIR		**TO-15**					Analyst: JJ	
1,1,1-Trichloroethane	< 1.0	1.0	< 5.46	5.46		2	3/10/2015	71-55-6
1,1,2,2-Tetrachloroethane	< 1.0	1.0	< 6.87	6.87		2	3/10/2015	79-34-5
1,1,2-Trichloroethane	< 1.0	1.0	< 5.46	5.46		2	3/10/2015	79-00-5
1,1-Dichloroethane	< 1.0	1.0	< 4.05	4.05		2	3/10/2015	75-34-3
1,1-Dichloroethene	< 1.0	1.0	< 3.97	3.97		2	3/10/2015	75-35-4
1,2,4-Trichlorobenzene	< 4.0	4.0	< 29.7	29.7		2	3/10/2015	120-82-1
1,2,4-Trimethylbenzene	< 1.0	1.0	< 4.92	4.92		2	3/10/2015	95-63-6
1,2-Dibromoethane	< 1.0	1.0	< 7.68	7.68		2	3/10/2015	106-93-4
1,2-Dichlorobenzene	< 1.0	1.0	< 6.01	6.01		2	3/10/2015	95-50-1
1,2-Dichloroethane	< 1.0	1.0	< 4.05	4.05		2	3/10/2015	107-06-2
1,2-Dichloropropane	< 1.0	1.0	< 4.62	4.62		2	3/10/2015	78-87-5
1,3,5-Trimethylbenzene	< 1.0	1.0	< 4.92	4.92		2	3/10/2015	108-67-8
1,3-Butadiene	< 1.0	1.0	< 2.21	2.21		2	3/10/2015	106-99-0
1,3-Dichlorobenzene	< 1.0	1.0	< 6.01	6.01		2	3/10/2015	541-73-1
1,4-Dichlorobenzene	< 1.0	1.0	< 6.01	6.01		2	3/10/2015	106-46-7
1,4-Dioxane	< 4.0	4.0	< 14.4	14.4		2	3/10/2015	123-91-1
2,2,4-Trimethylpentane	< 1.0	1.0	< 4.66	4.66		2	3/10/2015	540-84-1
2-Butanone (MEK)	< 10	10	< 29.5	29.5		2	3/10/2015	78-93-3
2-Hexanone	< 10	10	< 41.0	41.0		2	3/10/2015	591-78-6
2-Propanol (IPA)	< 10	10	< 24.5	24.5		2	3/10/2015	67-63-0
4-Ethyltoluene	< 2.0	2.0	< 9.84	9.84		2	3/10/2015	622-96-8
4-Methyl-2-pentanone (MIK)	< 10	10	< 41.0	41.0		2	3/10/2015	108-10-1
Acetone	**12**	**10**	**27.6**	**23.8**		2	3/10/2015	67-64-1
Allyl chloride	< 2.0	2.0	< 6.26	6.26		2	3/10/2015	107-05-1
Benzene	< 1.0	1.0	< 3.19	3.19		2	3/10/2015	71-43-2
Benzyl chloride	< 4.0	4.0	< 20.7	20.7		2	3/10/2015	100-44-7
Bromodichloromethane	< 1.0	1.0	< 6.70	6.70		2	3/10/2015	75-27-4
Bromoethene(Vinyl Bromide)	< 1.0	1.0	< 4.37	4.37		2	3/10/2015	593-60-2
Bromoform	< 1.0	1.0	< 10.3	10.3		2	3/10/2015	75-25-2
Bromomethane	< 1.0	1.0	< 3.88	3.88		2	3/10/2015	74-83-9
Butyl benzene	< 2.0	2.0	< 11.0	11.0		2	3/10/2015	104-51-8
Carbon disulfide	< 4.0	4.0	< 12.4	12.4		2	3/10/2015	75-15-0
Carbon tetrachloride	< 1.0	1.0	< 6.29	6.29		2	3/10/2015	56-23-5
Chlorobenzene	< 1.0	1.0	< 4.60	4.60		2	3/10/2015	108-90-7
Chloroethane	< 1.0	1.0	< 2.64	2.64		2	3/10/2015	75-00-3
Chloroform	< 1.0	1.0	< 4.88	4.88		2	3/10/2015	67-66-3
Chloromethane	< 4.0	4.0	< 8.28	8.28		2	3/10/2015	74-87-3
cis-1,2-Dichloroethene	< 1.0	1.0	< 3.96	3.96		2	3/10/2015	156-59-2
cis-1,3-Dichloropropene	< 1.0	1.0	< 4.54	4.54		2	3/10/2015	542-75-6
Cyclohexane	< 1.0	1.0	< 3.44	3.44		2	3/10/2015	110-82-7
Dibromochloromethane	< 1.0	1.0	< 8.52	8.52		2	3/10/2015	124-48-1
Dichlorodifluoromethane(F-12)	< 2.0	2.0	< 9.90	9.90		2	3/10/2015	75-71-8
Dichlorotetrafluoroethane(F-114)	< 1.0	1.0	< 6.99	6.99		2	3/10/2015	76-14-2
Ethanol	< 10	10	< 18.8	18.8		2	3/10/2015	64-17-5
Ethyl Acetate	< 1.0	1.0	< 3.60	3.60		2	3/10/2015	141-78-6
Ethylbenzene	< 1.0	1.0	< 4.34	4.34		2	3/10/2015	100-41-4

Airtech Environmental Laboratories (AEL) - AZ 0740

4620 E.Elwood St., Suite 13, Phoenix, AZ 85040 480-968-5888 Fax 480-966-1888

Client:	AMEC F/W	**Client Sample ID:**	PRUD-1-SG-030515
Project:	Broadway Pantana	**Project Number:**	14.2014-2029
Lab Order:	15C006	**Collection:**	3/5/2015
Lab ID:	01	**Matrix:**	Soil Vapor

	ppbv		ug/M^3				Date	
Analyses	**Result**	**Limit**	**Result**	**Limit**	**Qual**	**DF**	**Analyzed**	**CAS#**
VOLATILE ORGANICS IN AIR		**TO-15**					Analyst: JJ	
Heptane	< 1.0	1.0	< 4.10	4.10		2	3/10/2015	142-82-5
Hexachlorobutadiene	< 2.0	2.0	< 21.3	21.3		2	3/10/2015	87-68-3
Hexane	< 2.0	2.0	< 7.04	7.04		2	3/10/2015	110-54-3
Isopropylbenzene	< 2.0	2.0	< 9.84	9.84		2	3/10/2015	98-82-8
m&p-Xylene	< 2.0	2.0	< 8.68	8.68		2	3/10/2015	179601-23-1
Methyl tert-butyl ether	< 4.0	4.0	< 14.4	14.4		2	3/10/2015	1634-04-4
Methylcyclohexane	< 2.0	2.0	< 8.04	8.04		2	3/10/2015	108-87-2
Methylene chloride	< 4.0	4.0	< 13.9	13.9		2	3/10/2015	75-09-2
Naphthalene	< 4.0	4.0	< 21.0	21.0		2	3/10/2015	91-20-3
Nonane	< 2.0	2.0	< 10.5	10.5		2	3/10/2015	111-84-2
Octane	< 2.0	2.0	< 9.34	9.34		2	3/10/2015	111-65-9
o-Xylene	< 1.0	1.0	< 4.34	4.34		2	3/10/2015	95-47-6
Propene (Propylene)	< 2.0	2.0	< 3.44	3.44		2	3/10/2015	115-07-1
Propylbenzene	< 2.0	2.0	< 9.84	9.84		2	3/10/2015	103-65-1
Sec-Butyl benzene	< 2.0	2.0	< 11.0	11.0		2	3/10/2015	135-98-8
Styrene	< 1.0	1.0	< 4.26	4.26		2	3/10/2015	100-42-5
Tert-Butyl benzene	< 2.0	2.0	< 11.0	11.0		2	3/10/2015	98-06-6
Tetrachloroethene	**3.1**	**1.0**	**21.3**	**6.78**		2	3/10/2015	127-18-4
Tetrahydrofuran	< 4.0	4.0	< 11.8	11.8		2	3/10/2015	109-99-9
Toluene	< 1.0	1.0	< 3.77	3.77		2	3/10/2015	108-88-3
trans-1,2-Dichloroethene	< 1.0	1.0	< 3.96	3.96		2	3/10/2015	156-60-5
trans-1,3-Dichloropropene	< 1.0	1.0	< 4.54	4.54		2	3/10/2015	542-75-6
Trichloroethene	< 1.0	1.0	< 5.37	5.37		2	3/10/2015	79-01-6
Trichlorofluoromethane(F-11)	< 1.0	1.0	< 5.62	5.62		2	3/10/2015	75-69-4
Trichlorotrifluoroethane(F-113)	< 1.0	1.0	< 7.66	7.66		2	3/10/2015	76-13-1
Vinyl acetate	< 1.0	1.0	< 3.52	3.52		2	3/10/2015	108-05-4
Vinyl chloride	< 1.0	1.0	< 2.56	2.56		2	3/10/2015	75-01-4
Surr: 4-Bromofluorobenzene	102	70-130	%REC					

Tentatively Identified Compounds (TIC's)

Difluoroethane	< 20	20	ppbv		T4	2	3/10/2015

Airtech Environmental Laboratories (AEL) - AZ 0740

4620 E.Elwood St., Suite 13, Phoenix, AZ 85040 480-968-5888 Fax 480-966-1888

Client:	AMEC F/W	**Client Sample ID:**	WR-434A-50-SG-030515
Project:	Broadway Pantana	**Project Number:**	14.2014-2029
Lab Order:	15C006	**Collection:**	3/5/2015
Lab ID:	02	**Matrix:**	Soil Vapor

	ppbv		ug/M^3				Date	
Analyses	**Result**	**Limit**	**Result**	**Limit**	**Qual**	**DF**	**Analyzed**	**CAS#**
VOLATILE ORGANICS IN AIR		**TO-15**					Analyst: JJ	
1,1,1-Trichloroethane	< 1.0	1.0	< 5.46	5.46		2	3/11/2015	71-55-6
1,1-Dichloroethane	< 1.0	1.0	< 4.05	4.05		2	3/11/2015	75-34-3
1,1-Dichloroethene	< 1.0	1.0	< 3.97	3.97		2	3/11/2015	75-35-4
Benzene	**7.6**	**1.0**	**24.4**	**3.19**		2	3/11/2015	71-43-2
cis-1,2-Dichloroethene	< 1.0	1.0	< 3.96	3.96		2	3/11/2015	156-59-2
Dichlorodifluoromethane(F-12)	**22**	**2.0**	**111**	**9.90**		2	3/11/2015	75-71-8
Dichlorotetrafluoroethane(F-114)	**7.1**	**1.0**	**49.8**	**6.99**		2	3/11/2015	76-14-2
Ethylbenzene	< 1.0	1.0	< 4.34	4.34		2	3/11/2015	100-41-4
m&p-Xylene	< 2.0	2.0	< 8.68	8.68		2	3/11/2015	179601-23-1
o-Xylene	< 1.0	1.0	< 4.34	4.34		2	3/11/2015	95-47-6
Tetrachloroethene	**24**	**1.0**	**164**	**6.78**		2	3/11/2015	127-18-4
Toluene	< 1.0	1.0	< 3.77	3.77		2	3/11/2015	108-88-3
trans-1,2-Dichloroethene	< 1.0	1.0	< 3.96	3.96		2	3/11/2015	156-60-5
Trichloroethene	**1.4**	**1.0**	**7.52**	**5.37**		2	3/11/2015	79-01-6
Trichlorofluoromethane(F-11)	< 1.0	1.0	< 5.62	5.62		2	3/11/2015	75-69-4
Trichlorotrifluoroethane(F-113)	< 1.0	1.0	< 7.66	7.66		2	3/11/2015	76-13-1
Vinyl chloride	< 1.0	1.0	< 2.56	2.56		2	3/11/2015	75-01-4
Surr: 4-Bromofluorobenzene	98.0	70-130	%REC					

Tentatively Identified Compounds (TIC's)

Difluoroethane	< 20	20	ppbv		T4	2	3/11/2015	

Airtech Environmental Laboratories (AEL) - AZ 0740

4620 E.Elwood St., Suite 13, Phoenix, AZ 85040 480-968-5888 Fax 480-966-1888

Client:	AMEC F/W	**Client Sample ID:**	WR-434A-150-SG-030515
Project:	Broadway Pantana	**Project Number:**	14.2014-2029
Lab Order:	15C006	**Collection:**	3/5/2015
Lab ID:	03	**Matrix:**	Soil Vapor

	ppbv		ug/M^3				Date	
Analyses	**Result**	**Limit**	**Result**	**Limit**	**Qual**	**DF**	**Analyzed**	**CAS#**
VOLATILE ORGANICS IN AIR		**TO-15**					Analyst: JJ	
1,1,1-Trichloroethane	< 1.0	1.0	< 5.46	5.46		2	3/11/2015	71-55-6
1,1-Dichloroethane	< 1.0	1.0	< 4.05	4.05		2	3/11/2015	75-34-3
1,1-Dichloroethene	< 1.0	1.0	< 3.97	3.97		2	3/11/2015	75-35-4
Benzene	**1.9**	**1.0**	**6.06**	**3.19**		2	3/11/2015	71-43-2
cis-1,2-Dichloroethene	< 1.0	1.0	< 3.96	3.96		2	3/11/2015	156-59-2
Dichlorodifluoromethane(F-12)	**3.0**	**2.0**	**14.9**	**9.90**		2	3/11/2015	75-71-8
Dichlorotetrafluoroethane(F-114)	**3.6**	**1.0**	**25.0**	**6.99**		2	3/11/2015	76-14-2
Ethylbenzene	**1.1**	**1.0**	**4.95**	**4.34**		2	3/11/2015	100-41-4
m&p-Xylene	**2.3**	**2.0**	**9.98**	**8.68**		2	3/11/2015	179601-23-1
o-Xylene	**1.3**	**1.0**	**5.64**	**4.34**		2	3/11/2015	95-47-6
Tetrachloroethene	**12**	**1.0**	**80.0**	**6.78**		2	3/11/2015	127-18-4
Toluene	**1.2**	**1.0**	**4.45**	**3.77**		2	3/11/2015	108-88-3
trans-1,2-Dichloroethene	< 1.0	1.0	< 3.96	3.96		2	3/11/2015	156-60-5
Trichloroethene	**2.0**	**1.0**	**10.5**	**5.37**		2	3/11/2015	79-01-6
Trichlorofluoromethane(F-11)	< 1.0	1.0	< 5.62	5.62		2	3/11/2015	75-69-4
Trichlorotrifluoroethane(F-113)	< 1.0	1.0	< 7.66	7.66		2	3/11/2015	76-13-1
Vinyl chloride	< 1.0	1.0	< 2.56	2.56		2	3/11/2015	75-01-4
Surr: 4-Bromofluorobenzene	102	70-130	%REC					

Tentatively Identified Compounds (TIC's)

Difluoroethane	< 20	20	ppbv		T4	2	3/11/2015	

Airtech Environmental Laboratories (AEL) - AZ 0740

4620 E.Elwood St., Suite 13, Phoenix, AZ 85040 480-968-5888 Fax 480-966-1888

Client:	AMEC F/W	**Client Sample ID:**	WR-434A-250-SG-030515
Project:	Broadway Pantana	**Project Number:**	14.2014-2029
Lab Order:	15C006	**Collection:**	3/5/2015
Lab ID:	04	**Matrix:**	Soil Vapor

	ppbv		ug/M^3				Date	
Analyses	**Result**	**Limit**	**Result**	**Limit**	**Qual**	**DF**	**Analyzed**	**CAS#**
VOLATILE ORGANICS IN AIR		**TO-15**					Analyst: JJ	
1,1,1-Trichloroethane	< 1.0	1.0	< 5.46	5.46		2	3/11/2015	71-55-6
1,1-Dichloroethane	< 1.0	1.0	< 4.05	4.05		2	3/11/2015	75-34-3
1,1-Dichloroethene	< 1.0	1.0	< 3.97	3.97		2	3/11/2015	75-35-4
Benzene	**1.4**	**1.0**	**4.34**	**3.19**		2	3/11/2015	71-43-2
cis-1,2-Dichloroethene	**38**	**1.0**	**149**	**3.96**		2	3/11/2015	156-59-2
Dichlorodifluoromethane(F-12)	< 2.0	2.0	< 9.90	9.90		2	3/11/2015	75-71-8
Dichlorotetrafluoroethane(F-114)	< 1.0	1.0	< 6.99	6.99		2	3/11/2015	76-14-2
Ethylbenzene	< 1.0	1.0	< 4.34	4.34		2	3/11/2015	100-41-4
m&p-Xylene	< 2.0	2.0	< 8.68	8.68		2	3/11/2015	179601-23-1
o-Xylene	< 1.0	1.0	< 4.34	4.34		2	3/11/2015	95-47-6
Tetrachloroethene	**71**	**1.0**	**484**	**6.78**		2	3/11/2015	127-18-4
Toluene	< 1.0	1.0	< 3.77	3.77		2	3/11/2015	108-88-3
trans-1,2-Dichloroethene	< 1.0	1.0	< 3.96	3.96		2	3/11/2015	156-60-5
Trichloroethene	**13**	**1.0**	**68.3**	**5.37**		2	3/11/2015	79-01-6
Trichlorofluoromethane(F-11)	< 1.0	1.0	< 5.62	5.62		2	3/11/2015	75-69-4
Trichlorotrifluoroethane(F-113)	< 1.0	1.0	< 7.66	7.66		2	3/11/2015	76-13-1
Vinyl chloride	< 1.0	1.0	< 2.56	2.56		2	3/11/2015	75-01-4
Surr: 4-Bromofluorobenzene	104	70-130	%REC					

Tentatively Identified Compounds (TIC's)

Difluoroethane	< 20	20	ppbv		T4	2	3/11/2015

Airtech Environmental Laboratories (AEL) - AZ 0740

4620 E.Elwood St., Suite 13, Phoenix, AZ 85040 480-968-5888 Fax 480-966-1888

Client:	AMEC F/W	**Client Sample ID:**	WR-434A-350-SG-030515
Project:	Broadway Pantana	**Project Number:**	14.2014-2029
Lab Order:	15C006	**Collection:**	3/5/2015
Lab ID:	05	**Matrix:**	Soil Vapor

	ppbv		ug/M^3				Date	
Analyses	**Result**	**Limit**	**Result**	**Limit**	**Qual**	**DF**	**Analyzed**	**CAS#**
VOLATILE ORGANICS IN AIR		**TO-15**					Analyst: JJ	
1,1,1-Trichloroethane	< 10	10	< 54.6	54.6		20	3/10/2015	71-55-6
1,1-Dichloroethane	< 10	10	< 40.5	40.5		20	3/10/2015	75-34-3
1,1-Dichloroethene	< 10	10	< 39.7	39.7		20	3/10/2015	75-35-4
Benzene	< 10	10	< 31.9	31.9		20	3/10/2015	71-43-2
cis-1,2-Dichloroethene	**23**	**10**	**91.1**	**39.6**		20	3/10/2015	156-59-2
Dichlorodifluoromethane(F-12)	**3,560**	**200**	**17,600**	**990**		200	3/12/2015	75-71-8
Dichlorotetrafluoroethane(F-114)	**221**	**10**	**1,550**	**69.9**		20	3/10/2015	76-14-2
Ethylbenzene	< 10	10	< 43.4	43.4		20	3/10/2015	100-41-4
m&p-Xylene	< 20	20	< 86.8	86.8		20	3/10/2015	179601-23-1
o-Xylene	< 10	10	< 43.4	43.4		20	3/10/2015	95-47-6
Tetrachloroethene	**1,820**	**100**	**12,300**	**678**		200	3/12/2015	127-18-4
Toluene	< 10	10	< 37.7	37.7		20	3/10/2015	108-88-3
trans-1,2-Dichloroethene	< 10	10	< 39.6	39.6		20	3/10/2015	156-60-5
Trichloroethene	**174**	**10**	**933**	**53.7**		20	3/10/2015	79-01-6
Trichlorofluoromethane(F-11)	**134**	**10**	**755**	**56.2**		20	3/10/2015	75-69-4
Trichlorotrifluoroethane(F-113)	< 10	10	< 76.6	76.6		20	3/10/2015	76-13-1
Vinyl chloride	< 10	10	< 25.6	25.6		20	3/10/2015	75-01-4
Surr: 4-Bromofluorobenzene	98.8	70-130	%REC					

Tentatively Identified Compounds (TIC's)

Difluoroethane	< 200	200	ppbv		T4	20	3/10/2015

Airtech Environmental Laboratories (AEL) - AZ 0740

4620 E.Elwood St., Suite 13, Phoenix, AZ 85040 480-968-5888 Fax 480-966-1888

Client:	AMEC F/W	**Client Sample ID:**	BSDP-1-100-SG-030615
Project:	Broadway Pantana	**Project Number:**	14.2014-2029
Lab Order:	15C006	**Collection:**	3/6/2015
Lab ID:	06	**Matrix:**	Soil Vapor

Analyses	ppbv Result	ppbv Limit	ug/M^3 Result	ug/M^3 Limit	Qual	DF	Date Analyzed	CAS#
VOLATILE ORGANICS IN AIR		**TO-15**					Analyst: JJ	
1,1,1-Trichloroethane	< 10	10	< 54.6	54.6		20	3/10/2015	71-55-6
1,1-Dichloroethane	< 10	10	< 40.5	40.5		20	3/10/2015	75-34-3
1,1-Dichloroethene	< 10	10	< 39.7	39.7		20	3/10/2015	75-35-4
Benzene	**50**	**10**	**158**	**31.9**		20	3/10/2015	71-43-2
cis-1,2-Dichloroethene	**129**	**10**	**510**	**39.6**		20	3/10/2015	156-59-2
Dichlorodifluoromethane(F-12)	**314**	**20**	**1,560**	**99.0**		20	3/10/2015	75-71-8
Dichlorotetrafluoroethane(F-114)	**70**	**10**	**492**	**69.9**		20	3/10/2015	76-14-2
Ethylbenzene	< 10	10	< 43.4	43.4		20	3/10/2015	100-41-4
m&p-Xylene	< 20	20	< 86.8	86.8		20	3/10/2015	179601-23-1
o-Xylene	< 10	10	< 43.4	43.4		20	3/10/2015	95-47-6
Tetrachloroethene	**122**	**10**	**829**	**67.8**		20	3/10/2015	127-18-4
Toluene	< 10	10	< 37.7	37.7		20	3/10/2015	108-88-3
trans-1,2-Dichloroethene	**13**	**10**	**53.1**	**39.6**		20	3/10/2015	156-60-5
Trichloroethene	**112**	**10**	**600**	**53.7**		20	3/10/2015	79-01-6
Trichlorofluoromethane(F-11)	< 10	10	< 56.2	56.2		20	3/10/2015	75-69-4
Trichlorotrifluoroethane(F-113)	< 10	10	< 76.6	76.6		20	3/10/2015	76-13-1
Vinyl chloride	**10**	**10**	**25.6**	**25.6**		20	3/10/2015	75-01-4
Surr: 4-Bromofluorobenzene	100	70-130	%REC					

Tentatively Identified Compounds (TIC's)

Difluoroethane	< 200	200	ppbv		T4	20	3/10/2015	

Airtech Environmental Laboratories (AEL) - AZ 0740

4620 E.Elwood St., Suite 13, Phoenix, AZ 85040 480-968-5888 Fax 480-966-1888

Client:	AMEC F/W	**Client Sample ID:**	BSDP-1-150-SG-030615
Project:	Broadway Pantana	**Project Number:**	14.2014-2029
Lab Order:	15C006	**Collection:**	3/6/2015
Lab ID:	07	**Matrix:**	Soil Vapor

Analyses	ppbv Result	ppbv Limit	ug/M^3 Result	ug/M^3 Limit	Qual	DF	Date Analyzed	CAS#
VOLATILE ORGANICS IN AIR		**TO-15**					Analyst: JJ	
1,1,1-Trichloroethane	< 1.0	1.0	< 5.46	5.46		2	3/11/2015	71-55-6
1,1-Dichloroethane	< 1.0	1.0	< 4.05	4.05		2	3/11/2015	75-34-3
1,1-Dichloroethene	< 1.0	1.0	< 3.97	3.97		2	3/11/2015	75-35-4
Benzene	< 1.0	1.0	< 3.19	3.19		2	3/11/2015	71-43-2
cis-1,2-Dichloroethene	< 1.0	1.0	< 3.96	3.96		2	3/11/2015	156-59-2
Dichlorodifluoromethane(F-12)	< 2.0	2.0	< 9.90	9.90		2	3/11/2015	75-71-8
Dichlorotetrafluoroethane(F-114)	< 1.0	1.0	< 6.99	6.99		2	3/11/2015	76-14-2
Ethylbenzene	< 1.0	1.0	< 4.34	4.34		2	3/11/2015	100-41-4
m&p-Xylene	< 2.0	2.0	< 8.68	8.68		2	3/11/2015	179601-23-1
o-Xylene	< 1.0	1.0	< 4.34	4.34		2	3/11/2015	95-47-6
Tetrachloroethene	**1.2**	**1.0**	**7.86**	**6.78**		2	3/11/2015	127-18-4
Toluene	< 1.0	1.0	< 3.77	3.77		2	3/11/2015	108-88-3
trans-1,2-Dichloroethene	< 1.0	1.0	< 3.96	3.96		2	3/11/2015	156-60-5
Trichloroethene	< 1.0	1.0	< 5.37	5.37		2	3/11/2015	79-01-6
Trichlorofluoromethane(F-11)	< 1.0	1.0	< 5.62	5.62		2	3/11/2015	75-69-4
Trichlorotrifluoroethane(F-113)	< 1.0	1.0	< 7.66	7.66		2	3/11/2015	76-13-1
Vinyl chloride	< 1.0	1.0	< 2.56	2.56		2	3/11/2015	75-01-4
Surr: 4-Bromofluorobenzene	98.2	70-130	%REC					

Tentatively Identified Compounds (TIC's)

Difluoroethane	< 20	20	ppbv		T4	2	3/11/2015	

Airtech Environmental Laboratories (AEL) - AZ 0740

4620 E.Elwood St., Suite 13, Phoenix, AZ 85040 480-968-5888 Fax 480-966-1888

Client:	AMEC F/W	**Client Sample ID:**	BSDP-1-200-SG-030615
Project:	Broadway Pantana	**Project Number:**	14.2014-2029
Lab Order:	15C006	**Collection:**	3/6/2015
Lab ID:	08	**Matrix:**	Soil Vapor

Analyses	ppbv Result	ppbv Limit	ug/M^3 Result	ug/M^3 Limit	Qual	DF	Date Analyzed	CAS#
VOLATILE ORGANICS IN AIR		**TO-15**					Analyst: JJ	
1,1,1-Trichloroethane	< 5.0	5.0	< 27.3	27.3		10	3/11/2015	71-55-6
1,1-Dichloroethane	< 5.0	5.0	< 20.3	20.3		10	3/11/2015	75-34-3
1,1-Dichloroethene	< 5.0	5.0	< 19.9	19.9		10	3/11/2015	75-35-4
Benzene	**17**	**5.0**	**54.5**	**16.0**		10	3/11/2015	71-43-2
cis-1,2-Dichloroethene	**25**	**5.0**	**97.8**	**19.8**		10	3/11/2015	156-59-2
Dichlorodifluoromethane(F-12)	< 10	10	< 49.5	49.5		10	3/11/2015	75-71-8
Dichlorotetrafluoroethane(F-114)	< 5.0	5.0	< 35.0	35.0		10	3/11/2015	76-14-2
Ethylbenzene	< 5.0	5.0	< 21.7	21.7		10	3/11/2015	100-41-4
m&p-Xylene	**15**	**10**	**62.9**	**43.4**		10	3/11/2015	179601-23-1
o-Xylene	**8.9**	**5.0**	**38.6**	**21.7**		10	3/11/2015	95-47-6
Tetrachloroethene	**176**	**5.0**	**1,190**	**33.9**		10	3/11/2015	127-18-4
Toluene	< 5.0	5.0	< 18.9	18.9		10	3/11/2015	108-88-3
trans-1,2-Dichloroethene	< 5.0	5.0	< 19.8	19.8		10	3/11/2015	156-60-5
Trichloroethene	**94**	**5.0**	**506**	**26.9**		10	3/11/2015	79-01-6
Trichlorofluoromethane(F-11)	< 5.0	5.0	< 28.1	28.1		10	3/11/2015	75-69-4
Trichlorotrifluoroethane(F-113)	< 5.0	5.0	< 38.3	38.3		10	3/11/2015	76-13-1
Vinyl chloride	< 5.0	5.0	< 12.8	12.8		10	3/11/2015	75-01-4
Surr: 4-Bromofluorobenzene	110	70-130	%REC					

Tentatively Identified Compounds (TIC's)

Difluoroethane	< 100	100	ppbv		T4	10	3/11/2015	

Airtech Environmental Laboratories (AEL) - AZ 0740

4620 E.Elwood St., Suite 13, Phoenix, AZ 85040 480-968-5888 Fax 480-966-1888

Client:	AMEC F/W	**Client Sample ID:**	BSDP-1-248-SG-030615
Project:	Broadway Pantana	**Project Number:**	14.2014-2029
Lab Order:	15C006	**Collection:**	3/6/2015
Lab ID:	09	**Matrix:**	Soil Vapor

	ppbv		ug/M^3				Date	
Analyses	**Result**	**Limit**	**Result**	**Limit**	**Qual**	**DF**	**Analyzed**	**CAS#**
VOLATILE ORGANICS IN AIR		**TO-15**					Analyst: JJ	
1,1,1-Trichloroethane	< 5.0	5.0	< 27.3	27.3		10	3/11/2015	71-55-6
1,1-Dichloroethane	< 5.0	5.0	< 20.3	20.3		10	3/11/2015	75-34-3
1,1-Dichloroethene	< 5.0	5.0	< 19.9	19.9		10	3/11/2015	75-35-4
Benzene	**8.8**	**5.0**	**28.1**	**16.0**		10	3/11/2015	71-43-2
cis-1,2-Dichloroethene	**14**	**5.0**	**53.9**	**19.8**		10	3/11/2015	156-59-2
Dichlorodifluoromethane(F-12)	< 10	10	< 49.5	49.5		10	3/11/2015	75-71-8
Dichlorotetrafluoroethane(F-114)	< 5.0	5.0	< 35.0	35.0		10	3/11/2015	76-14-2
Ethylbenzene	< 5.0	5.0	< 21.7	21.7		10	3/11/2015	100-41-4
m&p-Xylene	< 10	10	< 43.4	43.4		10	3/11/2015	179601-23-1
o-Xylene	< 5.0	5.0	< 21.7	21.7		10	3/11/2015	95-47-6
Tetrachloroethene	**121**	**5.0**	**818**	**33.9**		10	3/11/2015	127-18-4
Toluene	< 5.0	5.0	< 18.9	18.9		10	3/11/2015	108-88-3
trans-1,2-Dichloroethene	< 5.0	5.0	< 19.8	19.8		10	3/11/2015	156-60-5
Trichloroethene	**69**	**5.0**	**368**	**26.9**		10	3/11/2015	79-01-6
Trichlorofluoromethane(F-11)	< 5.0	5.0	< 28.1	28.1		10	3/11/2015	75-69-4
Trichlorotrifluoroethane(F-113)	< 5.0	5.0	< 38.3	38.3		10	3/11/2015	76-13-1
Vinyl chloride	< 5.0	5.0	< 12.8	12.8		10	3/11/2015	75-01-4
Surr: 4-Bromofluorobenzene	106	70-130	%REC					

Tentatively Identified Compounds (TIC's)

Difluoroethane	< 100	100	ppbv		T4	10	3/11/2015	

Airtech Environmental Laboratories (AEL) - AZ 0740

4620 E.Elwood St., Suite 13, Phoenix, AZ 85040 480-968-5888 Fax 480-966-1888

Client:	AMEC F/W	**Client Sample ID:**	BSDP-1-300-SG-030615
Project:	Broadway Pantana	**Project Number:**	14.2014-2029
Lab Order:	15C006	**Collection:**	3/6/2015
Lab ID:	10	**Matrix:**	Soil Vapor

	ppbv		ug/M^3				Date	
Analyses	**Result**	**Limit**	**Result**	**Limit**	**Qual**	**DF**	**Analyzed**	**CAS#**
VOLATILE ORGANICS IN AIR		**TO-15**					Analyst: JJ	
1,1,1-Trichloroethane	< 1.0	1.0	< 5.46	5.46		2	3/11/2015	71-55-6
1,1-Dichloroethane	< 1.0	1.0	< 4.05	4.05		2	3/11/2015	75-34-3
1,1-Dichloroethene	< 1.0	1.0	< 3.97	3.97		2	3/11/2015	75-35-4
Benzene	< 1.0	1.0	< 3.19	3.19		2	3/11/2015	71-43-2
cis-1,2-Dichloroethene	< 1.0	1.0	< 3.96	3.96		2	3/11/2015	156-59-2
Dichlorodifluoromethane(F-12)	< 2.0	2.0	< 9.90	9.90		2	3/11/2015	75-71-8
Dichlorotetrafluoroethane(F-114)	< 1.0	1.0	< 6.99	6.99		2	3/11/2015	76-14-2
Ethylbenzene	< 1.0	1.0	< 4.34	4.34		2	3/11/2015	100-41-4
m&p-Xylene	< 2.0	2.0	< 8.68	8.68		2	3/11/2015	179601-23-1
o-Xylene	< 1.0	1.0	< 4.34	4.34		2	3/11/2015	95-47-6
Tetrachloroethene	**7.8**	**1.0**	**52.7**	**6.78**		2	3/11/2015	127-18-4
Toluene	< 1.0	1.0	< 3.77	3.77		2	3/11/2015	108-88-3
trans-1,2-Dichloroethene	< 1.0	1.0	< 3.96	3.96		2	3/11/2015	156-60-5
Trichloroethene	**2.0**	**1.0**	**11.0**	**5.37**		2	3/11/2015	79-01-6
Trichlorofluoromethane(F-11)	< 1.0	1.0	< 5.62	5.62		2	3/11/2015	75-69-4
Trichlorotrifluoroethane(F-113)	< 1.0	1.0	< 7.66	7.66		2	3/11/2015	76-13-1
Vinyl chloride	< 1.0	1.0	< 2.56	2.56		2	3/11/2015	75-01-4
Surr: 4-Bromofluorobenzene	99.7	70-130	%REC					

Tentatively Identified Compounds (TIC's)

Difluoroethane	< 20	20	ppbv		T4	2	3/11/2015	

Airtech Environmental Laboratories (AEL) - AZ 0740

4620 E.Elwood St., Suite 13, Phoenix, AZ 85040 480-968-5888 Fax 480-966-1888

Client:	AMEC F/W	**Client Sample ID:**	BSDP-1-350-SG-030615
Project:	Broadway Pantana	**Project Number:**	14.2014-2029
Lab Order:	15C006	**Collection:**	3/6/2015
Lab ID:	11	**Matrix:**	Soil Vapor

	ppbv		ug/M^3				Date	
Analyses	**Result**	**Limit**	**Result**	**Limit**	**Qual**	**DF**	**Analyzed**	**CAS#**
VOLATILE ORGANICS IN AIR		**TO-15**					Analyst: JJ	
1,1,1-Trichloroethane	< 1.0	1.0	< 5.46	5.46		2	3/11/2015	71-55-6
1,1-Dichloroethane	< 1.0	1.0	< 4.05	4.05		2	3/11/2015	75-34-3
1,1-Dichloroethene	< 1.0	1.0	< 3.97	3.97		2	3/11/2015	75-35-4
Benzene	**2.7**	**1.0**	**8.55**	**3.19**		2	3/11/2015	71-43-2
cis-1,2-Dichloroethene	< 1.0	1.0	< 3.96	3.96		2	3/11/2015	156-59-2
Dichlorodifluoromethane(F-12)	< 2.0	2.0	< 9.90	9.90		2	3/11/2015	75-71-8
Dichlorotetrafluoroethane(F-114)	< 1.0	1.0	< 6.99	6.99		2	3/11/2015	76-14-2
Ethylbenzene	< 1.0	1.0	< 4.34	4.34		2	3/11/2015	100-41-4
m&p-Xylene	**3.6**	**2.0**	**15.7**	**8.68**		2	3/11/2015	179601-23-1
o-Xylene	**1.9**	**1.0**	**8.33**	**4.34**		2	3/11/2015	95-47-6
Tetrachloroethene	**38**	**1.0**	**259**	**6.78**		2	3/11/2015	127-18-4
Toluene	< 1.0	1.0	< 3.77	3.77		2	3/11/2015	108-88-3
trans-1,2-Dichloroethene	< 1.0	1.0	< 3.96	3.96		2	3/11/2015	156-60-5
Trichloroethene	**7.9**	**1.0**	**42.4**	**5.37**		2	3/11/2015	79-01-6
Trichlorofluoromethane(F-11)	< 1.0	1.0	< 5.62	5.62		2	3/11/2015	75-69-4
Trichlorotrifluoroethane(F-113)	< 1.0	1.0	< 7.66	7.66		2	3/11/2015	76-13-1
Vinyl chloride	< 1.0	1.0	< 2.56	2.56		2	3/11/2015	75-01-4
Surr: 4-Bromofluorobenzene	100	70-130	%REC					

Tentatively Identified Compounds (TIC's)

Difluoroethane	< 20	20	ppbv		T4	2	3/11/2015	

Airtech Environmental Laboratories (AEL) - AZ 0740

4620 E.Elwood St., Suite 13, Phoenix, AZ 85040 480-968-5888 Fax 480-966-1888

Client:	AMEC F/W	**Client Sample ID:**	BSDP-2-100-SG-030615
Project:	Broadway Pantana	**Project Number:**	14.2014-2029
Lab Order:	15C006	**Collection:**	3/6/2015
Lab ID:	12	**Matrix:**	Soil Vapor

	ppbv		ug/M^3				Date	
Analyses	**Result**	**Limit**	**Result**	**Limit**	**Qual**	**DF**	**Analyzed**	**CAS#**
VOLATILE ORGANICS IN AIR		**TO-15**					Analyst: JJ	
1,1,1-Trichloroethane	< 10	10	< 54.6	54.6		20	3/11/2015	71-55-6
1,1-Dichloroethane	< 10	10	< 40.5	40.5		20	3/11/2015	75-34-3
1,1-Dichloroethene	< 10	10	< 39.7	39.7		20	3/11/2015	75-35-4
Benzene	**64**	**10**	**205**	**31.9**		20	3/11/2015	71-43-2
cis-1,2-Dichloroethene	**978**	**20**	**3,870**	**79.2**		40	3/12/2015	156-59-2
Dichlorodifluoromethane(F-12)	**407**	**20**	**2,020**	**99.0**		20	3/11/2015	75-71-8
Dichlorotetrafluoroethane(F-114)	**108**	**10**	**758**	**69.9**		20	3/11/2015	76-14-2
Ethylbenzene	< 10	10	< 43.4	43.4		20	3/11/2015	100-41-4
m&p-Xylene	< 20	20	< 86.8	86.8		20	3/11/2015	179601-23-1
o-Xylene	< 10	10	< 43.4	43.4		20	3/11/2015	95-47-6
Tetrachloroethene	**289**	**10**	**1,960**	**67.8**		20	3/11/2015	127-18-4
Toluene	< 10	10	< 37.7	37.7		20	3/11/2015	108-88-3
trans-1,2-Dichloroethene	**41**	**10**	**162**	**39.6**		20	3/11/2015	156-60-5
Trichloroethene	**159**	**10**	**855**	**53.7**		20	3/11/2015	79-01-6
Trichlorofluoromethane(F-11)	< 10	10	< 56.2	56.2		20	3/11/2015	75-69-4
Trichlorotrifluoroethane(F-113)	< 10	10	< 76.6	76.6		20	3/11/2015	76-13-1
Vinyl chloride	**48**	**10**	**123**	**25.6**		20	3/11/2015	75-01-4
Surr: 4-Bromofluorobenzene	101	70-130	%REC					

Tentatively Identified Compounds (TIC's)

Difluoroethane	< 200	200	ppbv		T4	20	3/11/2015

Airtech Environmental Laboratories (AEL) - AZ 0740

4620 E.Elwood St., Suite 13, Phoenix, AZ 85040 480-968-5888 Fax 480-966-1888

Client:	AMEC F/W	**Client Sample ID:**	BSDP-2-150-SG-030615
Project:	Broadway Pantana	**Project Number:**	14.2014-2029
Lab Order:	15C006	**Collection:**	3/6/2015
Lab ID:	13	**Matrix:**	Soil Vapor

	ppbv		ug/M^3				Date	
Analyses	**Result**	**Limit**	**Result**	**Limit**	**Qual**	**DF**	**Analyzed**	**CAS#**
VOLATILE ORGANICS IN AIR		**TO-15**					Analyst: JJ	
1,1,1-Trichloroethane	< 10	10	< 54.6	54.6		20	3/11/2015	71-55-6
1,1-Dichloroethane	< 10	10	< 40.5	40.5		20	3/11/2015	75-34-3
1,1-Dichloroethene	< 10	10	< 39.7	39.7		20	3/11/2015	75-35-4
Benzene	**63**	**10**	**202**	**31.9**		20	3/11/2015	71-43-2
cis-1,2-Dichloroethene	**281**	**10**	**1,110**	**39.6**		20	3/11/2015	156-59-2
Dichlorodifluoromethane(F-12)	**628**	**20**	**3,110**	**99.0**		20	3/11/2015	75-71-8
Dichlorotetrafluoroethane(F-114)	**101**	**10**	**706**	**69.9**		20	3/11/2015	76-14-2
Ethylbenzene	< 10	10	< 43.4	43.4		20	3/11/2015	100-41-4
m&p-Xylene	< 20	20	< 86.8	86.8		20	3/11/2015	179601-23-1
o-Xylene	< 10	10	< 43.4	43.4		20	3/11/2015	95-47-6
Tetrachloroethene	**655**	**10**	**4,440**	**67.8**		20	3/11/2015	127-18-4
Toluene	< 10	10	< 37.7	37.7		20	3/11/2015	108-88-3
trans-1,2-Dichloroethene	**31**	**10**	**124**	**39.6**		20	3/11/2015	156-60-5
Trichloroethene	**308**	**10**	**1,650**	**53.7**		20	3/11/2015	79-01-6
Trichlorofluoromethane(F-11)	< 10	10	< 56.2	56.2		20	3/11/2015	75-69-4
Trichlorotrifluoroethane(F-113)	< 10	10	< 76.6	76.6		20	3/11/2015	76-13-1
Vinyl chloride	**20**	**10**	**52.2**	**25.6**		20	3/11/2015	75-01-4
Surr: 4-Bromofluorobenzene	105	70-130	%REC					

Tentatively Identified Compounds (TIC's)

Difluoroethane	< 200	200	ppbv		T4	20	3/11/2015

Airtech Environmental Laboratories (AEL) - AZ 0740

4620 E.Elwood St., Suite 13, Phoenix, AZ 85040 480-968-5888 Fax 480-966-1888

Client:	AMEC F/W	**Client Sample ID:**	BSDP-2-200-SG-030615
Project:	Broadway Pantana	**Project Number:**	14.2014-2029
Lab Order:	15C006	**Collection:**	3/6/2015
Lab ID:	14	**Matrix:**	Soil Vapor

	ppbv		ug/M^3				Date	
Analyses	**Result**	**Limit**	**Result**	**Limit**	**Qual**	**DF**	**Analyzed**	**CAS#**
VOLATILE ORGANICS IN AIR		**TO-15**					Analyst: JJ	
1,1,1-Trichloroethane	< 10	10	< 54.6	54.6		20	3/11/2015	71-55-6
1,1-Dichloroethane	< 10	10	< 40.5	40.5		20	3/11/2015	75-34-3
1,1-Dichloroethene	< 10	10	< 39.7	39.7		20	3/11/2015	75-35-4
Benzene	**80**	**10**	**254**	**31.9**		20	3/11/2015	71-43-2
cis-1,2-Dichloroethene	**106**	**10**	**420**	**39.6**		20	3/11/2015	156-59-2
Dichlorodifluoromethane(F-12)	**930**	**20**	**4,600**	**99.0**		20	3/11/2015	75-71-8
Dichlorotetrafluoroethane(F-114)	**100**	**10**	**698**	**69.9**		20	3/11/2015	76-14-2
Ethylbenzene	< 10	10	< 43.4	43.4		20	3/11/2015	100-41-4
m&p-Xylene	< 20	20	< 86.8	86.8		20	3/11/2015	179601-23-1
o-Xylene	< 10	10	< 43.4	43.4		20	3/11/2015	95-47-6
Tetrachloroethene	**838**	**10**	**5,680**	**67.8**		20	3/11/2015	127-18-4
Toluene	< 10	10	< 37.7	37.7		20	3/11/2015	108-88-3
trans-1,2-Dichloroethene	**20**	**10**	**80.0**	**39.6**		20	3/11/2015	156-60-5
Trichloroethene	**328**	**10**	**1,760**	**53.7**		20	3/11/2015	79-01-6
Trichlorofluoromethane(F-11)	**16**	**10**	**92.2**	**56.2**		20	3/11/2015	75-69-4
Trichlorotrifluoroethane(F-113)	< 10	10	< 76.6	76.6		20	3/11/2015	76-13-1
Vinyl chloride	**11**	**10**	**27.1**	**25.6**		20	3/11/2015	75-01-4
Surr: 4-Bromofluorobenzene	107	70-130	%REC					

Tentatively Identified Compounds (TIC's)

Difluoroethane	< 200	200	ppbv		T4	20	3/11/2015

Airtech Environmental Laboratories (AEL) - AZ 0740

4620 E.Elwood St., Suite 13, Phoenix, AZ 85040 480-968-5888 Fax 480-966-1888

Client:	AMEC F/W	**Client Sample ID:**	BSDP-2-250-SG-030615
Project:	Broadway Pantana	**Project Number:**	14.2014-2029
Lab Order:	15C006	**Collection:**	3/6/2015
Lab ID:	15	**Matrix:**	Soil Vapor

	ppbv		ug/M^3				Date	
Analyses	**Result**	**Limit**	**Result**	**Limit**	**Qual**	**DF**	**Analyzed**	**CAS#**
VOLATILE ORGANICS IN AIR		**TO-15**					Analyst: JJ	
1,1,1-Trichloroethane	< 25	25	< 137	137		50	3/12/2015	71-55-6
1,1-Dichloroethane	< 25	25	< 101	101		50	3/12/2015	75-34-3
1,1-Dichloroethene	< 25	25	< 99.3	99.3		50	3/12/2015	75-35-4
Benzene	**95**	**25**	**303**	**79.8**		50	3/12/2015	71-43-2
cis-1,2-Dichloroethene	< 25	25	< 99.0	99.0		50	3/12/2015	156-59-2
Dichlorodifluoromethane(F-12)	**2,780**	**100**	**13,800**	**495**		100	3/12/2015	75-71-8
Dichlorotetrafluoroethane(F-114)	**191**	**25**	**1,340**	**175**		50	3/12/2015	76-14-2
Ethylbenzene	< 25	25	< 109	109		50	3/12/2015	100-41-4
m&p-Xylene	< 50	50	< 217	217		50	3/12/2015	179601-23-1
o-Xylene	< 25	25	< 109	109		50	3/12/2015	95-47-6
Tetrachloroethene	**1,610**	**25**	**10,900**	**170**		50	3/12/2015	127-18-4
Toluene	< 25	25	< 94.3	94.3		50	3/12/2015	108-88-3
trans-1,2-Dichloroethene	**44**	**25**	**172**	**99.0**		50	3/12/2015	156-60-5
Trichloroethene	**443**	**25**	**2,380**	**134**		50	3/12/2015	79-01-6
Trichlorofluoromethane(F-11)	**60**	**25**	**334**	**141**		50	3/12/2015	75-69-4
Trichlorotrifluoroethane(F-113)	< 25	25	< 192	192		50	3/12/2015	76-13-1
Vinyl chloride	< 25	25	< 64.0	64.0		50	3/12/2015	75-01-4
Surr: 4-Bromofluorobenzene	100	70-130	%REC					

Tentatively Identified Compounds (TIC's)

Difluoroethane	< 500	500	ppbv		T4	50	3/12/2015

Airtech Environmental Laboratories (AEL) - AZ 0740

4620 E.Elwood St., Suite 13, Phoenix, AZ 85040 480-968-5888 Fax 480-966-1888

Client:	AMEC F/W	**Client Sample ID:**	BSDP-2-300-SG-030615
Project:	Broadway Pantana	**Project Number:**	14.2014-2029
Lab Order:	15C006	**Collection:**	3/6/2015
Lab ID:	16	**Matrix:**	Soil Vapor

	ppbv		ug/M^3				Date	
Analyses	**Result**	**Limit**	**Result**	**Limit**	**Qual**	**DF**	**Analyzed**	**CAS#**
VOLATILE ORGANICS IN AIR		**TO-15**					Analyst: JJ	
1,1,1-Trichloroethane	< 25	25	< 137	137		50	3/12/2015	71-55-6
1,1-Dichloroethane	< 25	25	< 101	101		50	3/12/2015	75-34-3
1,1-Dichloroethene	< 25	25	< 99.3	99.3		50	3/12/2015	75-35-4
Benzene	**27**	**25**	**84.5**	**79.8**		50	3/12/2015	71-43-2
cis-1,2-Dichloroethene	< 25	25	< 99.0	99.0		50	3/12/2015	156-59-2
Dichlorodifluoromethane(F-12)	**3,730**	**200**	**18,500**	**990**		200	3/12/2015	75-71-8
Dichlorotetrafluoroethane(F-114)	**261**	**25**	**1,820**	**175**		50	3/12/2015	76-14-2
Ethylbenzene	< 25	25	< 109	109		50	3/12/2015	100-41-4
m&p-Xylene	< 50	50	< 217	217		50	3/12/2015	179601-23-1
o-Xylene	< 25	25	< 109	109		50	3/12/2015	95-47-6
Tetrachloroethene	**1,590**	**25**	**10,800**	**170**		50	3/12/2015	127-18-4
Toluene	< 25	25	< 94.3	94.3		50	3/12/2015	108-88-3
trans-1,2-Dichloroethene	< 25	25	< 99.0	99.0		50	3/12/2015	156-60-5
Trichloroethene	**268**	**25**	**1,440**	**134**		50	3/12/2015	79-01-6
Trichlorofluoromethane(F-11)	**93**	**25**	**520**	**141**		50	3/12/2015	75-69-4
Trichlorotrifluoroethane(F-113)	< 25	25	< 192	192		50	3/12/2015	76-13-1
Vinyl chloride	< 25	25	< 64.0	64.0		50	3/12/2015	75-01-4
Surr: 4-Bromofluorobenzene	103	70-130	%REC					

Tentatively Identified Compounds (TIC's)

Difluoroethane	< 500	500	ppbv		T4	50	3/12/2015

Airtech Environmental Laboratories (AEL) - AZ 0740

4620 E.Elwood St., Suite 13, Phoenix, AZ 85040 480-968-5888 Fax 480-966-1888

Client:	AMEC F/W	**Client Sample ID:**	BSDP-2-350-SG-030615
Project:	Broadway Pantana	**Project Number:**	14.2014-2029
Lab Order:	15C006	**Collection:**	3/6/2015
Lab ID:	17	**Matrix:**	Soil Vapor

	ppbv		ug/M^3				Date	
Analyses	**Result**	**Limit**	**Result**	**Limit**	**Qual**	**DF**	**Analyzed**	**CAS#**
VOLATILE ORGANICS IN AIR		**TO-15**					Analyst: JJ	
1,1,1-Trichloroethane	< 1.0	1.0	< 5.46	5.46		2	3/12/2015	71-55-6
1,1-Dichloroethane	< 1.0	1.0	< 4.05	4.05		2	3/12/2015	75-34-3
1,1-Dichloroethene	< 1.0	1.0	< 3.97	3.97		2	3/12/2015	75-35-4
Benzene	< 1.0	1.0	< 3.19	3.19		2	3/12/2015	71-43-2
cis-1,2-Dichloroethene	**1.8**	**1.0**	**7.05**	**3.96**		2	3/12/2015	156-59-2
Dichlorodifluoromethane(F-12)	**2.0**	**2.0**	**9.65**	**9.90**		2	3/12/2015	75-71-8
Dichlorotetrafluoroethane(F-114)	< 1.0	1.0	< 6.99	6.99		2	3/12/2015	76-14-2
Ethylbenzene	< 1.0	1.0	< 4.34	4.34		2	3/12/2015	100-41-4
m&p-Xylene	< 2.0	2.0	< 8.68	8.68		2	3/12/2015	179601-23-1
o-Xylene	< 1.0	1.0	< 4.34	4.34		2	3/12/2015	95-47-6
Tetrachloroethene	**58**	**1.0**	**391**	**6.78**		2	3/12/2015	127-18-4
Toluene	**1.8**	**1.0**	**6.86**	**3.77**		2	3/12/2015	108-88-3
trans-1,2-Dichloroethene	< 1.0	1.0	< 3.96	3.96		2	3/12/2015	156-60-5
Trichloroethene	**6.0**	**1.0**	**32.4**	**5.37**		2	3/12/2015	79-01-6
Trichlorofluoromethane(F-11)	< 1.0	1.0	< 5.62	5.62		2	3/12/2015	75-69-4
Trichlorotrifluoroethane(F-113)	< 1.0	1.0	< 7.66	7.66		2	3/12/2015	76-13-1
Vinyl chloride	**4.7**	**1.0**	**12.1**	**2.56**		2	3/12/2015	75-01-4
Surr: 4-Bromofluorobenzene	99.7	70-130	%REC					

Tentatively Identified Compounds (TIC's)

Difluoroethane	< 20	20	ppbv	T4	2	3/12/2015	

Airtech Environmental Laboratories (AEL) - AZ 0740

4620 E.Elwood St., Suite 13, Phoenix, AZ 85040 480-968-5888 Fax 480-966-1888

Client:	AMEC F/W	**Client Sample ID:**	BSDP-2-350-SG-030615-DUP
Project:	Broadway Pantana	**Project Number:**	14.2014-2029
Lab Order:	15C006	**Collection:**	3/6/2015
Lab ID:	18	**Matrix:**	Soil Vapor

	ppbv		ug/M^3				Date	
Analyses	**Result**	**Limit**	**Result**	**Limit**	**Qual**	**DF**	**Analyzed**	**CAS#**
VOLATILE ORGANICS IN AIR		**TO-15**					Analyst: JJ	
1,1,1-Trichloroethane	< 1.0	1.0	< 5.46	5.46		2	3/12/2015	71-55-6
1,1-Dichloroethane	< 1.0	1.0	< 4.05	4.05		2	3/12/2015	75-34-3
1,1-Dichloroethene	< 1.0	1.0	< 3.97	3.97		2	3/12/2015	75-35-4
Benzene	< 1.0	1.0	< 3.19	3.19		2	3/12/2015	71-43-2
cis-1,2-Dichloroethene	**1.9**	**1.0**	**7.60**	**3.96**		2	3/12/2015	156-59-2
Dichlorodifluoromethane(F-12)	**2.0**	**2.0**	**9.90**	**9.90**		2	3/12/2015	75-71-8
Dichlorotetrafluoroethane(F-114)	< 1.0	1.0	< 6.99	6.99		2	3/12/2015	76-14-2
Ethylbenzene	< 1.0	1.0	< 4.34	4.34		2	3/12/2015	100-41-4
m&p-Xylene	< 2.0	2.0	< 8.68	8.68		2	3/12/2015	179601-23-1
o-Xylene	< 1.0	1.0	< 4.34	4.34		2	3/12/2015	95-47-6
Tetrachloroethene	**73**	**1.0**	**492**	**6.78**		2	3/12/2015	127-18-4
Toluene	**1.8**	**1.0**	**6.94**	**3.77**		2	3/12/2015	108-88-3
trans-1,2-Dichloroethene	< 1.0	1.0	< 3.96	3.96		2	3/12/2015	156-60-5
Trichloroethene	**7.3**	**1.0**	**39.4**	**5.37**		2	3/12/2015	79-01-6
Trichlorofluoromethane(F-11)	< 1.0	1.0	< 5.62	5.62		2	3/12/2015	75-69-4
Trichlorotrifluoroethane(F-113)	< 1.0	1.0	< 7.66	7.66		2	3/12/2015	76-13-1
Vinyl chloride	**5.8**	**1.0**	**14.8**	**2.56**		2	3/12/2015	75-01-4
Surr: 4-Bromofluorobenzene	104	70-130	%REC					

Tentatively Identified Compounds (TIC's)

Difluoroethane	< 20	20	ppbv		T4	2	3/12/2015

Airtech Environmental Laboratories (AEL) - AZ 0740

4620 E.Elwood St., Suite 13, Phoenix, AZ 85040 480-968-5888 Fax 480-966-1888

Client:	AMEC F/W	**Client Sample ID:**	N/A
Project:	Broadway Pantana	**Project Number:**	14.2014-2029
Lab Order:	15C006	**Collection:**	N/A
Lab ID:	Blank	**Matrix:**	Nitrogen

Method QC Data

Batch: MS010309 Analyst: JJ

Analyses	ppbv Result	ppbv Limit	ug/M^3 Result	ug/M^3 Limit	Qual	DF	Date Analyzed	CAS#
VOLATILE ORGANICS IN AIR		**TO-15**					Analyst: JJ	
1,1,1-Trichloroethane	< 0.5	0.5	< 2.73	2.73		1	3/9/2015	71-55-6
1,1,2,2-Tetrachloroethane	< 0.5	0.5	< 3.44	3.44		1	3/9/2015	79-34-5
1,1,2-Trichloroethane	< 0.5	0.5	< 2.73	2.73		1	3/9/2015	79-00-5
1,1-Dichloroethane	< 0.5	0.5	< 2.03	2.03		1	3/9/2015	75-34-3
1,1-Dichloroethene	< 0.5	0.5	< 1.99	1.99		1	3/9/2015	75-35-4
1,2,4-Trichlorobenzene	< 2.0	2.0	< 14.8	14.8		1	3/9/2015	120-82-1
1,2,4-Trimethylbenzene	< 0.5	0.5	< 2.46	2.46		1	3/9/2015	95-63-6
1,2-Dibromoethane	< 0.5	0.5	< 3.84	3.84		1	3/9/2015	106-93-4
1,2-Dichlorobenzene	< 0.5	0.5	< 3.01	3.01		1	3/9/2015	95-50-1
1,2-Dichloroethane	< 0.5	0.5	< 2.03	2.03		1	3/9/2015	107-06-2
1,2-Dichloropropane	< 0.5	0.5	< 2.31	2.31		1	3/9/2015	78-87-5
1,3,5-Trimethylbenzene	< 0.5	0.5	< 2.46	2.46		1	3/9/2015	108-67-8
1,3-Butadiene	< 0.5	0.5	< 1.11	1.11		1	3/9/2015	106-99-0
1,3-Dichlorobenzene	< 0.5	0.5	< 3.01	3.01		1	3/9/2015	541-73-1
1,4-Dichlorobenzene	< 0.5	0.5	< 3.01	3.01		1	3/9/2015	106-46-7
1,4-Dioxane	< 2.0	2.0	< 7.20	7.20		1	3/9/2015	123-91-1
2,2,4-Trimethylpentane	< 0.5	0.5	< 2.33	2.33		1	3/9/2015	540-84-1
2-Butanone (MEK)	< 5.0	5.0	< 14.8	14.8		1	3/9/2015	78-93-3
2-Hexanone	< 5.0	5.0	< 20.5	20.5		1	3/9/2015	591-78-6
2-Propanol (IPA)	< 5.0	5.0	< 12.3	12.3		1	3/9/2015	67-63-0
4-Ethyltoluene	< 1.0	1.0	< 4.92	4.92		1	3/9/2015	622-96-8
4-Methyl-2-pentanone (MIK)	< 5.0	5.0	< 20.5	20.5		1	3/9/2015	108-10-1
Acetone	< 5.0	5.0	< 11.9	11.9		1	3/9/2015	67-64-1
Allyl chloride	< 1.0	1.0	< 3.13	3.13		1	3/9/2015	107-05-1
Benzene	< 0.5	0.5	< 1.60	1.60		1	3/9/2015	71-43-2
Benzyl chloride	< 2.0	2.0	< 10.4	10.4		1	3/9/2015	100-44-7
Bromodichloromethane	< 0.5	0.5	< 3.35	3.35		1	3/9/2015	75-27-4
Bromoethene(Vinyl Bromide)	< 0.5	0.5	< 2.19	2.19		1	3/9/2015	593-60-2
Bromoform	< 0.5	0.5	< 5.17	5.17		1	3/9/2015	75-25-2
Bromomethane	< 0.5	0.5	< 1.94	1.94		1	3/9/2015	74-83-9
Butyl benzene	< 1.0	1.0	< 5.49	5.49		1	3/9/2015	104-51-8
Carbon disulfide	< 2.0	2.0	< 6.22	6.22		1	3/9/2015	75-15-0
Carbon tetrachloride	< 0.5	0.5	< 3.15	3.15		1	3/9/2015	56-23-5
Chlorobenzene	< 0.5	0.5	< 2.30	2.30		1	3/9/2015	108-90-7
Chloroethane	< 0.5	0.5	< 1.32	1.32		1	3/9/2015	75-00-3
Chloroform	< 0.5	0.5	< 2.44	2.44		1	3/9/2015	67-66-3
Chloromethane	< 2.0	2.0	< 4.14	4.14		1	3/9/2015	74-87-3
cis-1,2-Dichloroethene	< 0.5	0.5	< 1.98	1.98		1	3/9/2015	156-59-2
cis-1,3-Dichloropropene	< 0.5	0.5	< 2.27	2.27		1	3/9/2015	542-75-6
Cyclohexane	< 0.5	0.5	< 1.72	1.72		1	3/9/2015	110-82-7
Dibromochloromethane	< 0.5	0.5	< 4.26	4.26		1	3/9/2015	124-48-1
Dichlorodifluoromethane(F-12)	< 1.0	1.0	< 4.95	4.95		1	3/9/2015	75-71-8
Dichlorotetrafluoroethane(F-114)	< 0.5	0.5	< 3.50	3.50		1	3/9/2015	76-14-2
Ethanol	< 5.0	5.0	< 9.40	9.40		1	3/9/2015	64-17-5
Ethyl Acetate	< 0.5	0.5	< 1.80	1.80		1	3/9/2015	141-78-6
Ethylbenzene	< 0.5	0.5	< 2.17	2.17		1	3/9/2015	100-41-4

Airtech Environmental Laboratories (AEL) - AZ 0740

4620 E.Elwood St., Suite 13, Phoenix, AZ 85040 480-968-5888 Fax 480-966-1888

Client:	AMEC F/W	**Client Sample ID:**	N/A
Project:	Broadway Pantana	**Project Number:**	14.2014-2029
Lab Order:	15C006	**Collection:**	N/A
Lab ID:	Blank	**Matrix:**	Nitrogen

Method QC Data

Batch: MS010309 Analyst: JJ

Analyses	ppbv Result	ppbv Limit	ug/M^3 Result	ug/M^3 Limit	Qual	DF	Date Analyzed	
VOLATILE ORGANICS IN AIR		**TO-15**					Analyst: JJ	
Heptane	< 0.5	0.5	< 2.05	2.05		1	3/9/2015	142-82-5
Hexachlorobutadiene	< 1.0	1.0	< 10.7	10.7		1	3/9/2015	87-68-3
Hexane	< 1.0	1.0	< 3.52	3.52		1	3/9/2015	110-54-3
Isopropylbenzene	< 1.0	1.0	< 4.92	4.92		1	3/9/2015	98-82-8
m&p-Xylene	< 1.0	1.0	< 4.34	4.34		1	3/9/2015	179601-23-1
Methyl tert-butyl ether	< 2.0	2.0	< 7.22	7.22		1	3/9/2015	1634-04-4
Methylcyclohexane	< 1.0	1.0	< 4.02	4.02		1	3/9/2015	108-87-2
Methylene chloride	< 2.0	2.0	< 6.94	6.94		1	3/9/2015	75-09-2
Naphthalene	< 2.0	2.0	< 10.5	10.5		1	3/9/2015	91-20-3
Nonane	< 1.0	1.0	< 5.24	5.24		1	3/9/2015	111-84-2
Octane	< 1.0	1.0	< 4.67	4.67		1	3/9/2015	111-65-9
o-Xylene	< 0.5	0.5	< 2.17	2.17		1	3/9/2015	95-47-6
Propene (Propylene)	< 1.0	1.0	< 1.72	1.72		1	3/9/2015	115-07-1
Propylbenzene	< 1.0	1.0	< 4.92	4.92		1	3/9/2015	103-65-1
Sec-Butyl benzene	< 1.0	1.0	< 5.49	5.49		1	3/9/2015	135-98-8
Styrene	< 0.5	0.5	< 2.13	2.13		1	3/9/2015	100-42-5
Tert-Butyl benzene	< 1.0	1.0	< 5.49	5.49		1	3/9/2015	98-06-6
Tetrachloroethene	< 0.5	0.5	< 3.39	3.39		1	3/9/2015	127-18-4
Tetrahydrofuran	< 2.0	2.0	< 5.90	5.90		1	3/9/2015	109-99-9
Toluene	< 0.5	0.5	< 1.89	1.89		1	3/9/2015	108-88-3
trans-1,2-Dichloroethene	< 0.5	0.5	< 1.98	1.98		1	3/9/2015	156-60-5
trans-1,3-Dichloropropene	< 0.5	0.5	< 2.27	2.27		1	3/9/2015	542-75-6
Trichloroethene	< 0.5	0.5	< 2.69	2.69		1	3/9/2015	79-01-6
Trichlorofluoromethane(F-11)	< 0.5	0.5	< 2.81	2.81		1	3/9/2015	75-69-4
Trichlorotrifluoroethane(F-113)	< 0.5	0.5	< 3.83	3.83		1	3/9/2015	76-13-1
Vinyl acetate	< 0.5	0.5	< 1.76	1.76		1	3/9/2015	108-05-4
Vinyl chloride	< 0.5	0.5	< 1.28	1.28		1	3/9/2015	75-01-4
Surr: 4-Bromofluorobenzene	101	70-130	%REC					

Airtech Environmental Laboratories (AEL) - AZ 0740

4620 E.Elwood St., Suite 13, Phoenix, AZ 85040 480-968-5888 Fax 480-966-1888

Client:	AMEC F/W	**Client Sample ID:**	N/A
Project:	Broadway Pantana	**Project Number:**	14.2014-2029
Lab Order:	15C006	**Collection:**	N/A
Lab ID:	LCS/LCSD	**Matrix:**	Nitrogen

Method QC Data

Date Analyzed: 3/9/2015 Batch: MS010309 Analyst: JJ

Analyses	LCS Result	LCS %REC	LCSD Result	LCSD %REC	T.V.	%RPD	Unit	Qualifier LCS	Qualifier LCSD	Qualifier RPD
VOLATILE ORGANICS IN AIR	**TO-15**							70-130%		<25%
Propene (Propylene)	10.6	106	10.9	109	10.0	2.5	ppbv			
Dichlorodifluoromethane(F-12)	10.5	105	10.4	104	10.0	0.8	ppbv			
Chloromethane	10.9	109	10.5	105	10.0	3.1	ppbv			
Dichlorotetrafluoroethane(F-114)	10.3	103	10.0	100	10.0	2.9	ppbv			
Vinyl Chloride	9.8	98.3	10.0	100	10.0	1.4	ppbv			
1,3-Butadiene	10.0	100	9.2	92.3	10.0	8.1	ppbv			
Bromomethane	9.2	92.0	9.2	91.6	10.0	0.4	ppbv			
Ethanol	10.6	106	9.6	96.3	10.0	9.5	ppbv			
Chloroethane	10.3	103	10.6	106	10.0	2.8	ppbv			
Bromoethene(Vinyl Bromide)	9.5	95.0	9.4	93.9	10.0	1.2	ppbv			
Trichlorofluoromethane (F-11)	10.1	101	9.9	99.1	10.0	1.4	ppbv			
Acetone	12.0	120	11.1	111	10.0	7.5	ppbv			
Isopropyl Alcohol (2-Propanol)	11.2	112	10.5	105	10.0	6.7	ppbv			
1,1-Dichloroethene	10.6	106	10.1	101	10.0	4.6	ppbv			
Trichlorotrifluoroethane (F-113)	9.9	98.7	9.7	96.6	10.0	2.2	ppbv			
Methylene Chloride	11.0	110	10.4	104	10.0	5.8	ppbv			
Allyl Chloride	10.2	102	9.6	95.7	10.0	6.0	ppbv			
Carbon disulfide	10.6	106	10.2	102	10.0	3.9	ppbv			
trans-1,2-Dichloroethene	9.9	98.6	9.5	94.8	10.0	3.9	ppbv			
Methyl tert-butyl ether	11.0	110	10.0	100	10.0	9.7	ppbv			
1,1-Dichloroethane	10.9	109	10.3	103	10.0	5.3	ppbv			
Vinyl acetate	11.8	118	10.8	108	10.0	8.8	ppbv			
2-Butanone (MEK)	10.7	107	9.5	95.1	10.0	11.5	ppbv			
Hexane	11.2	112	10.1	101	10.0	10.5	ppbv			
cis-1,2-Dichloroethene	10.2	102	9.3	92.8	10.0	9.3	ppbv			
Ethyl Acetate	11.7	117	11.0	110	10.0	5.9	ppbv			
Chloroform	10.5	105	10.1	101	10.0	3.4	ppbv			
Tetrahydrofuran	11.3	113	10.7	107	10.0	5.1	ppbv			
1,1,1-Trichloroethane	10.4	104	10.2	102	10.0	2.0	ppbv			
1,2-Dichloroethane	11.6	116	10.5	105	10.0	9.4	ppbv			
Benzene	10.7	107	10.0	100	10.0	7.5	ppbv			
Carbon tetrachloride	9.9	98.6	9.7	96.8	10.0	1.8	ppbv			
Cyclohexane	11.2	112	10.7	107	10.0	4.9	ppbv			
2,2,4-Trimethylpentane	11.1	111	10.6	106	10.0	4.3	ppbv			
Heptane	10.6	106	10.3	103	10.0	2.8	ppbv			
1,2-Dichloropropane	11.2	112	10.9	109	10.0	2.1	ppbv			
Trichloroethene	9.4	94.1	9.5	94.9	10.0	0.8	ppbv			
Bromodichloromethane	10.5	105	10.7	107	10.0	1.8	ppbv			
1,4-Dioxane	10.7	107	10.6	106	10.0	0.7	ppbv			
Methylcyclohexane	10.0	100	10.0	100	10.0	0.5	ppbv			
cis-1,3-Dichloropropene	10.8	108	10.8	108	10.0	0.1	ppbv			
4-methyl-2-pentanone	11.7	117	12.0	120	10.0	2.5	ppbv			
trans-1,3-Dichloropropene	11.2	112	11.2	112	10.0	0.4	ppbv			
Toluene	10.3	103	10.2	102	10.0	0.9	ppbv			

Airtech Environmental Laboratories (AEL) - AZ 0740

Client:	AMEC F/W	**Client Sample ID:**	N/A
Project:	Broadway Pantana	**Project Number:**	14.2014-2029
Lab Order:	15C006	**Collection:**	N/A
Lab ID:	LCS/LCSD	**Matrix:**	Nitrogen

Method QC Data

Date Analyzed: 3/9/2015 Batch: MS010309 Analyst: JJ

Analyses	LCS Result	LCS %REC	LCSD Result	LCSD %REC	T.V.	%RPD	Unit	Qualifier LCS	Qualifier LCSD	Qualifier RPD
VOLATILE ORGANICS IN AIR	**TO-15**							70-130%		<25%
1,1,2-Trichloroethane	10.4	104	10.2	102	10.0	2.1	ppbv			
2-Hexanone	12.4	124	12.3	123	10.0	0.4	ppbv			
n-Octane	11.0	110	11.0	110	10.0	0.3	ppbv			
Dibromochloromethane	9.9	99.0	10.2	102	10.0	2.8	ppbv			
1,2-Dibromoethane	10.0	100	10.4	104	10.0	3.2	ppbv			
Tetrachloroethene	9.2	92.3	9.5	94.7	10.0	2.6	ppbv			
Chlorobenzene	9.7	96.8	9.6	96.3	10.0	0.5	ppbv			
Ethylbenzene	9.9	99.4	9.7	97.4	10.0	2.0	ppbv			
m&p-Xylene	19.2	96.0	19.3	96.7	20.0	0.7	ppbv			
Bromoform	9.8	97.8	10.0	100	10.0	1.9	ppbv			
Styrene	10.0	100	10.0	100	10.0	0.2	ppbv			
Nonane	11.9	119	11.8	118	10.0	0.9	ppbv			
o-Xylene	9.9	98.5	9.7	96.8	10.0	1.7	ppbv			
1,1,2,2-Tetrachloroethane	10.0	99.7	10.4	104	10.0	3.9	ppbv			
Isopropylbenzene	9.3	92.5	9.3	93.4	10.0	1.0	ppbv			
n-Propylbenzene	9.9	99.2	9.7	97.1	10.0	2.1	ppbv			
4-Ethyltoluene	10.1	101	10.0	100	10.0	0.3	ppbv			
1,3,5-Trimethylbenzene	9.7	97.4	9.9	98.7	10.0	1.3	ppbv			
Tert-Butyl Benzene	9.3	92.5	9.4	93.9	10.0	1.5	ppbv			
1,2,4-Trimethylbenzene	10.1	101	10.1	101	10.0	0.1	ppbv			
Sec-Butyl Benzene	9.6	96.3	9.4	94.2	10.0	2.2	ppbv			
1,3-Dichlorobenzene	9.8	98.3	9.6	96.1	10.0	2.3	ppbv			
Benzyl chloride	10.7	107	10.7	107	10.0	0.1	ppbv			
1,4-Dichlorobenzene	9.8	98.0	9.6	95.5	10.0	2.6	ppbv			
1,2-Dichlorobenzene	9.7	97.2	10.1	101	10.0	3.3	ppbv			
n-Butyl Benzene	9.7	96.7	10.0	99.5	10.0	2.9	ppbv			
1,2,4-Trichlorobenzene	9.7	96.9	9.7	97.0	10.0	0.1	ppbv			
Naphthalene	9.7	96.9	9.7	96.6	10.0	0.3	ppbv			
Hexachlorobutadiene	9.5	95.0	9.4	93.8	10.0	1.3	ppbv			
Surr: 4-Bromofluorobenzene	10.2	102	10.3	103		1.4	%REC			
		70-130%		70-130%						

Airtech Environmental Laboratories (AEL) - AZ 0740

4620 E.Elwood St., Suite 13, Phoenix, AZ 85040 480-968-5888 Fax 480-966-1888

Client:	AMEC F/W	**Client Sample ID:**	N/A
Project:	Broadway Pantana	**Project Number:**	14.2014-2029
Lab Order:	15C006	**Collection:**	N/A
Lab ID:	Blank	**Matrix:**	Nitrogen

Method QC Data

Batch: MS010311 Analyst: JJ

Analyses	ppbv Result	ppbv Limit	ug/M^3 Result	ug/M^3 Limit	Qual	DF	Date Analyzed	CAS#
VOLATILE ORGANICS IN AIR		**TO-15**					Analyst: JJ	
1,1,1-Trichloroethane	< 0.5	0.5	< 2.73	2.73		1	3/11/2015	71-55-6
1,1-Dichloroethane	< 0.5	0.5	< 2.03	2.03		1	3/11/2015	75-34-3
1,1-Dichloroethene	< 0.5	0.5	< 1.99	1.99		1	3/11/2015	75-35-4
Benzene	< 0.5	0.5	< 1.60	1.60		1	3/11/2015	71-43-2
cis-1,2-Dichloroethene	< 0.5	0.5	< 1.98	1.98		1	3/11/2015	156-59-2
Dichlorodifluoromethane(F-12)	< 1.0	1.0	< 4.95	4.95		1	3/11/2015	75-71-8
Dichlorotetrafluoroethane(F-114)	< 0.5	0.5	< 3.50	3.50		1	3/11/2015	76-14-2
Ethylbenzene	< 0.5	0.5	< 2.17	2.17		1	3/11/2015	100-41-4
m&p-Xylene	< 1.0	1.0	< 4.34	4.34		1	3/11/2015	179601-23-1
o-Xylene	< 0.5	0.5	< 2.17	2.17		1	3/11/2015	95-47-6
Tetrachloroethene	< 0.5	0.5	< 3.39	3.39		1	3/11/2015	127-18-4
Toluene	< 0.5	0.5	< 1.89	1.89		1	3/11/2015	108-88-3
trans-1,2-Dichloroethene	< 0.5	0.5	< 1.98	1.98		1	3/11/2015	156-60-5
Trichloroethene	< 0.5	0.5	< 2.69	2.69		1	3/11/2015	79-01-6
Trichlorofluoromethane(F-11)	< 0.5	0.5	< 2.81	2.81		1	3/11/2015	75-69-4
Trichlorotrifluoroethane(F-113)	< 0.5	0.5	< 3.83	3.83		1	3/11/2015	76-13-1
Vinyl chloride	< 0.5	0.5	< 1.28	1.28		1	3/11/2015	75-01-4
Surr: 4-Bromofluorobenzene	97.1	70-130	%REC					

Airtech Environmental Laboratories (AEL) - AZ 0740

4620 E.Elwood St., Suite 13, Phoenix, AZ 85040 480-968-5888 Fax 480-966-1888

Client:	AMEC F/W	**Client Sample ID:**	N/A
Project:	Broadway Pantana	**Project Number:**	14.2014-2029
Lab Order:	15C006	**Collection:**	N/A
Lab ID:	LCS/LCSD	**Matrix:**	Nitrogen

Method QC Data

Date Analyzed: 3/11/2015 Batch: MS010311 Analyst: JJ

Analyses	LCS Result	LCS %REC	LCSD Result	LCSD %REC	T.V.	%RPD	Unit	Qualifier LCS	Qualifier LCSD	Qualifier RPD
VOLATILE ORGANICS IN AIR	**TO-15**							70-130%		<25%
Dichlorodifluoromethane(F-12)	10.2	102	9.9	98.5	10.0	3.4	ppbv			
Dichlorotetrafluoroethane(F-114)	9.3	93.4	9.1	90.6	10.0	3.0	ppbv			
Vinyl Chloride	10.8	108	10.0	100	10.0	7.8	ppbv			
Trichlorofluoromethane (F-11)	8.8	88.3	9.1	91.0	10.0	3.0	ppbv			
1,1-Dichloroethene	11.4	114	12.1	121	10.0	6.3	ppbv			
Trichlorotrifluoroethane (F-113)	8.7	87.2	9.3	92.9	10.0	6.3	ppbv			
trans-1,2-Dichloroethene	9.3	93.0	9.8	97.5	10.0	4.7	ppbv			
1,1-Dichloroethane	11.7	117	12.4	124	10.0	5.1	ppbv			
cis-1,2-Dichloroethene	8.9	88.5	9.7	96.8	10.0	9.0	ppbv			
1,1,1-Trichloroethane	8.5	85.1	9.0	89.8	10.0	5.4	ppbv			
Benzene	9.9	98.5	10.7	107	10.0	8.4	ppbv			
Trichloroethene	8.5	84.5	9.2	92.0	10.0	8.5	ppbv			
Toluene	9.2	91.5	10.7	107	10.0	15.2	ppbv			
Tetrachloroethene	8.3	83.4	9.1	90.9	10.0	8.6	ppbv			
Ethylbenzene	8.0	79.7	9.2	91.8	10.0	14.1	ppbv			
m&p-Xylene	15.7	78.7	18.0	90.0	20.0	13.4	ppbv			
o-Xylene	7.6	76.0	9.0	89.5	10.0	16.3	ppbv			
Surr: 4-Bromofluorobenzene	10.0	100	10.3	103		2.5	%REC			
		70-130%		70-130%						

Airtech Environmental Laboratories (AEL) - AZ 0740

4620 E.Elwood St., Suite 13, Phoenix, AZ 85040 480-968-5888 Fax 480-966-1888

Client:	AMEC F/W	**Client Sample ID:**	NA
Project:	Broadway Pantana	**Project Number:**	14.2014-2029
Lab Order:	15C006	**Collection:**	NA
Lab ID:	Standards	**Matrix:**	Nitrogen

AEL ID#	STD Name	Vendor	SGI Order#	Description	CONC.	Accuracy	Exp.Date
S-140820-01	Stock	Scott Gas	T9Z90001-110	TO-14 39 Analytes	1.0 ppmv	± 5%	8/20/2015
S-140820-02	Stock	Scott Gas	TO900015-110	TO-15 25 Analytes	1.0 ppmv	± 5%	8/20/2015
S-140624-01	Stock	Spectra Gases	111672570	14 Additional Compounds	1.0 ppmv	± 5%	6/23/2015
S-141201-01	Stock	Spectra Gases	TB500009-110	TO-15 IS 4 Compounds	1.0 ppmv	± 5%	12/1/2015
A-150223-02	Working Std	AEL Dilution		TO-15 74 Analytes	10 ppbv	± 5%	5/23/2015
A-150223-01	Working IS	AEL Dilution		TO-15 IS 4 Compounds	50 ppbv	± 5%	5/23/2015
A-150310-01	Working IS	AEL Dilution		TO-15 IS 4 Compounds	50 ppbv	± 5%	6/10/2015

Airtech Environmental Laboratories (AEL)

Chain of Custody

4620 E.Elwood Street, Suite 13, Phoenix, AZ 85040 480-968-5888 (phone) 480-966-1888 (fax)

Customer :	AMEC F/W	Page 1 of 2	AEL Lab #
Address:	4600 E WASHINGTON ST #600	Sampler: ERIC MILLER Phone: 602.300.8313	15C006
		Project Name: BROADWAY PANTANA Project Number: 14.2014-2029	
City, State, Zip:	PHOENIX, AZ	Project location: TUCSON, AZ	
Contact:	ALEX Y	P.O. Number:	
Phone:	Fax:	Fax Results: Y N	
E-Mail Address:	Alex.Yiannakakis@amec.com	E-Mail Results: Y N	

Sample Receipt	Turn Around Request	Sample Type
Temperature_____ °C	____ 24 Hours ____ 48 Hours	SVE: soil vapor extraction GW: ground water
Custody Seals: Yes_____ No_____	____ 72 Hours	A: ambient air WW: waste water
Custody Seals Intact: Yes_____ No_____	____ 5 working Day	I: indoor air
Total # of Containers:_____	X Standard 10 Working Days	S: soil vapor
		W: water

Sample Information

AEL Lab #	Serial # Canister	Serial # Grab	Canister (L) or bag	Grab (Min)	Client's Sample Identification	Sampled Date	Sampled Time	Sample Type	Number of Containers	TO-15 full list	TO-15 TPH(GRO)	TO-15 Selet List	8260B AZ Vapor full list	8260B Vapor select list	8015 GRO	8260B Water	TO-15 (SHORT LIST)		
01	E2364	110	6 (1) bag	1 2 (5)	PROD-1-SG-030515	3.5.15	1150	S	1	X									
02	1877	006	6 (1) bag	1 2 (5)	WR-434A-50-SG-030515	↓	1322	↓	↓								X		
03	E2404	020	6 (1) bag	1 2 (5)	WR-434A-150-SG-030515	↓	1410	↓	↓								X		
04	1881	109	6 (1) bag	1 2 (5)	WR-434A-250-SG-030515	↓	1445	↓	↓								X		
05	E2283	069	6 (1) bag	1 2 (5)	WR-434A-350-SG-030515	↓	1515	↓	↓								X		
06	1800	147	6 (1) bag	1 2 (5)	BSAP-1-100-SG-030615	3.6.15	830	S	1								X		
07	1807	080	6 (1) bag	1 2 (5)	BSAP-1-150-SG-030615	↓	903	↓	↓								X		
08	0606	004	6 (1) bag	1 2 (5)	BSAP-1-200-SG-030615	↓	935	↓	↓								X		
09	E2365	121	6 (1) bag	1 2 (5)	BSAP-1-248-SG-030615	↓	1020	↓	↓								X		
10	1852	095	6 (1) bag	1 2 (5)	BSAP-1-300-SG-030615	↓	1050	↓	↓								X		

Instructions / Special Requirements:

Date:	Time:	Samples Relinquished By:	Received By:
3.9.15	650	E. Mch	[signature]

Airtech Environmental Laboratories (AEL)

Chain of Custody

4620 E.Elwood Street, Suite 13, Phoenix, AZ 85040 480-968-5888 (phone) 480-966-1888 (fax)

Customer :	AMEC F/W	Page 2 of 2	AEL Lab #
Address:	4600 EAST WASHINGTON #600	Sampler: ERIC MILLER Phone: 602.300.8313	15C006
		Project Name: BROADWAY PANTANA Project Number: 142014 2027	
City, State, Zip:	PHOENIX, AZ	Project location: TUCSON, AZ	
Contact:	Alex Y.	P.O. Number:	
Phone:	Fax:	Fax Results: Y N	
E-Mail Address:	Alex.Yiannakakis@amec.com	E-Mail Results: Y N	

Sample Receipt	Turn Around Request	Sample Type
Temperature_____ °C	_____ 24 Hours _____ 48 Hours	SVE: soil vapor extraction GW: ground water
Custody Seals: Yes_____ No_____	_____ 72 Hours	A: ambient air WW: waste water
Custody Seals Intact: Yes_____ No_____	_____ 5 working Day	I: indoor air
Total # of Containers:_____	X Standard 10 Working Days	S: soil vapor
		W: water

Sample Information

AEL Lab #	Serial # Canister	Serial # Grab	Canister (L) or bag	Grab (Min)	Client's Sample Identification	Sampled Date	Sampled Time	Sample Type	Number of Containers	TO-15 full list	TO-15 TPH(GRO)	TO-15 Selet List	8260B AZ Vapor full list	8260B Vapor select list	8015 GRO	8260B Water	TO-15 (SHORT LIST)		
11	1835	067	6 1 bag	1 2 5	BSDP-1-350-SG-030615	3.6.15	1115	S	1								X		
12	E2293	032	6 1 bag	1 2 5	BSDP-2-100-SG-030615	↓	1232	↓	↓								X		
13	1879	053	6 1 bag	1 2 5	BSDP-2-150-SG-030615	↓	1258	↓	↓								X		
14	1878	040	6 1 bag	1 2 5	BSDP-2-200-SG-030615	↓	1323	↓	↓								X		
15	1856	139	6 1 bag	1 2 5	BSDP-2-250-SG-030615	↓	1350	↓	↓								X		
16	E2367	134	6 1 bag	1 2 5	BSDP-2-300-SG-030615	↓	1420	↓	↓								X		
17	1842	120	6 1 bag	1 2 5	BSDP-2-350-SG-030615	↓	1450	↓	↓								X		
18	E2104	122	6 1 bag	1 2 5	BSDP-2-350-SG-030615-DUP	↓	1450	↓	↓								X		
			6 1 bag	1 2 5															
			6 1 bag	1 2 5															

Instructions / Special Requirements:

Date:	Time:	Samples Relinquished By:	Received By:
3.9.15	650	E. Miller	[illegible]

Airtech Environmental Laboratories (AEL)
4620 E.Elwood St., Suite 13, Phoenix, AZ 85040 480-968-5888 Fax 480-966-1888

Date: March 27, 2015

Client:	Alex Yiannakakis	Work Order #:	15C013
Company:	AMEC F/W	Project Name:	Broadway Pantana
Address:	4600 E Washington St #600	Project Number:	14.2014-2029
	Phoenix, AZ 85040	Received Date:	3/12/2015

Dear Client:

Airtech Environmental Laboratories received twenty-eight (28) samples for analysis.

All analyses met laboratory QA/QC with any exceptions addressed in the Case Narrative.

If you have any questions or concerns regarding your samples analysis, please contact the laboratory at 480-968-5888

Sincerely,

Yu Min Shi
Technical Director
Airtech Environmental Labs

Arizona ADHS License No. AZ0740

Airtech Environmental Laboratories (AEL)
4620 E.Elwood St., Suite 13, Phoenix, AZ 85040 480-968-5888 Fax 480-966-1888

Date: March 27, 2015

Client:	Alex Yiannakakis	Work Order #:	15C013
Company:	AMEC F/W	Project Name:	Broadway Pantana
Address:	4600 E Washington St #600	Project Number:	14.2014-2029
	Phoenix, AZ 85040	Received Date:	3/12/2015

SAMPLE SUMMARY

LAB ID	CLIENT ID	METHOD	SAMPLE DATE	SAMPLE TIME
15C013-01	PRUD-2-SG-030915	TO-15	3/9/2015	1443
15C013-02	PRUD-4-SG-030915	TO-15	3/9/2015	1525
15C013-03	PRUD-3-SG-030915	TO-15	3/9/2015	1553
15C013-04	PRUD-19-SG-030915	TO-15	3/9/2015	1630
15C013-05	PRUD-18-SG-030915	TO-15	3/9/2015	1705
15C013-06	PRUD-17-SG-030915	TO-15	3/9/2015	1733
15C013-07	PRUD-16-SG-030915	TO-15	3/9/2015	1800
15C013-08	MW-9-SG-031015	TO-15	3/10/2015	0915
15C013-09	MW-8-SG-031015	TO-15	3/10/2015	0945
15C013-10	MW-8-SG-031015-DUP	TO-15	3/10/2015	0945
15C013-11	MW-7-SG-031015	TO-15	3/10/2015	1023
15C013-12	MW-6-SG-031015	TO-15	3/10/2015	1057
15C013-13	BSDP-3-50-SG-031015	TO-15	3/10/2015	1235
15C013-14	BSDP-3-100-SG-031015	TO-15	3/10/2015	1300
15C013-15	BSDP-3-150-SG-031015	TO-15	3/10/2015	1327
15C013-16	BSDP-4-50-SG-031015	TO-15	3/10/2015	1400
15C013-17	BSDP-4-100-SG-031015	TO-15	3/10/2015	1433
15C013-18	BSDP-4-150-SG-031015	TO-15	3/10/2015	1503
15C013-19	BP-23-200-SG-031115	TO-15	3/11/2015	0750
15C013-20	BP-23-250-SG-031115	TO-15	3/11/2015	0820
15C013-21	BP-23-300-SG-031115	TO-15	3/11/2015	0850
15C013-22	BP-23-350-SG-031115	TO-15	3/11/2015	0955
15C013-23	BP-23-350-SG-031115-DUP	TO-15	3/11/2015	0955
15C013-24	BP-22-200-SG-031115	TO-15	3/11/2015	1044
15C013-25	BP-22-250-SG-031115	TO-15	3/11/2015	1110
15C013-26	BP-22-300-SG-031115	TO-15	3/11/2015	1145
15C013-27	BP-22-350-SG-031115	TO-15	3/11/2015	1243
15C013-28	MW-5-SG-031115	TO-15	3/11/2015	1513

Airtech Environmental Laboratories (AEL)
4620 E.Elwood St., Suite 13, Phoenix, AZ 85040 480-968-5888 Fax 480-966-1888

Date: March 27, 2015

Client:	Alex Yiannakakis	Work Order #:	15C013
Company:	AMEC F/W	Project Name:	Broadway Pantana
Address:	4600 E Washington St #600	Project Number:	14.2014-2029
	Phoenix, AZ 85040	Received Date:	03/12/15

Case Narrative

All samples and QC associated with your samples met the quality control objectives.
Data qualifiers in this report are in accordance with ADEQ Data Qualifiers.

L5: The associated blank spike recovery was above the laboratory/method acceptance limits. Analyte not detected in sample.

T4: Tentatively identified compound. Concentration is estimated and based on the closest internal standard.

Airtech Environmental Laboratories (AEL) - AZ 0740
4620 E.Elwood St., Suite 13, Phoenix, AZ 85040 480-968-5888 Fax 480-966-1888

Client:	AMEC F/W	**Client Sample ID:**	N/A
Project:	Broadway Pantana	**Project Number:**	14.2014-2029
Lab Order:	15C013	**Collection:**	N/A
Lab ID:	Kits QC	**Matrix:**	Air

		Canister				Grab Sampler	
		Type		Vacuum	Vacuum	Type	
	Client	1.0 liter		before sampled	after sampled	5 minute-fill 1.0L canister	
AEL#	ID	SN#	Clean Batch#	Hg inch	psia	SN#	Clean Batch#
15C013-01	PRUD-2-SG-030915	E2407	1502-08	29.1	12.55	082	1502-08
15C013-02	PRUD-4-SG-030915	E2094	1502-08	29.1	10.89	136	1502-08
15C013-03	PRUD-3-SG-030915	E2393	1502-08	29.1	10.68	050	1412-09
15C013-04	PRUD-19-SG-030915	E2412	1502-14	29.1	12.90	037	1502-07
15C013-05	PRUD-18-SG-030915	1817	1502-14	29.1	11.93	073	1502-07
15C013-06	PRUD-17-SG-030915	E2294	1502-14	29.1	12.76	074	1502-07
15C013-07	PRUD-16-SG-030915	1886	1502-14	29.1	11.80	137	1502-07
15C013-08	MW-9-SG-031015	E2103	1502-14	29.1	11.19	116	1502-03
15C013-09	MW-8-SG-031015	1881	1502-15	29.1	12.83	140	1502-07
15C013-10	MW-8-SG-031015-DUP	E2350	1502-15	29.1	13.28	126	1502-03
15C013-11	MW-7-SG-031015	E2387	1502-14	29.1	12.96	070	1502-03
15C013-12	MW-6-SG-031015	E2087	1502-14	29.1	12.13	106	1502-03
15C013-13	BSDP-3-50-SG-031015	E2391	1502-16	29.1	11.81	055	1412-09
15C013-14	BSDP-3-100-SG-031015	E2397	1502-16	29.1	12.23	132	1502-07
15C013-15	BSDP-3-150-SG-031015	1809	1502-16	29.1	11.68	145	1412-07
15C013-16	BSDP-4-50-SG-031015	1793	1502-16	29.1	11.70	047	1412-09
15C013-17	BSDP-4-100-SG-031015	1865	1502-16	29.1	12.02	127	1412-07
15C013-18	BSDP-4-150-SG-031015	E2352	1502-16	29.1	12.35	078	1412-05
15C013-19	BP-23-200-SG-031115	1839	1502-16	29.1	12.63	107	1412-09
15C013-20	BP-23-250-SG-031115	1794	1502-16	29.1	12.88	016	1412-08

Airtech Environmental Laboratories (AEL) - AZ 0740
4620 E.Elwood St., Suite 13, Phoenix, AZ 85040 480-968-5888 Fax 480-966-1888

Client:	AMEC F/W	**Client Sample ID:**	N/A
Project:	Broadway Pantana	**Project Number:**	14.2014-2029
Lab Order:	15C013	**Collection:**	N/A
Lab ID:	Kits QC	**Matrix:**	Air

		Canister				Grab Sampler	
		Type		Vacuum	Vacuum	Type	
	Client	1.0 liter		before sampled	after sampled	5 minute-fill 1.0L canister	
AEL#	ID	SN#	Clean Batch#	Hg inch	psia	SN#	Clean Batch#
15C013-21	BP-23-300-SG-031115	E2370	1502-16	29.1	13.43	018	1412-09
15C013-22	BP-23-350-SG-031115	1858	1502-09	29.1	11.50	091	1502-04
15C013-23	BP-23-350-SG-031115-DUP	1864	1502-15	29.1	11.63	081	1502-04
15C013-24	BP-22-200-SG-031115	E2089	1502-15	29.1	11.64	024	1502-07
15C013-25	BP-22-250-SG-031115	E2406	1502-15	29.1	11.83	045	1502-07
15C013-26	BP-22-300-SG-031115	1816	1502-15	29.1	11.16	142	1502-07
15C013-27	BP-22-350-SG-031115	1797	1502-14	29.1	10.26	128	1502-07
15C013-28	MW-5-SG-031115	E2371	1502-15	29.1	12.28	115	1502-07

Airtech Environmental Laboratories (AEL) - AZ 0740

4620 E.Elwood St., Suite 13, Phoenix, AZ 85040 480-968-5888 Fax 480-966-1888

Client:	AMEC F/W	**Client Sample ID:**	PRUD-2-SG-030915
Project:	Broadway Pantana	**Project Number:**	14.2014-2029
Lab Order:	15C013	**Collection:**	3/9/2015
Lab ID:	01	**Matrix:**	Soil Vapor

	ppbv		ug/M^3				Date	
Analyses	**Result**	**Limit**	**Result**	**Limit**	**Qual**	**DF**	**Analyzed**	**CAS#**
VOLATILE ORGANICS IN AIR		**TO-15**					Analyst: JJ	
1,1,1-Trichloroethane	< 1.0	1.0	< 5.46	5.46		2	3/19/2015	71-55-6
1,1,2,2-Tetrachloroethane	< 1.0	1.0	< 6.87	6.87		2	3/19/2015	79-34-5
1,1,2-Trichloroethane	< 1.0	1.0	< 5.46	5.46		2	3/19/2015	79-00-5
1,1-Dichloroethane	< 1.0	1.0	< 4.05	4.05		2	3/19/2015	75-34-3
1,1-Dichloroethene	< 1.0	1.0	< 3.97	3.97		2	3/19/2015	75-35-4
1,2,4-Trichlorobenzene	< 4.0	4.0	< 29.7	29.7	L5	2	3/19/2015	120-82-1
1,2,4-Trimethylbenzene	< 1.0	1.0	< 4.92	4.92		2	3/19/2015	95-63-6
1,2-Dibromoethane	< 1.0	1.0	< 7.68	7.68		2	3/19/2015	106-93-4
1,2-Dichlorobenzene	< 1.0	1.0	< 6.01	6.01		2	3/19/2015	95-50-1
1,2-Dichloroethane	< 1.0	1.0	< 4.05	4.05		2	3/19/2015	107-06-2
1,2-Dichloropropane	< 1.0	1.0	< 4.62	4.62		2	3/19/2015	78-87-5
1,3,5-Trimethylbenzene	< 1.0	1.0	< 4.92	4.92		2	3/19/2015	108-67-8
1,3-Butadiene	< 1.0	1.0	< 2.21	2.21	L5	2	3/19/2015	106-99-0
1,3-Dichlorobenzene	< 1.0	1.0	< 6.01	6.01		2	3/19/2015	541-73-1
1,4-Dichlorobenzene	< 1.0	1.0	< 6.01	6.01		2	3/19/2015	106-46-7
1,4-Dioxane	< 4.0	4.0	< 14.4	14.4		2	3/19/2015	123-91-1
2,2,4-Trimethylpentane	< 1.0	1.0	< 4.66	4.66	L5	2	3/19/2015	540-84-1
2-Butanone (MEK)	< 10	10	< 29.5	29.5		2	3/19/2015	78-93-3
2-Hexanone	< 10	10	< 41.0	41.0	L5	2	3/19/2015	591-78-6
2-Propanol (IPA)	< 10	10	< 24.5	24.5	L5	2	3/19/2015	67-63-0
4-Ethyltoluene	< 2.0	2.0	< 9.84	9.84		2	3/19/2015	622-96-8
4-Methyl-2-pentanone (MIK)	< 10	10	< 41.0	41.0	L5	2	3/19/2015	108-10-1
Acetone	< 10	10	< 23.8	23.8		2	3/19/2015	67-64-1
Allyl chloride	< 2.0	2.0	< 6.26	6.26		2	3/19/2015	107-05-1
Benzene	< 1.0	1.0	< 3.19	3.19		2	3/19/2015	71-43-2
Benzyl chloride	< 4.0	4.0	< 20.7	20.7		2	3/19/2015	100-44-7
Bromodichloromethane	< 1.0	1.0	< 6.70	6.70		2	3/19/2015	75-27-4
Bromoethene(Vinyl Bromide)	< 1.0	1.0	< 4.37	4.37		2	3/19/2015	593-60-2
Bromoform	< 1.0	1.0	< 10.3	10.3	L5	2	3/19/2015	75-25-2
Bromomethane	< 1.0	1.0	< 3.88	3.88		2	3/19/2015	74-83-9
Butyl benzene	< 2.0	2.0	< 11.0	11.0		2	3/19/2015	104-51-8
Carbon disulfide	**5.6**	**4.0**	**17.4**	**12.4**		2	3/19/2015	75-15-0
Carbon tetrachloride	< 1.0	1.0	< 6.29	6.29		2	3/19/2015	56-23-5
Chlorobenzene	< 1.0	1.0	< 4.60	4.60		2	3/19/2015	108-90-7
Chloroethane	< 1.0	1.0	< 2.64	2.64		2	3/19/2015	75-00-3
Chloroform	< 1.0	1.0	< 4.88	4.88		2	3/19/2015	67-66-3
Chloromethane	< 4.0	4.0	< 8.28	8.28		2	3/19/2015	74-87-3
cis-1,2-Dichloroethene	< 1.0	1.0	< 3.96	3.96		2	3/19/2015	156-59-2
cis-1,3-Dichloropropene	< 1.0	1.0	< 4.54	4.54		2	3/19/2015	542-75-6
Cyclohexane	< 1.0	1.0	< 3.44	3.44		2	3/19/2015	110-82-7
Dibromochloromethane	< 1.0	1.0	< 8.52	8.52		2	3/19/2015	124-48-1
Dichlorodifluoromethane(F-12)	**2.1**	**2.0**	**10.5**	**9.90**		2	3/19/2015	75-71-8
Dichlorotetrafluoroethane(F-114)	< 1.0	1.0	< 6.99	6.99		2	3/19/2015	76-14-2
Ethanol	< 10	10	< 18.8	18.8		2	3/19/2015	64-17-5
Ethyl Acetate	< 1.0	1.0	< 3.60	3.60	L5	2	3/19/2015	141-78-6
Ethylbenzene	< 1.0	1.0	< 4.34	4.34		2	3/19/2015	100-41-4

Airtech Environmental Laboratories (AEL) - AZ 0740

4620 E.Elwood St., Suite 13, Phoenix, AZ 85040 480-968-5888 Fax 480-966-1888

Client:	AMEC F/W	**Client Sample ID:**	PRUD-2-SG-030915
Project:	Broadway Pantana	**Project Number:**	14.2014-2029
Lab Order:	15C013	**Collection:**	3/9/2015
Lab ID:	01	**Matrix:**	Soil Vapor

	ppbv		ug/M^3				Date	
Analyses	**Result**	**Limit**	**Result**	**Limit**	**Qual**	**DF**	**Analyzed**	**CAS#**
VOLATILE ORGANICS IN AIR		**TO-15**					Analyst: JJ	
Heptane	< 1.0	1.0	< 4.10	4.10		2	3/19/2015	142-82-5
Hexachlorobutadiene	< 2.0	2.0	< 21.3	21.3	L5	2	3/19/2015	87-68-3
Hexane	< 2.0	2.0	< 7.04	7.04		2	3/19/2015	110-54-3
Isopropylbenzene	< 2.0	2.0	< 9.84	9.84		2	3/19/2015	98-82-8
m&p-Xylene	< 2.0	2.0	< 8.68	8.68		2	3/19/2015	179601-23-1
Methyl tert-butyl ether	< 4.0	4.0	< 14.4	14.4		2	3/19/2015	1634-04-4
Methylcyclohexane	< 2.0	2.0	< 8.04	8.04		2	3/19/2015	108-87-2
Methylene chloride	< 4.0	4.0	< 13.9	13.9		2	3/19/2015	75-09-2
Naphthalene	< 4.0	4.0	< 21.0	21.0		2	3/19/2015	91-20-3
Nonane	< 2.0	2.0	< 10.5	10.5		2	3/19/2015	111-84-2
Octane	< 2.0	2.0	< 9.34	9.34		2	3/19/2015	111-65-9
o-Xylene	< 1.0	1.0	< 4.34	4.34		2	3/19/2015	95-47-6
Propene (Propylene)	< 2.0	2.0	< 3.44	3.44		2	3/19/2015	115-07-1
Propylbenzene	< 2.0	2.0	< 9.84	9.84		2	3/19/2015	103-65-1
Sec-Butyl benzene	< 2.0	2.0	< 11.0	11.0		2	3/19/2015	135-98-8
Styrene	< 1.0	1.0	< 4.26	4.26		2	3/19/2015	100-42-5
Tert-Butyl benzene	< 2.0	2.0	< 11.0	11.0		2	3/19/2015	98-06-6
Tetrachloroethene	**4.4**	**1.0**	**29.6**	**6.78**		2	3/19/2015	127-18-4
Tetrahydrofuran	< 4.0	4.0	< 11.8	11.8	L5	2	3/19/2015	109-99-9
Toluene	< 1.0	1.0	< 3.77	3.77		2	3/19/2015	108-88-3
trans-1,2-Dichloroethene	< 1.0	1.0	< 3.96	3.96		2	3/19/2015	156-60-5
trans-1,3-Dichloropropene	< 1.0	1.0	< 4.54	4.54		2	3/19/2015	542-75-6
Trichloroethene	< 1.0	1.0	< 5.37	5.37		2	3/19/2015	79-01-6
Trichlorofluoromethane(F-11)	< 1.0	1.0	< 5.62	5.62		2	3/19/2015	75-69-4
Trichlorotrifluoroethane(F-113)	< 1.0	1.0	< 7.66	7.66		2	3/19/2015	76-13-1
Vinyl acetate	< 1.0	1.0	< 3.52	3.52	L5	2	3/19/2015	108-05-4
Vinyl chloride	< 1.0	1.0	< 2.56	2.56		2	3/19/2015	75-01-4
Surr: 4-Bromofluorobenzene	83.5	70-130	%REC					

Tentatively Identified Compounds (TIC's)

Difluoroethane	< 20	20	ppbv		T4	2	3/19/2015

Airtech Environmental Laboratories (AEL) - AZ 0740

4620 E.Elwood St., Suite 13, Phoenix, AZ 85040 480-968-5888 Fax 480-966-1888

Client:	AMEC F/W	**Client Sample ID:**	PRUD-4-SG-030915
Project:	Broadway Pantana	**Project Number:**	14.2014-2029
Lab Order:	15C013	**Collection:**	3/9/2015
Lab ID:	02	**Matrix:**	Soil Vapor

	ppbv		ug/M^3				Date	
Analyses	**Result**	**Limit**	**Result**	**Limit**	**Qual**	**DF**	**Analyzed**	**CAS#**
VOLATILE ORGANICS IN AIR		**TO-15**					Analyst: JJ	
1,1,1-Trichloroethane	< 1.0	1.0	< 5.46	5.46		2	3/19/2015	71-55-6
1,1,2,2-Tetrachloroethane	< 1.0	1.0	< 6.87	6.87		2	3/19/2015	79-34-5
1,1,2-Trichloroethane	< 1.0	1.0	< 5.46	5.46		2	3/19/2015	79-00-5
1,1-Dichloroethane	< 1.0	1.0	< 4.05	4.05		2	3/19/2015	75-34-3
1,1-Dichloroethene	< 1.0	1.0	< 3.97	3.97		2	3/19/2015	75-35-4
1,2,4-Trichlorobenzene	< 4.0	4.0	< 29.7	29.7	L5	2	3/19/2015	120-82-1
1,2,4-Trimethylbenzene	< 1.0	1.0	< 4.92	4.92		2	3/19/2015	95-63-6
1,2-Dibromoethane	< 1.0	1.0	< 7.68	7.68		2	3/19/2015	106-93-4
1,2-Dichlorobenzene	< 1.0	1.0	< 6.01	6.01		2	3/19/2015	95-50-1
1,2-Dichloroethane	< 1.0	1.0	< 4.05	4.05		2	3/19/2015	107-06-2
1,2-Dichloropropane	< 1.0	1.0	< 4.62	4.62		2	3/19/2015	78-87-5
1,3,5-Trimethylbenzene	< 1.0	1.0	< 4.92	4.92		2	3/19/2015	108-67-8
1,3-Butadiene	< 1.0	1.0	< 2.21	2.21	L5	2	3/19/2015	106-99-0
1,3-Dichlorobenzene	< 1.0	1.0	< 6.01	6.01		2	3/19/2015	541-73-1
1,4-Dichlorobenzene	< 1.0	1.0	< 6.01	6.01		2	3/19/2015	106-46-7
1,4-Dioxane	< 4.0	4.0	< 14.4	14.4		2	3/19/2015	123-91-1
2,2,4-Trimethylpentane	< 1.0	1.0	< 4.66	4.66	L5	2	3/19/2015	540-84-1
2-Butanone (MEK)	< 10	10	< 29.5	29.5		2	3/19/2015	78-93-3
2-Hexanone	< 10	10	< 41.0	41.0	L5	2	3/19/2015	591-78-6
2-Propanol (IPA)	< 10	10	< 24.5	24.5	L5	2	3/19/2015	67-63-0
4-Ethyltoluene	< 2.0	2.0	< 9.84	9.84		2	3/19/2015	622-96-8
4-Methyl-2-pentanone (MIK)	< 10	10	< 41.0	41.0	L5	2	3/19/2015	108-10-1
Acetone	< 10	10	< 23.8	23.8		2	3/19/2015	67-64-1
Allyl chloride	< 2.0	2.0	< 6.26	6.26		2	3/19/2015	107-05-1
Benzene	< 1.0	1.0	< 3.19	3.19		2	3/19/2015	71-43-2
Benzyl chloride	< 4.0	4.0	< 20.7	20.7		2	3/19/2015	100-44-7
Bromodichloromethane	< 1.0	1.0	< 6.70	6.70		2	3/19/2015	75-27-4
Bromoethene(Vinyl Bromide)	< 1.0	1.0	< 4.37	4.37		2	3/19/2015	593-60-2
Bromoform	< 1.0	1.0	< 10.3	10.3	L5	2	3/19/2015	75-25-2
Bromomethane	< 1.0	1.0	< 3.88	3.88		2	3/19/2015	74-83-9
Butyl benzene	< 2.0	2.0	< 11.0	11.0		2	3/19/2015	104-51-8
Carbon disulfide	< 4.0	4.0	< 12.4	12.4		2	3/19/2015	75-15-0
Carbon tetrachloride	< 1.0	1.0	< 6.29	6.29		2	3/19/2015	56-23-5
Chlorobenzene	< 1.0	1.0	< 4.60	4.60		2	3/19/2015	108-90-7
Chloroethane	< 1.0	1.0	< 2.64	2.64		2	3/19/2015	75-00-3
Chloroform	< 1.0	1.0	< 4.88	4.88		2	3/19/2015	67-66-3
Chloromethane	< 4.0	4.0	< 8.28	8.28		2	3/19/2015	74-87-3
cis-1,2-Dichloroethene	< 1.0	1.0	< 3.96	3.96		2	3/19/2015	156-59-2
cis-1,3-Dichloropropene	< 1.0	1.0	< 4.54	4.54		2	3/19/2015	542-75-6
Cyclohexane	< 1.0	1.0	< 3.44	3.44		2	3/19/2015	110-82-7
Dibromochloromethane	< 1.0	1.0	< 8.52	8.52		2	3/19/2015	124-48-1
Dichlorodifluoromethane(F-12)	**8.4**	**2.0**	**41.5**	**9.90**		2	3/19/2015	75-71-8
Dichlorotetrafluoroethane(F-114)	< 1.0	1.0	< 6.99	6.99		2	3/19/2015	76-14-2
Ethanol	< 10	10	< 18.8	18.8		2	3/19/2015	64-17-5
Ethyl Acetate	< 1.0	1.0	< 3.60	3.60	L5	2	3/19/2015	141-78-6
Ethylbenzene	< 1.0	1.0	< 4.34	4.34		2	3/19/2015	100-41-4

Airtech Environmental Laboratories (AEL) - AZ 0740

4620 E.Elwood St., Suite 13, Phoenix, AZ 85040 480-968-5888 Fax 480-966-1888

Client:	AMEC F/W	**Client Sample ID:**	PRUD-4-SG-030915
Project:	Broadway Pantana	**Project Number:**	14.2014-2029
Lab Order:	15C013	**Collection:**	3/9/2015
Lab ID:	02	**Matrix:**	Soil Vapor

	ppbv		ug/M^3				Date	
Analyses	**Result**	**Limit**	**Result**	**Limit**	**Qual**	**DF**	**Analyzed**	**CAS#**
VOLATILE ORGANICS IN AIR		**TO-15**					Analyst: JJ	
Heptane	< 1.0	1.0	< 4.10	4.10		2	3/19/2015	142-82-5
Hexachlorobutadiene	< 2.0	2.0	< 21.3	21.3	L5	2	3/19/2015	87-68-3
Hexane	< 2.0	2.0	< 7.04	7.04		2	3/19/2015	110-54-3
Isopropylbenzene	< 2.0	2.0	< 9.84	9.84		2	3/19/2015	98-82-8
m&p-Xylene	< 2.0	2.0	< 8.68	8.68		2	3/19/2015	179601-23-1
Methyl tert-butyl ether	< 4.0	4.0	< 14.4	14.4		2	3/19/2015	1634-04-4
Methylcyclohexane	< 2.0	2.0	< 8.04	8.04		2	3/19/2015	108-87-2
Methylene chloride	< 4.0	4.0	< 13.9	13.9		2	3/19/2015	75-09-2
Naphthalene	< 4.0	4.0	< 21.0	21.0		2	3/19/2015	91-20-3
Nonane	< 2.0	2.0	< 10.5	10.5		2	3/19/2015	111-84-2
Octane	< 2.0	2.0	< 9.34	9.34		2	3/19/2015	111-65-9
o-Xylene	< 1.0	1.0	< 4.34	4.34		2	3/19/2015	95-47-6
Propene (Propylene)	< 2.0	2.0	< 3.44	3.44		2	3/19/2015	115-07-1
Propylbenzene	< 2.0	2.0	< 9.84	9.84		2	3/19/2015	103-65-1
Sec-Butyl benzene	< 2.0	2.0	< 11.0	11.0		2	3/19/2015	135-98-8
Styrene	< 1.0	1.0	< 4.26	4.26		2	3/19/2015	100-42-5
Tert-Butyl benzene	< 2.0	2.0	< 11.0	11.0		2	3/19/2015	98-06-6
Tetrachloroethene	**1.5**	**1.0**	**10.2**	**6.78**		2	3/19/2015	127-18-4
Tetrahydrofuran	< 4.0	4.0	< 11.8	11.8	L5	2	3/19/2015	109-99-9
Toluene	< 1.0	1.0	< 3.77	3.77		2	3/19/2015	108-88-3
trans-1,2-Dichloroethene	< 1.0	1.0	< 3.96	3.96		2	3/19/2015	156-60-5
trans-1,3-Dichloropropene	< 1.0	1.0	< 4.54	4.54		2	3/19/2015	542-75-6
Trichloroethene	< 1.0	1.0	< 5.37	5.37		2	3/19/2015	79-01-6
Trichlorofluoromethane(F-11)	< 1.0	1.0	< 5.62	5.62		2	3/19/2015	75-69-4
Trichlorotrifluoroethane(F-113)	< 1.0	1.0	< 7.66	7.66		2	3/19/2015	76-13-1
Vinyl acetate	< 1.0	1.0	< 3.52	3.52	L5	2	3/19/2015	108-05-4
Vinyl chloride	< 1.0	1.0	< 2.56	2.56		2	3/19/2015	75-01-4
Surr: 4-Bromofluorobenzene	84.2	70-130	%REC					

Tentatively Identified Compounds (TIC's)

Difluoroethane	< 20	20	ppbv		T4	2	3/19/2015

Airtech Environmental Laboratories (AEL) - AZ 0740

4620 E.Elwood St., Suite 13, Phoenix, AZ 85040 480-968-5888 Fax 480-966-1888

Client:	AMEC F/W	**Client Sample ID:**	PRUD-3-SG-030915
Project:	Broadway Pantana	**Project Number:**	14.2014-2029
Lab Order:	15C013	**Collection:**	3/9/2015
Lab ID:	03	**Matrix:**	Soil Vapor

	ppbv		ug/M^3				Date	
Analyses	**Result**	**Limit**	**Result**	**Limit**	**Qual**	**DF**	**Analyzed**	**CAS#**
VOLATILE ORGANICS IN AIR		**TO-15**					Analyst: JJ	
1,1,1-Trichloroethane	< 1.0	1.0	< 5.46	5.46		2	3/19/2015	71-55-6
1,1,2,2-Tetrachloroethane	< 1.0	1.0	< 6.87	6.87		2	3/19/2015	79-34-5
1,1,2-Trichloroethane	< 1.0	1.0	< 5.46	5.46		2	3/19/2015	79-00-5
1,1-Dichloroethane	< 1.0	1.0	< 4.05	4.05		2	3/19/2015	75-34-3
1,1-Dichloroethene	< 1.0	1.0	< 3.97	3.97		2	3/19/2015	75-35-4
1,2,4-Trichlorobenzene	< 4.0	4.0	< 29.7	29.7	L5	2	3/19/2015	120-82-1
1,2,4-Trimethylbenzene	< 1.0	1.0	< 4.92	4.92		2	3/19/2015	95-63-6
1,2-Dibromoethane	< 1.0	1.0	< 7.68	7.68		2	3/19/2015	106-93-4
1,2-Dichlorobenzene	< 1.0	1.0	< 6.01	6.01		2	3/19/2015	95-50-1
1,2-Dichloroethane	< 1.0	1.0	< 4.05	4.05		2	3/19/2015	107-06-2
1,2-Dichloropropane	< 1.0	1.0	< 4.62	4.62		2	3/19/2015	78-87-5
1,3,5-Trimethylbenzene	< 1.0	1.0	< 4.92	4.92		2	3/19/2015	108-67-8
1,3-Butadiene	< 1.0	1.0	< 2.21	2.21	L5	2	3/19/2015	106-99-0
1,3-Dichlorobenzene	< 1.0	1.0	< 6.01	6.01		2	3/19/2015	541-73-1
1,4-Dichlorobenzene	< 1.0	1.0	< 6.01	6.01		2	3/19/2015	106-46-7
1,4-Dioxane	< 4.0	4.0	< 14.4	14.4		2	3/19/2015	123-91-1
2,2,4-Trimethylpentane	< 1.0	1.0	< 4.66	4.66	L5	2	3/19/2015	540-84-1
2-Butanone (MEK)	< 10	10	< 29.5	29.5		2	3/19/2015	78-93-3
2-Hexanone	< 10	10	< 41.0	41.0	L5	2	3/19/2015	591-78-6
2-Propanol (IPA)	< 10	10	< 24.5	24.5	L5	2	3/19/2015	67-63-0
4-Ethyltoluene	< 2.0	2.0	< 9.84	9.84		2	3/19/2015	622-96-8
4-Methyl-2-pentanone (MIK)	< 10	10	< 41.0	41.0	L5	2	3/19/2015	108-10-1
Acetone	< 10	10	< 23.8	23.8		2	3/19/2015	67-64-1
Allyl chloride	< 2.0	2.0	< 6.26	6.26		2	3/19/2015	107-05-1
Benzene	< 1.0	1.0	< 3.19	3.19		2	3/19/2015	71-43-2
Benzyl chloride	< 4.0	4.0	< 20.7	20.7		2	3/19/2015	100-44-7
Bromodichloromethane	< 1.0	1.0	< 6.70	6.70		2	3/19/2015	75-27-4
Bromoethene(Vinyl Bromide)	< 1.0	1.0	< 4.37	4.37		2	3/19/2015	593-60-2
Bromoform	< 1.0	1.0	< 10.3	10.3	L5	2	3/19/2015	75-25-2
Bromomethane	< 1.0	1.0	< 3.88	3.88		2	3/19/2015	74-83-9
Butyl benzene	< 2.0	2.0	< 11.0	11.0		2	3/19/2015	104-51-8
Carbon disulfide	< 4.0	4.0	< 12.4	12.4		2	3/19/2015	75-15-0
Carbon tetrachloride	< 1.0	1.0	< 6.29	6.29		2	3/19/2015	56-23-5
Chlorobenzene	< 1.0	1.0	< 4.60	4.60		2	3/19/2015	108-90-7
Chloroethane	< 1.0	1.0	< 2.64	2.64		2	3/19/2015	75-00-3
Chloroform	< 1.0	1.0	< 4.88	4.88		2	3/19/2015	67-66-3
Chloromethane	< 4.0	4.0	< 8.28	8.28		2	3/19/2015	74-87-3
cis-1,2-Dichloroethene	< 1.0	1.0	< 3.96	3.96		2	3/19/2015	156-59-2
cis-1,3-Dichloropropene	< 1.0	1.0	< 4.54	4.54		2	3/19/2015	542-75-6
Cyclohexane	< 1.0	1.0	< 3.44	3.44		2	3/19/2015	110-82-7
Dibromochloromethane	< 1.0	1.0	< 8.52	8.52		2	3/19/2015	124-48-1
Dichlorodifluoromethane(F-12)	< 2.0	2.0	< 9.90	9.90		2	3/19/2015	75-71-8
Dichlorotetrafluoroethane(F-114)	< 1.0	1.0	< 6.99	6.99		2	3/19/2015	76-14-2
Ethanol	< 10	10	< 18.8	18.8		2	3/19/2015	64-17-5
Ethyl Acetate	< 1.0	1.0	< 3.60	3.60	L5	2	3/19/2015	141-78-6
Ethylbenzene	< 1.0	1.0	< 4.34	4.34		2	3/19/2015	100-41-4

Airtech Environmental Laboratories (AEL) - AZ 0740

4620 E.Elwood St., Suite 13, Phoenix, AZ 85040 480-968-5888 Fax 480-966-1888

Client:	AMEC F/W	**Client Sample ID:**	PRUD-3-SG-030915
Project:	Broadway Pantana	**Project Number:**	14.2014-2029
Lab Order:	15C013	**Collection:**	3/9/2015
Lab ID:	03	**Matrix:**	Soil Vapor

Analyses	ppbv Result	ppbv Limit	ug/M^3 Result	ug/M^3 Limit	Qual	DF	Date Analyzed	CAS#
VOLATILE ORGANICS IN AIR		**TO-15**					Analyst: JJ	
Heptane	< 1.0	1.0	< 4.10	4.10		2	3/19/2015	142-82-5
Hexachlorobutadiene	< 2.0	2.0	< 21.3	21.3	L5	2	3/19/2015	87-68-3
Hexane	< 2.0	2.0	< 7.04	7.04		2	3/19/2015	110-54-3
Isopropylbenzene	< 2.0	2.0	< 9.84	9.84		2	3/19/2015	98-82-8
m&p-Xylene	< 2.0	2.0	< 8.68	8.68		2	3/19/2015	179601-23-1
Methyl tert-butyl ether	< 4.0	4.0	< 14.4	14.4		2	3/19/2015	1634-04-4
Methylcyclohexane	< 2.0	2.0	< 8.04	8.04		2	3/19/2015	108-87-2
Methylene chloride	< 4.0	4.0	< 13.9	13.9		2	3/19/2015	75-09-2
Naphthalene	< 4.0	4.0	< 21.0	21.0		2	3/19/2015	91-20-3
Nonane	< 2.0	2.0	< 10.5	10.5		2	3/19/2015	111-84-2
Octane	< 2.0	2.0	< 9.34	9.34		2	3/19/2015	111-65-9
o-Xylene	< 1.0	1.0	< 4.34	4.34		2	3/19/2015	95-47-6
Propene (Propylene)	< 2.0	2.0	< 3.44	3.44		2	3/19/2015	115-07-1
Propylbenzene	< 2.0	2.0	< 9.84	9.84		2	3/19/2015	103-65-1
Sec-Butyl benzene	< 2.0	2.0	< 11.0	11.0		2	3/19/2015	135-98-8
Styrene	< 1.0	1.0	< 4.26	4.26		2	3/19/2015	100-42-5
Tert-Butyl benzene	< 2.0	2.0	< 11.0	11.0		2	3/19/2015	98-06-6
Tetrachloroethene	**3.5**	**1.0**	**23.5**	**6.78**		2	3/19/2015	127-18-4
Tetrahydrofuran	< 4.0	4.0	< 11.8	11.8	L5	2	3/19/2015	109-99-9
Toluene	< 1.0	1.0	< 3.77	3.77		2	3/19/2015	108-88-3
trans-1,2-Dichloroethene	< 1.0	1.0	< 3.96	3.96		2	3/19/2015	156-60-5
trans-1,3-Dichloropropene	< 1.0	1.0	< 4.54	4.54		2	3/19/2015	542-75-6
Trichloroethene	< 1.0	1.0	< 5.37	5.37		2	3/19/2015	79-01-6
Trichlorofluoromethane(F-11)	< 1.0	1.0	< 5.62	5.62		2	3/19/2015	75-69-4
Trichlorotrifluoroethane(F-113)	< 1.0	1.0	< 7.66	7.66		2	3/19/2015	76-13-1
Vinyl acetate	< 1.0	1.0	< 3.52	3.52	L5	2	3/19/2015	108-05-4
Vinyl chloride	< 1.0	1.0	< 2.56	2.56		2	3/19/2015	75-01-4
Surr: 4-Bromofluorobenzene	85.4	70-130	%REC					

Tentatively Identified Compounds (TIC's)

Difluoroethane	< 20	20	ppbv		T4	2	3/19/2015

Airtech Environmental Laboratories (AEL) - AZ 0740

4620 E.Elwood St., Suite 13, Phoenix, AZ 85040 480-968-5888 Fax 480-966-1888

Client:	AMEC F/W	**Client Sample ID:**	PRUD-19-SG-030915
Project:	Broadway Pantana	**Project Number:**	14.2014-2029
Lab Order:	15C013	**Collection:**	3/9/2015
Lab ID:	04	**Matrix:**	Soil Vapor

	ppbv		ug/M^3				Date	
Analyses	**Result**	**Limit**	**Result**	**Limit**	**Qual**	**DF**	**Analyzed**	**CAS#**
VOLATILE ORGANICS IN AIR		**TO-15**					Analyst: JJ	
1,1,1-Trichloroethane	< 1.0	1.0	< 5.46	5.46		2	3/19/2015	71-55-6
1,1,2,2-Tetrachloroethane	< 1.0	1.0	< 6.87	6.87		2	3/19/2015	79-34-5
1,1,2-Trichloroethane	< 1.0	1.0	< 5.46	5.46		2	3/19/2015	79-00-5
1,1-Dichloroethane	< 1.0	1.0	< 4.05	4.05		2	3/19/2015	75-34-3
1,1-Dichloroethene	< 1.0	1.0	< 3.97	3.97		2	3/19/2015	75-35-4
1,2,4-Trichlorobenzene	< 4.0	4.0	< 29.7	29.7	L5	2	3/19/2015	120-82-1
1,2,4-Trimethylbenzene	< 1.0	1.0	< 4.92	4.92		2	3/19/2015	95-63-6
1,2-Dibromoethane	< 1.0	1.0	< 7.68	7.68		2	3/19/2015	106-93-4
1,2-Dichlorobenzene	< 1.0	1.0	< 6.01	6.01		2	3/19/2015	95-50-1
1,2-Dichloroethane	< 1.0	1.0	< 4.05	4.05		2	3/19/2015	107-06-2
1,2-Dichloropropane	< 1.0	1.0	< 4.62	4.62		2	3/19/2015	78-87-5
1,3,5-Trimethylbenzene	< 1.0	1.0	< 4.92	4.92		2	3/19/2015	108-67-8
1,3-Butadiene	< 1.0	1.0	< 2.21	2.21	L5	2	3/19/2015	106-99-0
1,3-Dichlorobenzene	< 1.0	1.0	< 6.01	6.01		2	3/19/2015	541-73-1
1,4-Dichlorobenzene	< 1.0	1.0	< 6.01	6.01		2	3/19/2015	106-46-7
1,4-Dioxane	< 4.0	4.0	< 14.4	14.4		2	3/19/2015	123-91-1
2,2,4-Trimethylpentane	< 1.0	1.0	< 4.66	4.66	L5	2	3/19/2015	540-84-1
2-Butanone (MEK)	< 10	10	< 29.5	29.5		2	3/19/2015	78-93-3
2-Hexanone	< 10	10	< 41.0	41.0	L5	2	3/19/2015	591-78-6
2-Propanol (IPA)	< 10	10	< 24.5	24.5	L5	2	3/19/2015	67-63-0
4-Ethyltoluene	< 2.0	2.0	< 9.84	9.84		2	3/19/2015	622-96-8
4-Methyl-2-pentanone (MIK)	< 10	10	< 41.0	41.0	L5	2	3/19/2015	108-10-1
Acetone	< 10	10	< 23.8	23.8		2	3/19/2015	67-64-1
Allyl chloride	< 2.0	2.0	< 6.26	6.26		2	3/19/2015	107-05-1
Benzene	< 1.0	1.0	< 3.19	3.19		2	3/19/2015	71-43-2
Benzyl chloride	< 4.0	4.0	< 20.7	20.7		2	3/19/2015	100-44-7
Bromodichloromethane	< 1.0	1.0	< 6.70	6.70		2	3/19/2015	75-27-4
Bromoethene(Vinyl Bromide)	< 1.0	1.0	< 4.37	4.37		2	3/19/2015	593-60-2
Bromoform	< 1.0	1.0	< 10.3	10.3	L5	2	3/19/2015	75-25-2
Bromomethane	< 1.0	1.0	< 3.88	3.88		2	3/19/2015	74-83-9
Butyl benzene	< 2.0	2.0	< 11.0	11.0		2	3/19/2015	104-51-8
Carbon disulfide	< 4.0	4.0	< 12.4	12.4		2	3/19/2015	75-15-0
Carbon tetrachloride	< 1.0	1.0	< 6.29	6.29		2	3/19/2015	56-23-5
Chlorobenzene	< 1.0	1.0	< 4.60	4.60		2	3/19/2015	108-90-7
Chloroethane	< 1.0	1.0	< 2.64	2.64		2	3/19/2015	75-00-3
Chloroform	< 1.0	1.0	< 4.88	4.88		2	3/19/2015	67-66-3
Chloromethane	< 4.0	4.0	< 8.28	8.28		2	3/19/2015	74-87-3
cis-1,2-Dichloroethene	< 1.0	1.0	< 3.96	3.96		2	3/19/2015	156-59-2
cis-1,3-Dichloropropene	< 1.0	1.0	< 4.54	4.54		2	3/19/2015	542-75-6
Cyclohexane	< 1.0	1.0	< 3.44	3.44		2	3/19/2015	110-82-7
Dibromochloromethane	< 1.0	1.0	< 8.52	8.52		2	3/19/2015	124-48-1
Dichlorodifluoromethane(F-12)	< 2.0	2.0	< 9.90	9.90		2	3/19/2015	75-71-8
Dichlorotetrafluoroethane(F-114)	< 1.0	1.0	< 6.99	6.99		2	3/19/2015	76-14-2
Ethanol	< 10	10	< 18.8	18.8		2	3/19/2015	64-17-5
Ethyl Acetate	< 1.0	1.0	< 3.60	3.60	L5	2	3/19/2015	141-78-6
Ethylbenzene	< 1.0	1.0	< 4.34	4.34		2	3/19/2015	100-41-4

Airtech Environmental Laboratories (AEL) - AZ 0740

4620 E.Elwood St., Suite 13, Phoenix, AZ 85040 480-968-5888 Fax 480-966-1888

Client:	AMEC F/W	**Client Sample ID:**	PRUD-19-SG-030915
Project:	Broadway Pantana	**Project Number:**	14.2014-2029
Lab Order:	15C013	**Collection:**	3/9/2015
Lab ID:	04	**Matrix:**	Soil Vapor

	ppbv		ug/M^3				Date	
Analyses	**Result**	**Limit**	**Result**	**Limit**	**Qual**	**DF**	**Analyzed**	**CAS#**
VOLATILE ORGANICS IN AIR	**TO-15**						Analyst: JJ	
Heptane	< 1.0	1.0	< 4.10	4.10		2	3/19/2015	142-82-5
Hexachlorobutadiene	< 2.0	2.0	< 21.3	21.3	L5	2	3/19/2015	87-68-3
Hexane	< 2.0	2.0	< 7.04	7.04		2	3/19/2015	110-54-3
Isopropylbenzene	< 2.0	2.0	< 9.84	9.84		2	3/19/2015	98-82-8
m&p-Xylene	< 2.0	2.0	< 8.68	8.68		2	3/19/2015	179601-23-1
Methyl tert-butyl ether	< 4.0	4.0	< 14.4	14.4		2	3/19/2015	1634-04-4
Methylcyclohexane	< 2.0	2.0	< 8.04	8.04		2	3/19/2015	108-87-2
Methylene chloride	< 4.0	4.0	< 13.9	13.9		2	3/19/2015	75-09-2
Naphthalene	< 4.0	4.0	< 21.0	21.0		2	3/19/2015	91-20-3
Nonane	< 2.0	2.0	< 10.5	10.5		2	3/19/2015	111-84-2
Octane	< 2.0	2.0	< 9.34	9.34		2	3/19/2015	111-65-9
o-Xylene	< 1.0	1.0	< 4.34	4.34		2	3/19/2015	95-47-6
Propene (Propylene)	< 2.0	2.0	< 3.44	3.44		2	3/19/2015	115-07-1
Propylbenzene	< 2.0	2.0	< 9.84	9.84		2	3/19/2015	103-65-1
Sec-Butyl benzene	< 2.0	2.0	< 11.0	11.0		2	3/19/2015	135-98-8
Styrene	< 1.0	1.0	< 4.26	4.26		2	3/19/2015	100-42-5
Tert-Butyl benzene	< 2.0	2.0	< 11.0	11.0		2	3/19/2015	98-06-6
Tetrachloroethene	< 1.0	1.0	< 6.78	6.78		2	3/19/2015	127-18-4
Tetrahydrofuran	< 4.0	4.0	< 11.8	11.8	L5	2	3/19/2015	109-99-9
Toluene	< 1.0	1.0	< 3.77	3.77		2	3/19/2015	108-88-3
trans-1,2-Dichloroethene	< 1.0	1.0	< 3.96	3.96		2	3/19/2015	156-60-5
trans-1,3-Dichloropropene	< 1.0	1.0	< 4.54	4.54		2	3/19/2015	542-75-6
Trichloroethene	< 1.0	1.0	< 5.37	5.37		2	3/19/2015	79-01-6
Trichlorofluoromethane(F-11)	< 1.0	1.0	< 5.62	5.62		2	3/19/2015	75-69-4
Trichlorotrifluoroethane(F-113)	< 1.0	1.0	< 7.66	7.66		2	3/19/2015	76-13-1
Vinyl acetate	< 1.0	1.0	< 3.52	3.52	L5	2	3/19/2015	108-05-4
Vinyl chloride	< 1.0	1.0	< 2.56	2.56		2	3/19/2015	75-01-4
Surr: 4-Bromofluorobenzene	84.1	70-130	%REC					

Tentatively Identified Compounds (TIC's)

Difluoroethane	< 20	20	ppbv		T4	2	3/19/2015

Airtech Environmental Laboratories (AEL) - AZ 0740

4620 E.Elwood St., Suite 13, Phoenix, AZ 85040 480-968-5888 Fax 480-966-1888

Client:	AMEC F/W	**Client Sample ID:**	PRUD-18-SG-030915
Project:	Broadway Pantana	**Project Number:**	14.2014-2029
Lab Order:	15C013	**Collection:**	3/9/2015
Lab ID:	05	**Matrix:**	Soil Vapor

	ppbv		ug/M^3				Date	
Analyses	**Result**	**Limit**	**Result**	**Limit**	**Qual**	**DF**	**Analyzed**	**CAS#**
VOLATILE ORGANICS IN AIR		**TO-15**					Analyst: JJ	
1,1,1-Trichloroethane	< 1.0	1.0	< 5.46	5.46		2	3/19/2015	71-55-6
1,1,2,2-Tetrachloroethane	< 1.0	1.0	< 6.87	6.87		2	3/19/2015	79-34-5
1,1,2-Trichloroethane	< 1.0	1.0	< 5.46	5.46		2	3/19/2015	79-00-5
1,1-Dichloroethane	< 1.0	1.0	< 4.05	4.05		2	3/19/2015	75-34-3
1,1-Dichloroethene	< 1.0	1.0	< 3.97	3.97		2	3/19/2015	75-35-4
1,2,4-Trichlorobenzene	< 4.0	4.0	< 29.7	29.7	L5	2	3/19/2015	120-82-1
1,2,4-Trimethylbenzene	< 1.0	1.0	< 4.92	4.92		2	3/19/2015	95-63-6
1,2-Dibromoethane	< 1.0	1.0	< 7.68	7.68		2	3/19/2015	106-93-4
1,2-Dichlorobenzene	< 1.0	1.0	< 6.01	6.01		2	3/19/2015	95-50-1
1,2-Dichloroethane	< 1.0	1.0	< 4.05	4.05		2	3/19/2015	107-06-2
1,2-Dichloropropane	< 1.0	1.0	< 4.62	4.62		2	3/19/2015	78-87-5
1,3,5-Trimethylbenzene	< 1.0	1.0	< 4.92	4.92		2	3/19/2015	108-67-8
1,3-Butadiene	< 1.0	1.0	< 2.21	2.21	L5	2	3/19/2015	106-99-0
1,3-Dichlorobenzene	< 1.0	1.0	< 6.01	6.01		2	3/19/2015	541-73-1
1,4-Dichlorobenzene	< 1.0	1.0	< 6.01	6.01		2	3/19/2015	106-46-7
1,4-Dioxane	< 4.0	4.0	< 14.4	14.4		2	3/19/2015	123-91-1
2,2,4-Trimethylpentane	< 1.0	1.0	< 4.66	4.66	L5	2	3/19/2015	540-84-1
2-Butanone (MEK)	< 10	10	< 29.5	29.5		2	3/19/2015	78-93-3
2-Hexanone	< 10	10	< 41.0	41.0	L5	2	3/19/2015	591-78-6
2-Propanol (IPA)	< 10	10	< 24.5	24.5	L5	2	3/19/2015	67-63-0
4-Ethyltoluene	< 2.0	2.0	< 9.84	9.84		2	3/19/2015	622-96-8
4-Methyl-2-pentanone (MIK)	< 10	10	< 41.0	41.0	L5	2	3/19/2015	108-10-1
Acetone	< 10	10	< 23.8	23.8		2	3/19/2015	67-64-1
Allyl chloride	< 2.0	2.0	< 6.26	6.26		2	3/19/2015	107-05-1
Benzene	< 1.0	1.0	< 3.19	3.19		2	3/19/2015	71-43-2
Benzyl chloride	< 4.0	4.0	< 20.7	20.7		2	3/19/2015	100-44-7
Bromodichloromethane	< 1.0	1.0	< 6.70	6.70		2	3/19/2015	75-27-4
Bromoethene(Vinyl Bromide)	< 1.0	1.0	< 4.37	4.37		2	3/19/2015	593-60-2
Bromoform	< 1.0	1.0	< 10.3	10.3	L5	2	3/19/2015	75-25-2
Bromomethane	< 1.0	1.0	< 3.88	3.88		2	3/19/2015	74-83-9
Butyl benzene	< 2.0	2.0	< 11.0	11.0		2	3/19/2015	104-51-8
Carbon disulfide	< 4.0	4.0	< 12.4	12.4		2	3/19/2015	75-15-0
Carbon tetrachloride	< 1.0	1.0	< 6.29	6.29		2	3/19/2015	56-23-5
Chlorobenzene	< 1.0	1.0	< 4.60	4.60		2	3/19/2015	108-90-7
Chloroethane	< 1.0	1.0	< 2.64	2.64		2	3/19/2015	75-00-3
Chloroform	< 1.0	1.0	< 4.88	4.88		2	3/19/2015	67-66-3
Chloromethane	< 4.0	4.0	< 8.28	8.28		2	3/19/2015	74-87-3
cis-1,2-Dichloroethene	< 1.0	1.0	< 3.96	3.96		2	3/19/2015	156-59-2
cis-1,3-Dichloropropene	< 1.0	1.0	< 4.54	4.54		2	3/19/2015	542-75-6
Cyclohexane	< 1.0	1.0	< 3.44	3.44		2	3/19/2015	110-82-7
Dibromochloromethane	< 1.0	1.0	< 8.52	8.52		2	3/19/2015	124-48-1
Dichlorodifluoromethane(F-12)	< 2.0	2.0	< 9.90	9.90		2	3/19/2015	75-71-8
Dichlorotetrafluoroethane(F-114)	< 1.0	1.0	< 6.99	6.99		2	3/19/2015	76-14-2
Ethanol	< 10	10	< 18.8	18.8		2	3/19/2015	64-17-5
Ethyl Acetate	< 1.0	1.0	< 3.60	3.60	L5	2	3/19/2015	141-78-6
Ethylbenzene	< 1.0	1.0	< 4.34	4.34		2	3/19/2015	100-41-4

Airtech Environmental Laboratories (AEL) - AZ 0740

4620 E.Elwood St., Suite 13, Phoenix, AZ 85040 480-968-5888 Fax 480-966-1888

Client:	AMEC F/W	**Client Sample ID:**	PRUD-18-SG-030915
Project:	Broadway Pantana	**Project Number:**	14.2014-2029
Lab Order:	15C013	**Collection:**	3/9/2015
Lab ID:	05	**Matrix:**	Soil Vapor

	ppbv		ug/M^3				Date	
Analyses	**Result**	**Limit**	**Result**	**Limit**	**Qual**	**DF**	**Analyzed**	**CAS#**
VOLATILE ORGANICS IN AIR		**TO-15**					Analyst: JJ	
Heptane	< 1.0	1.0	< 4.10	4.10		2	3/19/2015	142-82-5
Hexachlorobutadiene	< 2.0	2.0	< 21.3	21.3	L5	2	3/19/2015	87-68-3
Hexane	< 2.0	2.0	< 7.04	7.04		2	3/19/2015	110-54-3
Isopropylbenzene	< 2.0	2.0	< 9.84	9.84		2	3/19/2015	98-82-8
m&p-Xylene	< 2.0	2.0	< 8.68	8.68		2	3/19/2015	179601-23-1
Methyl tert-butyl ether	< 4.0	4.0	< 14.4	14.4		2	3/19/2015	1634-04-4
Methylcyclohexane	< 2.0	2.0	< 8.04	8.04		2	3/19/2015	108-87-2
Methylene chloride	< 4.0	4.0	< 13.9	13.9		2	3/19/2015	75-09-2
Naphthalene	< 4.0	4.0	< 21.0	21.0		2	3/19/2015	91-20-3
Nonane	< 2.0	2.0	< 10.5	10.5		2	3/19/2015	111-84-2
Octane	< 2.0	2.0	< 9.34	9.34		2	3/19/2015	111-65-9
o-Xylene	< 1.0	1.0	< 4.34	4.34		2	3/19/2015	95-47-6
Propene (Propylene)	< 2.0	2.0	< 3.44	3.44		2	3/19/2015	115-07-1
Propylbenzene	< 2.0	2.0	< 9.84	9.84		2	3/19/2015	103-65-1
Sec-Butyl benzene	< 2.0	2.0	< 11.0	11.0		2	3/19/2015	135-98-8
Styrene	< 1.0	1.0	< 4.26	4.26		2	3/19/2015	100-42-5
Tert-Butyl benzene	< 2.0	2.0	< 11.0	11.0		2	3/19/2015	98-06-6
Tetrachloroethene	**1.5**	**1.0**	**10.0**	**6.78**		2	3/19/2015	127-18-4
Tetrahydrofuran	< 4.0	4.0	< 11.8	11.8	L5	2	3/19/2015	109-99-9
Toluene	< 1.0	1.0	< 3.77	3.77		2	3/19/2015	108-88-3
trans-1,2-Dichloroethene	< 1.0	1.0	< 3.96	3.96		2	3/19/2015	156-60-5
trans-1,3-Dichloropropene	< 1.0	1.0	< 4.54	4.54		2	3/19/2015	542-75-6
Trichloroethene	< 1.0	1.0	< 5.37	5.37		2	3/19/2015	79-01-6
Trichlorofluoromethane(F-11)	< 1.0	1.0	< 5.62	5.62		2	3/19/2015	75-69-4
Trichlorotrifluoroethane(F-113)	< 1.0	1.0	< 7.66	7.66		2	3/19/2015	76-13-1
Vinyl acetate	< 1.0	1.0	< 3.52	3.52	L5	2	3/19/2015	108-05-4
Vinyl chloride	< 1.0	1.0	< 2.56	2.56		2	3/19/2015	75-01-4
Surr: 4-Bromofluorobenzene	85.7	70-130	%REC					

Tentatively Identified Compounds (TIC's)

Difluoroethane	< 20	20	ppbv		T4	2	3/19/2015

Airtech Environmental Laboratories (AEL) - AZ 0740

4620 E.Elwood St., Suite 13, Phoenix, AZ 85040 480-968-5888 Fax 480-966-1888

Client:	AMEC F/W	**Client Sample ID:**	PRUD-17-SG-030915
Project:	Broadway Pantana	**Project Number:**	14.2014-2029
Lab Order:	15C013	**Collection:**	3/9/2015
Lab ID:	06	**Matrix:**	Soil Vapor

	ppbv		ug/M^3				Date	
Analyses	**Result**	**Limit**	**Result**	**Limit**	**Qual**	**DF**	**Analyzed**	**CAS#**
VOLATILE ORGANICS IN AIR		**TO-15**					Analyst: JJ	
1,1,1-Trichloroethane	< 1.0	1.0	< 5.46	5.46		2	3/19/2015	71-55-6
1,1,2,2-Tetrachloroethane	< 1.0	1.0	< 6.87	6.87		2	3/19/2015	79-34-5
1,1,2-Trichloroethane	< 1.0	1.0	< 5.46	5.46		2	3/19/2015	79-00-5
1,1-Dichloroethane	< 1.0	1.0	< 4.05	4.05		2	3/19/2015	75-34-3
1,1-Dichloroethene	< 1.0	1.0	< 3.97	3.97		2	3/19/2015	75-35-4
1,2,4-Trichlorobenzene	< 4.0	4.0	< 29.7	29.7	L5	2	3/19/2015	120-82-1
1,2,4-Trimethylbenzene	< 1.0	1.0	< 4.92	4.92		2	3/19/2015	95-63-6
1,2-Dibromoethane	< 1.0	1.0	< 7.68	7.68		2	3/19/2015	106-93-4
1,2-Dichlorobenzene	< 1.0	1.0	< 6.01	6.01		2	3/19/2015	95-50-1
1,2-Dichloroethane	< 1.0	1.0	< 4.05	4.05		2	3/19/2015	107-06-2
1,2-Dichloropropane	< 1.0	1.0	< 4.62	4.62		2	3/19/2015	78-87-5
1,3,5-Trimethylbenzene	< 1.0	1.0	< 4.92	4.92		2	3/19/2015	108-67-8
1,3-Butadiene	< 1.0	1.0	< 2.21	2.21	L5	2	3/19/2015	106-99-0
1,3-Dichlorobenzene	< 1.0	1.0	< 6.01	6.01		2	3/19/2015	541-73-1
1,4-Dichlorobenzene	< 1.0	1.0	< 6.01	6.01		2	3/19/2015	106-46-7
1,4-Dioxane	< 4.0	4.0	< 14.4	14.4		2	3/19/2015	123-91-1
2,2,4-Trimethylpentane	< 1.0	1.0	< 4.66	4.66	L5	2	3/19/2015	540-84-1
2-Butanone (MEK)	< 10	10	< 29.5	29.5		2	3/19/2015	78-93-3
2-Hexanone	< 10	10	< 41.0	41.0	L5	2	3/19/2015	591-78-6
2-Propanol (IPA)	< 10	10	< 24.5	24.5	L5	2	3/19/2015	67-63-0
4-Ethyltoluene	< 2.0	2.0	< 9.84	9.84		2	3/19/2015	622-96-8
4-Methyl-2-pentanone (MIK)	< 10	10	< 41.0	41.0	L5	2	3/19/2015	108-10-1
Acetone	< 10	10	< 23.8	23.8		2	3/19/2015	67-64-1
Allyl chloride	< 2.0	2.0	< 6.26	6.26		2	3/19/2015	107-05-1
Benzene	< 1.0	1.0	< 3.19	3.19		2	3/19/2015	71-43-2
Benzyl chloride	< 4.0	4.0	< 20.7	20.7		2	3/19/2015	100-44-7
Bromodichloromethane	< 1.0	1.0	< 6.70	6.70		2	3/19/2015	75-27-4
Bromoethene(Vinyl Bromide)	< 1.0	1.0	< 4.37	4.37		2	3/19/2015	593-60-2
Bromoform	< 1.0	1.0	< 10.3	10.3	L5	2	3/19/2015	75-25-2
Bromomethane	< 1.0	1.0	< 3.88	3.88		2	3/19/2015	74-83-9
Butyl benzene	< 2.0	2.0	< 11.0	11.0		2	3/19/2015	104-51-8
Carbon disulfide	< 4.0	4.0	< 12.4	12.4		2	3/19/2015	75-15-0
Carbon tetrachloride	< 1.0	1.0	< 6.29	6.29		2	3/19/2015	56-23-5
Chlorobenzene	< 1.0	1.0	< 4.60	4.60		2	3/19/2015	108-90-7
Chloroethane	< 1.0	1.0	< 2.64	2.64		2	3/19/2015	75-00-3
Chloroform	**1.2**	**1.0**	**5.76**	**4.88**		2	3/19/2015	67-66-3
Chloromethane	< 4.0	4.0	< 8.28	8.28		2	3/19/2015	74-87-3
cis-1,2-Dichloroethene	< 1.0	1.0	< 3.96	3.96		2	3/19/2015	156-59-2
cis-1,3-Dichloropropene	< 1.0	1.0	< 4.54	4.54		2	3/19/2015	542-75-6
Cyclohexane	< 1.0	1.0	< 3.44	3.44		2	3/19/2015	110-82-7
Dibromochloromethane	< 1.0	1.0	< 8.52	8.52		2	3/19/2015	124-48-1
Dichlorodifluoromethane(F-12)	< 2.0	2.0	< 9.90	9.90		2	3/19/2015	75-71-8
Dichlorotetrafluoroethane(F-114)	< 1.0	1.0	< 6.99	6.99		2	3/19/2015	76-14-2
Ethanol	< 10	10	< 18.8	18.8		2	3/19/2015	64-17-5
Ethyl Acetate	< 1.0	1.0	< 3.60	3.60	L5	2	3/19/2015	141-78-6
Ethylbenzene	< 1.0	1.0	< 4.34	4.34		2	3/19/2015	100-41-4

Airtech Environmental Laboratories (AEL) - AZ 0740

4620 E.Elwood St., Suite 13, Phoenix, AZ 85040 480-968-5888 Fax 480-966-1888

Client:	AMEC F/W	**Client Sample ID:**	PRUD-17-SG-030915
Project:	Broadway Pantana	**Project Number:**	14.2014-2029
Lab Order:	15C013	**Collection:**	3/9/2015
Lab ID:	06	**Matrix:**	Soil Vapor

	ppbv		ug/M^3				Date	
Analyses	**Result**	**Limit**	**Result**	**Limit**	**Qual**	**DF**	**Analyzed**	**CAS#**
VOLATILE ORGANICS IN AIR	**TO-15**						Analyst: JJ	
Heptane	< 1.0	1.0	< 4.10	4.10		2	3/19/2015	142-82-5
Hexachlorobutadiene	< 2.0	2.0	< 21.3	21.3	L5	2	3/19/2015	87-68-3
Hexane	< 2.0	2.0	< 7.04	7.04		2	3/19/2015	110-54-3
Isopropylbenzene	< 2.0	2.0	< 9.84	9.84		2	3/19/2015	98-82-8
m&p-Xylene	< 2.0	2.0	< 8.68	8.68		2	3/19/2015	179601-23-1
Methyl tert-butyl ether	< 4.0	4.0	< 14.4	14.4		2	3/19/2015	1634-04-4
Methylcyclohexane	< 2.0	2.0	< 8.04	8.04		2	3/19/2015	108-87-2
Methylene chloride	< 4.0	4.0	< 13.9	13.9		2	3/19/2015	75-09-2
Naphthalene	< 4.0	4.0	< 21.0	21.0		2	3/19/2015	91-20-3
Nonane	< 2.0	2.0	< 10.5	10.5		2	3/19/2015	111-84-2
Octane	< 2.0	2.0	< 9.34	9.34		2	3/19/2015	111-65-9
o-Xylene	< 1.0	1.0	< 4.34	4.34		2	3/19/2015	95-47-6
Propene (Propylene)	< 2.0	2.0	< 3.44	3.44		2	3/19/2015	115-07-1
Propylbenzene	< 2.0	2.0	< 9.84	9.84		2	3/19/2015	103-65-1
Sec-Butyl benzene	< 2.0	2.0	< 11.0	11.0		2	3/19/2015	135-98-8
Styrene	< 1.0	1.0	< 4.26	4.26		2	3/19/2015	100-42-5
Tert-Butyl benzene	< 2.0	2.0	< 11.0	11.0		2	3/19/2015	98-06-6
Tetrachloroethene	**6.1**	**1.0**	**41.1**	**6.78**		2	3/19/2015	127-18-4
Tetrahydrofuran	< 4.0	4.0	< 11.8	11.8	L5	2	3/19/2015	109-99-9
Toluene	< 1.0	1.0	< 3.77	3.77		2	3/19/2015	108-88-3
trans-1,2-Dichloroethene	< 1.0	1.0	< 3.96	3.96		2	3/19/2015	156-60-5
trans-1,3-Dichloropropene	< 1.0	1.0	< 4.54	4.54		2	3/19/2015	542-75-6
Trichloroethene	< 1.0	1.0	< 5.37	5.37		2	3/19/2015	79-01-6
Trichlorofluoromethane(F-11)	< 1.0	1.0	< 5.62	5.62		2	3/19/2015	75-69-4
Trichlorotrifluoroethane(F-113)	< 1.0	1.0	< 7.66	7.66		2	3/19/2015	76-13-1
Vinyl acetate	< 1.0	1.0	< 3.52	3.52	L5	2	3/19/2015	108-05-4
Vinyl chloride	< 1.0	1.0	< 2.56	2.56		2	3/19/2015	75-01-4
Surr: 4-Bromofluorobenzene	84.0	70-130	%REC					

Tentatively Identified Compounds (TIC's)

Difluoroethane	< 20	20	ppbv		T4	2	3/19/2015

Airtech Environmental Laboratories (AEL) - AZ 0740

4620 E.Elwood St., Suite 13, Phoenix, AZ 85040 480-968-5888 Fax 480-966-1888

Client:	AMEC F/W	**Client Sample ID:**	PRUD-16-SG-030915
Project:	Broadway Pantana	**Project Number:**	14.2014-2029
Lab Order:	15C013	**Collection:**	3/9/2015
Lab ID:	07	**Matrix:**	Soil Vapor

	ppbv		ug/M^3				Date	
Analyses	**Result**	**Limit**	**Result**	**Limit**	**Qual**	**DF**	**Analyzed**	**CAS#**
VOLATILE ORGANICS IN AIR		**TO-15**					Analyst: JJ	
1,1,1-Trichloroethane	< 1.0	1.0	< 5.46	5.46		2	3/19/2015	71-55-6
1,1,2,2-Tetrachloroethane	< 1.0	1.0	< 6.87	6.87		2	3/19/2015	79-34-5
1,1,2-Trichloroethane	< 1.0	1.0	< 5.46	5.46		2	3/19/2015	79-00-5
1,1-Dichloroethane	< 1.0	1.0	< 4.05	4.05		2	3/19/2015	75-34-3
1,1-Dichloroethene	< 1.0	1.0	< 3.97	3.97		2	3/19/2015	75-35-4
1,2,4-Trichlorobenzene	< 4.0	4.0	< 29.7	29.7	L5	2	3/19/2015	120-82-1
1,2,4-Trimethylbenzene	< 1.0	1.0	< 4.92	4.92		2	3/19/2015	95-63-6
1,2-Dibromoethane	< 1.0	1.0	< 7.68	7.68		2	3/19/2015	106-93-4
1,2-Dichlorobenzene	< 1.0	1.0	< 6.01	6.01		2	3/19/2015	95-50-1
1,2-Dichloroethane	< 1.0	1.0	< 4.05	4.05		2	3/19/2015	107-06-2
1,2-Dichloropropane	< 1.0	1.0	< 4.62	4.62		2	3/19/2015	78-87-5
1,3,5-Trimethylbenzene	< 1.0	1.0	< 4.92	4.92		2	3/19/2015	108-67-8
1,3-Butadiene	< 1.0	1.0	< 2.21	2.21	L5	2	3/19/2015	106-99-0
1,3-Dichlorobenzene	< 1.0	1.0	< 6.01	6.01		2	3/19/2015	541-73-1
1,4-Dichlorobenzene	< 1.0	1.0	< 6.01	6.01		2	3/19/2015	106-46-7
1,4-Dioxane	< 4.0	4.0	< 14.4	14.4		2	3/19/2015	123-91-1
2,2,4-Trimethylpentane	< 1.0	1.0	< 4.66	4.66	L5	2	3/19/2015	540-84-1
2-Butanone (MEK)	< 10	10	< 29.5	29.5		2	3/19/2015	78-93-3
2-Hexanone	< 10	10	< 41.0	41.0	L5	2	3/19/2015	591-78-6
2-Propanol (IPA)	< 10	10	< 24.5	24.5	L5	2	3/19/2015	67-63-0
4-Ethyltoluene	< 2.0	2.0	< 9.84	9.84		2	3/19/2015	622-96-8
4-Methyl-2-pentanone (MIK)	< 10	10	< 41.0	41.0	L5	2	3/19/2015	108-10-1
Acetone	< 10	10	< 23.8	23.8		2	3/19/2015	67-64-1
Allyl chloride	< 2.0	2.0	< 6.26	6.26		2	3/19/2015	107-05-1
Benzene	< 1.0	1.0	< 3.19	3.19		2	3/19/2015	71-43-2
Benzyl chloride	< 4.0	4.0	< 20.7	20.7		2	3/19/2015	100-44-7
Bromodichloromethane	< 1.0	1.0	< 6.70	6.70		2	3/19/2015	75-27-4
Bromoethene(Vinyl Bromide)	< 1.0	1.0	< 4.37	4.37		2	3/19/2015	593-60-2
Bromoform	< 1.0	1.0	< 10.3	10.3	L5	2	3/19/2015	75-25-2
Bromomethane	< 1.0	1.0	< 3.88	3.88		2	3/19/2015	74-83-9
Butyl benzene	< 2.0	2.0	< 11.0	11.0		2	3/19/2015	104-51-8
Carbon disulfide	< 4.0	4.0	< 12.4	12.4		2	3/19/2015	75-15-0
Carbon tetrachloride	< 1.0	1.0	< 6.29	6.29		2	3/19/2015	56-23-5
Chlorobenzene	< 1.0	1.0	< 4.60	4.60		2	3/19/2015	108-90-7
Chloroethane	< 1.0	1.0	< 2.64	2.64		2	3/19/2015	75-00-3
Chloroform	**2.2**	**1.0**	**10.5**	**4.88**		2	3/19/2015	67-66-3
Chloromethane	< 4.0	4.0	< 8.28	8.28		2	3/19/2015	74-87-3
cis-1,2-Dichloroethene	< 1.0	1.0	< 3.96	3.96		2	3/19/2015	156-59-2
cis-1,3-Dichloropropene	< 1.0	1.0	< 4.54	4.54		2	3/19/2015	542-75-6
Cyclohexane	< 1.0	1.0	< 3.44	3.44		2	3/19/2015	110-82-7
Dibromochloromethane	< 1.0	1.0	< 8.52	8.52		2	3/19/2015	124-48-1
Dichlorodifluoromethane(F-12)	< 2.0	2.0	< 9.90	9.90		2	3/19/2015	75-71-8
Dichlorotetrafluoroethane(F-114)	< 1.0	1.0	< 6.99	6.99		2	3/19/2015	76-14-2
Ethanol	< 10	10	< 18.8	18.8		2	3/19/2015	64-17-5
Ethyl Acetate	< 1.0	1.0	< 3.60	3.60	L5	2	3/19/2015	141-78-6
Ethylbenzene	< 1.0	1.0	< 4.34	4.34		2	3/19/2015	100-41-4

Airtech Environmental Laboratories (AEL) - AZ 0740

4620 E.Elwood St., Suite 13, Phoenix, AZ 85040 480-968-5888 Fax 480-966-1888

Client:	AMEC F/W	**Client Sample ID:**	PRUD-16-SG-030915
Project:	Broadway Pantana	**Project Number:**	14.2014-2029
Lab Order:	15C013	**Collection:**	3/9/2015
Lab ID:	07	**Matrix:**	Soil Vapor

	ppbv		ug/M^3				Date	
Analyses	**Result**	**Limit**	**Result**	**Limit**	**Qual**	**DF**	**Analyzed**	**CAS#**
VOLATILE ORGANICS IN AIR	**TO-15**						Analyst: JJ	
Heptane	< 1.0	1.0	< 4.10	4.10		2	3/19/2015	142-82-5
Hexachlorobutadiene	< 2.0	2.0	< 21.3	21.3	L5	2	3/19/2015	87-68-3
Hexane	< 2.0	2.0	< 7.04	7.04		2	3/19/2015	110-54-3
Isopropylbenzene	< 2.0	2.0	< 9.84	9.84		2	3/19/2015	98-82-8
m&p-Xylene	< 2.0	2.0	< 8.68	8.68		2	3/19/2015	179601-23-1
Methyl tert-butyl ether	< 4.0	4.0	< 14.4	14.4		2	3/19/2015	1634-04-4
Methylcyclohexane	< 2.0	2.0	< 8.04	8.04		2	3/19/2015	108-87-2
Methylene chloride	< 4.0	4.0	< 13.9	13.9		2	3/19/2015	75-09-2
Naphthalene	< 4.0	4.0	< 21.0	21.0		2	3/19/2015	91-20-3
Nonane	< 2.0	2.0	< 10.5	10.5		2	3/19/2015	111-84-2
Octane	< 2.0	2.0	< 9.34	9.34		2	3/19/2015	111-65-9
o-Xylene	< 1.0	1.0	< 4.34	4.34		2	3/19/2015	95-47-6
Propene (Propylene)	< 2.0	2.0	< 3.44	3.44		2	3/19/2015	115-07-1
Propylbenzene	< 2.0	2.0	< 9.84	9.84		2	3/19/2015	103-65-1
Sec-Butyl benzene	< 2.0	2.0	< 11.0	11.0		2	3/19/2015	135-98-8
Styrene	< 1.0	1.0	< 4.26	4.26		2	3/19/2015	100-42-5
Tert-Butyl benzene	< 2.0	2.0	< 11.0	11.0		2	3/19/2015	98-06-6
Tetrachloroethene	**16**	**1.0**	**111**	**6.78**		2	3/19/2015	127-18-4
Tetrahydrofuran	< 4.0	4.0	< 11.8	11.8	L5	2	3/19/2015	109-99-9
Toluene	< 1.0	1.0	< 3.77	3.77		2	3/19/2015	108-88-3
trans-1,2-Dichloroethene	< 1.0	1.0	< 3.96	3.96		2	3/19/2015	156-60-5
trans-1,3-Dichloropropene	< 1.0	1.0	< 4.54	4.54		2	3/19/2015	542-75-6
Trichloroethene	< 1.0	1.0	< 5.37	5.37		2	3/19/2015	79-01-6
Trichlorofluoromethane(F-11)	< 1.0	1.0	< 5.62	5.62		2	3/19/2015	75-69-4
Trichlorotrifluoroethane(F-113)	< 1.0	1.0	< 7.66	7.66		2	3/19/2015	76-13-1
Vinyl acetate	< 1.0	1.0	< 3.52	3.52	L5	2	3/19/2015	108-05-4
Vinyl chloride	< 1.0	1.0	< 2.56	2.56		2	3/19/2015	75-01-4
Surr: 4-Bromofluorobenzene	86.4	70-130	%REC					

Tentatively Identified Compounds (TIC's)

Difluoroethane	< 20	20	ppbv		T4	2	3/19/2015

Airtech Environmental Laboratories (AEL) - AZ 0740

4620 E.Elwood St., Suite 13, Phoenix, AZ 85040 480-968-5888 Fax 480-966-1888

Client:	AMEC F/W	**Client Sample ID:**	MW-9-SG-031015
Project:	Broadway Pantana	**Project Number:**	14.2014-2029
Lab Order:	15C013	**Collection:**	3/10/2015
Lab ID:	08	**Matrix:**	Soil Vapor

	ppbv		ug/M^3				Date	
Analyses	**Result**	**Limit**	**Result**	**Limit**	**Qual**	**DF**	**Analyzed**	**CAS#**
VOLATILE ORGANICS IN AIR		**TO-15**					Analyst: JJ	
1,1,1-Trichloroethane	< 1.0	1.0	< 5.46	5.46		2	3/19/2015	71-55-6
1,1,2,2-Tetrachloroethane	< 1.0	1.0	< 6.87	6.87		2	3/19/2015	79-34-5
1,1,2-Trichloroethane	< 1.0	1.0	< 5.46	5.46		2	3/19/2015	79-00-5
1,1-Dichloroethane	< 1.0	1.0	< 4.05	4.05		2	3/19/2015	75-34-3
1,1-Dichloroethene	< 1.0	1.0	< 3.97	3.97		2	3/19/2015	75-35-4
1,2,4-Trichlorobenzene	< 4.0	4.0	< 29.7	29.7	L5	2	3/19/2015	120-82-1
1,2,4-Trimethylbenzene	< 1.0	1.0	< 4.92	4.92		2	3/19/2015	95-63-6
1,2-Dibromoethane	< 1.0	1.0	< 7.68	7.68		2	3/19/2015	106-93-4
1,2-Dichlorobenzene	< 1.0	1.0	< 6.01	6.01		2	3/19/2015	95-50-1
1,2-Dichloroethane	< 1.0	1.0	< 4.05	4.05		2	3/19/2015	107-06-2
1,2-Dichloropropane	< 1.0	1.0	< 4.62	4.62		2	3/19/2015	78-87-5
1,3,5-Trimethylbenzene	< 1.0	1.0	< 4.92	4.92		2	3/19/2015	108-67-8
1,3-Butadiene	< 1.0	1.0	< 2.21	2.21	L5	2	3/19/2015	106-99-0
1,3-Dichlorobenzene	< 1.0	1.0	< 6.01	6.01		2	3/19/2015	541-73-1
1,4-Dichlorobenzene	< 1.0	1.0	< 6.01	6.01		2	3/19/2015	106-46-7
1,4-Dioxane	< 4.0	4.0	< 14.4	14.4		2	3/19/2015	123-91-1
2,2,4-Trimethylpentane	< 1.0	1.0	< 4.66	4.66	L5	2	3/19/2015	540-84-1
2-Butanone (MEK)	< 10	10	< 29.5	29.5		2	3/19/2015	78-93-3
2-Hexanone	< 10	10	< 41.0	41.0	L5	2	3/19/2015	591-78-6
2-Propanol (IPA)	< 10	10	< 24.5	24.5	L5	2	3/19/2015	67-63-0
4-Ethyltoluene	< 2.0	2.0	< 9.84	9.84		2	3/19/2015	622-96-8
4-Methyl-2-pentanone (MIK)	< 10	10	< 41.0	41.0	L5	2	3/19/2015	108-10-1
Acetone	< 10	10	< 23.8	23.8		2	3/19/2015	67-64-1
Allyl chloride	< 2.0	2.0	< 6.26	6.26		2	3/19/2015	107-05-1
Benzene	< 1.0	1.0	< 3.19	3.19		2	3/19/2015	71-43-2
Benzyl chloride	< 4.0	4.0	< 20.7	20.7		2	3/19/2015	100-44-7
Bromodichloromethane	< 1.0	1.0	< 6.70	6.70		2	3/19/2015	75-27-4
Bromoethene(Vinyl Bromide)	< 1.0	1.0	< 4.37	4.37		2	3/19/2015	593-60-2
Bromoform	< 1.0	1.0	< 10.3	10.3	L5	2	3/19/2015	75-25-2
Bromomethane	< 1.0	1.0	< 3.88	3.88		2	3/19/2015	74-83-9
Butyl benzene	< 2.0	2.0	< 11.0	11.0		2	3/19/2015	104-51-8
Carbon disulfide	< 4.0	4.0	< 12.4	12.4		2	3/19/2015	75-15-0
Carbon tetrachloride	< 1.0	1.0	< 6.29	6.29		2	3/19/2015	56-23-5
Chlorobenzene	< 1.0	1.0	< 4.60	4.60		2	3/19/2015	108-90-7
Chloroethane	< 1.0	1.0	< 2.64	2.64		2	3/19/2015	75-00-3
Chloroform	**3.3**	**1.0**	**16.1**	**4.88**		2	3/19/2015	67-66-3
Chloromethane	< 4.0	4.0	< 8.28	8.28		2	3/19/2015	74-87-3
cis-1,2-Dichloroethene	< 1.0	1.0	< 3.96	3.96		2	3/19/2015	156-59-2
cis-1,3-Dichloropropene	< 1.0	1.0	< 4.54	4.54		2	3/19/2015	542-75-6
Cyclohexane	**1.8**	**1.0**	**6.05**	**3.44**		2	3/19/2015	110-82-7
Dibromochloromethane	< 1.0	1.0	< 8.52	8.52		2	3/19/2015	124-48-1
Dichlorodifluoromethane(F-12)	**7.6**	**2.0**	**37.5**	**9.90**		2	3/19/2015	75-71-8
Dichlorotetrafluoroethane(F-114)	**2.9**	**1.0**	**20.3**	**6.99**		2	3/19/2015	76-14-2
Ethanol	< 10	10	< 18.8	18.8		2	3/19/2015	64-17-5
Ethyl Acetate	< 1.0	1.0	< 3.60	3.60	L5	2	3/19/2015	141-78-6
Ethylbenzene	< 1.0	1.0	< 4.34	4.34		2	3/19/2015	100-41-4

Airtech Environmental Laboratories (AEL) - AZ 0740

4620 E.Elwood St., Suite 13, Phoenix, AZ 85040 480-968-5888 Fax 480-966-1888

Client:	AMEC F/W	**Client Sample ID:**	MW-9-SG-031015
Project:	Broadway Pantana	**Project Number:**	14.2014-2029
Lab Order:	15C013	**Collection:**	3/10/2015
Lab ID:	08	**Matrix:**	Soil Vapor

	ppbv		ug/M^3				Date	
Analyses	**Result**	**Limit**	**Result**	**Limit**	**Qual**	**DF**	**Analyzed**	**CAS#**
VOLATILE ORGANICS IN AIR		**TO-15**					Analyst: JJ	
Heptane	**9.9**	**1.0**	**40.4**	**4.10**		2	3/19/2015	142-82-5
Hexachlorobutadiene	< 2.0	2.0	< 21.3	21.3	L5	2	3/19/2015	87-68-3
Hexane	**4.7**	**2.0**	**16.6**	**7.04**		2	3/19/2015	110-54-3
Isopropylbenzene	< 2.0	2.0	< 9.84	9.84		2	3/19/2015	98-82-8
m&p-Xylene	< 2.0	2.0	< 8.68	8.68		2	3/19/2015	179601-23-1
Methyl tert-butyl ether	< 4.0	4.0	< 14.4	14.4		2	3/19/2015	1634-04-4
Methylcyclohexane	< 2.0	2.0	< 8.04	8.04		2	3/19/2015	108-87-2
Methylene chloride	< 4.0	4.0	< 13.9	13.9		2	3/19/2015	75-09-2
Naphthalene	< 4.0	4.0	< 21.0	21.0		2	3/19/2015	91-20-3
Nonane	< 2.0	2.0	< 10.5	10.5		2	3/19/2015	111-84-2
Octane	< 2.0	2.0	< 9.34	9.34		2	3/19/2015	111-65-9
o-Xylene	< 1.0	1.0	< 4.34	4.34		2	3/19/2015	95-47-6
Propene (Propylene)	< 2.0	2.0	< 3.44	3.44		2	3/19/2015	115-07-1
Propylbenzene	< 2.0	2.0	< 9.84	9.84		2	3/19/2015	103-65-1
Sec-Butyl benzene	< 2.0	2.0	< 11.0	11.0		2	3/19/2015	135-98-8
Styrene	< 1.0	1.0	< 4.26	4.26		2	3/19/2015	100-42-5
Tert-Butyl benzene	< 2.0	2.0	< 11.0	11.0		2	3/19/2015	98-06-6
Tetrachloroethene	**2.8**	**1.0**	**19.1**	**6.78**		2	3/19/2015	127-18-4
Tetrahydrofuran	< 4.0	4.0	< 11.8	11.8	L5	2	3/19/2015	109-99-9
Toluene	**2.1**	**1.0**	**7.84**	**3.77**		2	3/19/2015	108-88-3
trans-1,2-Dichloroethene	< 1.0	1.0	< 3.96	3.96		2	3/19/2015	156-60-5
trans-1,3-Dichloropropene	< 1.0	1.0	< 4.54	4.54		2	3/19/2015	542-75-6
Trichloroethene	< 1.0	1.0	< 5.37	5.37		2	3/19/2015	79-01-6
Trichlorofluoromethane(F-11)	< 1.0	1.0	< 5.62	5.62		2	3/19/2015	75-69-4
Trichlorotrifluoroethane(F-113)	< 1.0	1.0	< 7.66	7.66		2	3/19/2015	76-13-1
Vinyl acetate	< 1.0	1.0	< 3.52	3.52	L5	2	3/19/2015	108-05-4
Vinyl chloride	< 1.0	1.0	< 2.56	2.56		2	3/19/2015	75-01-4
Surr: 4-Bromofluorobenzene	84.3	70-130	%REC					

Tentatively Identified Compounds (TIC's)

Difluoroethane	< 20	20	ppbv		T4	2	3/19/2015

Airtech Environmental Laboratories (AEL) - AZ 0740

4620 E.Elwood St., Suite 13, Phoenix, AZ 85040 480-968-5888 Fax 480-966-1888

Client:	AMEC F/W	**Client Sample ID:**	MW-8-SG-031015
Project:	Broadway Pantana	**Project Number:**	14.2014-2029
Lab Order:	15C013	**Collection:**	3/10/2015
Lab ID:	09	**Matrix:**	Soil Vapor

	ppbv		ug/M^3				Date	
Analyses	**Result**	**Limit**	**Result**	**Limit**	**Qual**	**DF**	**Analyzed**	**CAS#**
VOLATILE ORGANICS IN AIR		**TO-15**					Analyst: JJ	
1,1,1-Trichloroethane	< 2.5	2.5	< 13.7	13.7		5	3/19/2015	71-55-6
1,1,2,2-Tetrachloroethane	< 2.5	2.5	< 17.2	17.2		5	3/19/2015	79-34-5
1,1,2-Trichloroethane	< 2.5	2.5	< 13.7	13.7		5	3/19/2015	79-00-5
1,1-Dichloroethane	< 2.5	2.5	< 10.1	10.1		5	3/19/2015	75-34-3
1,1-Dichloroethene	< 2.5	2.5	< 9.93	9.93		5	3/19/2015	75-35-4
1,2,4-Trichlorobenzene	< 10	10	< 74.2	74.2	L5	5	3/19/2015	120-82-1
1,2,4-Trimethylbenzene	< 2.5	2.5	< 12.3	12.3		5	3/19/2015	95-63-6
1,2-Dibromoethane	< 2.5	2.5	< 19.2	19.2		5	3/19/2015	106-93-4
1,2-Dichlorobenzene	< 2.5	2.5	< 15.0	15.0		5	3/19/2015	95-50-1
1,2-Dichloroethane	< 2.5	2.5	< 10.1	10.1		5	3/19/2015	107-06-2
1,2-Dichloropropane	< 2.5	2.5	< 11.6	11.6		5	3/19/2015	78-87-5
1,3,5-Trimethylbenzene	< 2.5	2.5	< 12.3	12.3		5	3/19/2015	108-67-8
1,3-Butadiene	< 2.5	2.5	< 5.53	5.53	L5	5	3/19/2015	106-99-0
1,3-Dichlorobenzene	< 2.5	2.5	< 15.0	15.0		5	3/19/2015	541-73-1
1,4-Dichlorobenzene	< 2.5	2.5	< 15.0	15.0		5	3/19/2015	106-46-7
1,4-Dioxane	< 10	10	< 36.0	36.0		5	3/19/2015	123-91-1
2,2,4-Trimethylpentane	< 2.5	2.5	< 11.7	11.7	L5	5	3/19/2015	540-84-1
2-Butanone (MEK)	< 25	25	< 73.8	73.8		5	3/19/2015	78-93-3
2-Hexanone	< 25	25	< 103	103	L5	5	3/19/2015	591-78-6
2-Propanol (IPA)	< 25	25	< 61.3	61.3	L5	5	3/19/2015	67-63-0
4-Ethyltoluene	< 5.0	5.0	< 24.6	24.6		5	3/19/2015	622-96-8
4-Methyl-2-pentanone (MIK)	< 25	25	< 103	103	L5	5	3/19/2015	108-10-1
Acetone	< 25	25	< 59.5	59.5		5	3/19/2015	67-64-1
Allyl chloride	< 5.0	5.0	< 15.7	15.7		5	3/19/2015	107-05-1
Benzene	**8.1**	**2.5**	**25.8**	**7.98**		5	3/19/2015	71-43-2
Benzyl chloride	< 10	10	< 51.8	51.8		5	3/19/2015	100-44-7
Bromodichloromethane	< 2.5	2.5	< 16.8	16.8		5	3/19/2015	75-27-4
Bromoethene(Vinyl Bromide)	< 2.5	2.5	< 10.9	10.9		5	3/19/2015	593-60-2
Bromoform	< 2.5	2.5	< 25.9	25.9	L5	5	3/19/2015	75-25-2
Bromomethane	< 2.5	2.5	< 9.70	9.70		5	3/19/2015	74-83-9
Butyl benzene	< 5.0	5.0	< 27.5	27.5		5	3/19/2015	104-51-8
Carbon disulfide	< 10	10	< 31.1	31.1		5	3/19/2015	75-15-0
Carbon tetrachloride	< 2.5	2.5	< 15.7	15.7		5	3/19/2015	56-23-5
Chlorobenzene	< 2.5	2.5	< 11.5	11.5		5	3/19/2015	108-90-7
Chloroethane	< 2.5	2.5	< 6.60	6.60		5	3/19/2015	75-00-3
Chloroform	< 2.5	2.5	< 12.2	12.2		5	3/19/2015	67-66-3
Chloromethane	< 10	10	< 20.7	20.7		5	3/19/2015	74-87-3
cis-1,2-Dichloroethene	**6.4**	**2.5**	**25.3**	**9.90**		5	3/19/2015	156-59-2
cis-1,3-Dichloropropene	< 2.5	2.5	< 11.4	11.4		5	3/19/2015	542-75-6
Cyclohexane	**11**	**2.5**	**36.6**	**8.60**		5	3/19/2015	110-82-7
Dibromochloromethane	< 2.5	2.5	< 21.3	21.3		5	3/19/2015	124-48-1
Dichlorodifluoromethane(F-12)	< 5.0	5.0	< 24.8	24.8		5	3/19/2015	75-71-8
Dichlorotetrafluoroethane(F-114)	**27**	**2.5**	**188**	**17.5**		5	3/19/2015	76-14-2
Ethanol	< 25	25	< 47.0	47.0		5	3/19/2015	64-17-5
Ethyl Acetate	< 2.5	2.5	< 9.00	9.00	L5	5	3/19/2015	141-78-6
Ethylbenzene	**2.6**	**2.5**	**11.1**	**10.9**		5	3/19/2015	100-41-4

Airtech Environmental Laboratories (AEL) - AZ 0740

4620 E.Elwood St., Suite 13, Phoenix, AZ 85040 480-968-5888 Fax 480-966-1888

Client:	AMEC F/W	**Client Sample ID:**	MW-8-SG-031015
Project:	Broadway Pantana	**Project Number:**	14.2014-2029
Lab Order:	15C013	**Collection:**	3/10/2015
Lab ID:	09	**Matrix:**	Soil Vapor

	ppbv		ug/M^3				Date	
Analyses	**Result**	**Limit**	**Result**	**Limit**	**Qual**	**DF**	**Analyzed**	**CAS#**
VOLATILE ORGANICS IN AIR	**TO-15**						Analyst: JJ	
Heptane	**123**	**2.5**	**505**	**10.3**		5	3/19/2015	142-82-5
Hexachlorobutadiene	< 5.0	5.0	< 53.4	53.4	L5	5	3/19/2015	87-68-3
Hexane	**34**	**5.0**	**121**	**17.6**		5	3/19/2015	110-54-3
Isopropylbenzene	< 5.0	5.0	< 24.6	24.6		5	3/19/2015	98-82-8
m&p-Xylene	< 5.0	5.0	< 21.7	21.7		5	3/19/2015	179601-23-1
Methyl tert-butyl ether	< 10	10	< 36.1	36.1		5	3/19/2015	1634-04-4
Methylcyclohexane	**16**	**5.0**	**66.1**	**20.1**		5	3/19/2015	108-87-2
Methylene chloride	< 10	10	< 34.7	34.7		5	3/19/2015	75-09-2
Naphthalene	< 10	10	< 52.4	52.4		5	3/19/2015	91-20-3
Nonane	**59**	**5.0**	**307**	**26.2**		5	3/19/2015	111-84-2
Octane	**11**	**5.0**	**50.7**	**23.4**		5	3/19/2015	111-65-9
o-Xylene	< 2.5	2.5	< 10.9	10.9		5	3/19/2015	95-47-6
Propene (Propylene)	< 5.0	5.0	< 8.60	8.60		5	3/19/2015	115-07-1
Propylbenzene	< 5.0	5.0	< 24.6	24.6		5	3/19/2015	103-65-1
Sec-Butyl benzene	< 5.0	5.0	< 27.5	27.5		5	3/19/2015	135-98-8
Styrene	< 2.5	2.5	< 10.7	10.7		5	3/19/2015	100-42-5
Tert-Butyl benzene	< 5.0	5.0	< 27.5	27.5		5	3/19/2015	98-06-6
Tetrachloroethene	**7.4**	**2.5**	**50.2**	**17.0**		5	3/19/2015	127-18-4
Tetrahydrofuran	< 10	10	< 29.5	29.5	L5	5	3/19/2015	109-99-9
Toluene	**4.2**	**2.5**	**15.6**	**9.43**		5	3/19/2015	108-88-3
trans-1,2-Dichloroethene	< 2.5	2.5	< 9.90	9.90		5	3/19/2015	156-60-5
trans-1,3-Dichloropropene	< 2.5	2.5	< 11.4	11.4		5	3/19/2015	542-75-6
Trichloroethene	< 2.5	2.5	< 13.4	13.4		5	3/19/2015	79-01-6
Trichlorofluoromethane(F-11)	< 2.5	2.5	< 14.1	14.1		5	3/19/2015	75-69-4
Trichlorotrifluoroethane(F-113)	< 2.5	2.5	< 19.2	19.2		5	3/19/2015	76-13-1
Vinyl acetate	< 2.5	2.5	< 8.80	8.80	L5	5	3/19/2015	108-05-4
Vinyl chloride	**4.3**	**2.5**	**11.0**	**6.40**		5	3/19/2015	75-01-4
Surr: 4-Bromofluorobenzene	78.2	70-130	%REC					

Tentatively Identified Compounds (TIC's)

Difluoroethane	< 50	50	ppbv		T4	5	3/19/2015

Airtech Environmental Laboratories (AEL) - AZ 0740

4620 E.Elwood St., Suite 13, Phoenix, AZ 85040 480-968-5888 Fax 480-966-1888

Client:	AMEC F/W	**Client Sample ID:**	MW-8-SG-031015-DUP
Project:	Broadway Pantana	**Project Number:**	14.2014-2029
Lab Order:	15C013	**Collection:**	3/10/2015
Lab ID:	10	**Matrix:**	Soil Vapor

	ppbv		ug/M^3				Date	
Analyses	**Result**	**Limit**	**Result**	**Limit**	**Qual**	**DF**	**Analyzed**	**CAS#**
VOLATILE ORGANICS IN AIR		**TO-15**					Analyst: JJ	
1,1,1-Trichloroethane	< 2.5	2.5	< 13.7	13.7		5	3/19/2015	71-55-6
1,1,2,2-Tetrachloroethane	< 2.5	2.5	< 17.2	17.2		5	3/19/2015	79-34-5
1,1,2-Trichloroethane	< 2.5	2.5	< 13.7	13.7		5	3/19/2015	79-00-5
1,1-Dichloroethane	< 2.5	2.5	< 10.1	10.1		5	3/19/2015	75-34-3
1,1-Dichloroethene	< 2.5	2.5	< 9.93	9.93		5	3/19/2015	75-35-4
1,2,4-Trichlorobenzene	< 10	10	< 74.2	74.2	L5	5	3/19/2015	120-82-1
1,2,4-Trimethylbenzene	< 2.5	2.5	< 12.3	12.3		5	3/19/2015	95-63-6
1,2-Dibromoethane	< 2.5	2.5	< 19.2	19.2		5	3/19/2015	106-93-4
1,2-Dichlorobenzene	< 2.5	2.5	< 15.0	15.0		5	3/19/2015	95-50-1
1,2-Dichloroethane	< 2.5	2.5	< 10.1	10.1		5	3/19/2015	107-06-2
1,2-Dichloropropane	< 2.5	2.5	< 11.6	11.6		5	3/19/2015	78-87-5
1,3,5-Trimethylbenzene	< 2.5	2.5	< 12.3	12.3		5	3/19/2015	108-67-8
1,3-Butadiene	< 2.5	2.5	< 5.53	5.53	L5	5	3/19/2015	106-99-0
1,3-Dichlorobenzene	< 2.5	2.5	< 15.0	15.0		5	3/19/2015	541-73-1
1,4-Dichlorobenzene	< 2.5	2.5	< 15.0	15.0		5	3/19/2015	106-46-7
1,4-Dioxane	< 10	10	< 36.0	36.0		5	3/19/2015	123-91-1
2,2,4-Trimethylpentane	< 2.5	2.5	< 11.7	11.7	L5	5	3/19/2015	540-84-1
2-Butanone (MEK)	< 25	25	< 73.8	73.8		5	3/19/2015	78-93-3
2-Hexanone	< 25	25	< 103	103	L5	5	3/19/2015	591-78-6
2-Propanol (IPA)	< 25	25	< 61.3	61.3	L5	5	3/19/2015	67-63-0
4-Ethyltoluene	< 5.0	5.0	< 24.6	24.6		5	3/19/2015	622-96-8
4-Methyl-2-pentanone (MIK)	< 25	25	< 103	103	L5	5	3/19/2015	108-10-1
Acetone	< 25	25	< 59.5	59.5		5	3/19/2015	67-64-1
Allyl chloride	< 5.0	5.0	< 15.7	15.7		5	3/19/2015	107-05-1
Benzene	**9.9**	**2.5**	**31.6**	**7.98**		5	3/19/2015	71-43-2
Benzyl chloride	< 10	10	< 51.8	51.8		5	3/19/2015	100-44-7
Bromodichloromethane	< 2.5	2.5	< 16.8	16.8		5	3/19/2015	75-27-4
Bromoethene(Vinyl Bromide)	< 2.5	2.5	< 10.9	10.9		5	3/19/2015	593-60-2
Bromoform	< 2.5	2.5	< 25.9	25.9	L5	5	3/19/2015	75-25-2
Bromomethane	< 2.5	2.5	< 9.70	9.70		5	3/19/2015	74-83-9
Butyl benzene	< 5.0	5.0	< 27.5	27.5		5	3/19/2015	104-51-8
Carbon disulfide	< 10	10	< 31.1	31.1		5	3/19/2015	75-15-0
Carbon tetrachloride	< 2.5	2.5	< 15.7	15.7		5	3/19/2015	56-23-5
Chlorobenzene	< 2.5	2.5	< 11.5	11.5		5	3/19/2015	108-90-7
Chloroethane	< 2.5	2.5	< 6.60	6.60		5	3/19/2015	75-00-3
Chloroform	< 2.5	2.5	< 12.2	12.2		5	3/19/2015	67-66-3
Chloromethane	< 10	10	< 20.7	20.7		5	3/19/2015	74-87-3
cis-1,2-Dichloroethene	**7.3**	**2.5**	**28.9**	**9.90**		5	3/19/2015	156-59-2
cis-1,3-Dichloropropene	< 2.5	2.5	< 11.4	11.4		5	3/19/2015	542-75-6
Cyclohexane	**13**	**2.5**	**44.4**	**8.60**		5	3/19/2015	110-82-7
Dibromochloromethane	< 2.5	2.5	< 21.3	21.3		5	3/19/2015	124-48-1
Dichlorodifluoromethane(F-12)	**5.8**	**5.0**	**28.7**	**24.8**		5	3/19/2015	75-71-8
Dichlorotetrafluoroethane(F-114)	**33**	**2.5**	**232**	**17.5**		5	3/19/2015	76-14-2
Ethanol	< 25	25	< 47.0	47.0		5	3/19/2015	64-17-5
Ethyl Acetate	< 2.5	2.5	< 9.00	9.00	L5	5	3/19/2015	141-78-6
Ethylbenzene	**3.4**	**2.5**	**14.5**	**10.9**		5	3/19/2015	100-41-4

Airtech Environmental Laboratories (AEL) - AZ 0740

4620 E.Elwood St., Suite 13, Phoenix, AZ 85040 480-968-5888 Fax 480-966-1888

Client:	AMEC F/W	**Client Sample ID:**	MW-8-SG-031015-DUP
Project:	Broadway Pantana	**Project Number:**	14.2014-2029
Lab Order:	15C013	**Collection:**	3/10/2015
Lab ID:	10	**Matrix:**	Soil Vapor

	ppbv		ug/M^3				Date	
Analyses	**Result**	**Limit**	**Result**	**Limit**	**Qual**	**DF**	**Analyzed**	**CAS#**
VOLATILE ORGANICS IN AIR		**TO-15**					Analyst: JJ	
Heptane	**178**	**2.5**	**730**	**10.3**		5	3/19/2015	142-82-5
Hexachlorobutadiene	< 5.0	5.0	< 53.4	53.4	L5	5	3/19/2015	87-68-3
Hexane	**44**	**5.0**	**153**	**17.6**		5	3/19/2015	110-54-3
Isopropylbenzene	< 5.0	5.0	< 24.6	24.6		5	3/19/2015	98-82-8
m&p-Xylene	< 5.0	5.0	< 21.7	21.7		5	3/19/2015	179601-23-1
Methyl tert-butyl ether	< 10	10	< 36.1	36.1		5	3/19/2015	1634-04-4
Methylcyclohexane	**21**	**5.0**	**85.2**	**20.1**		5	3/19/2015	108-87-2
Methylene chloride	< 10	10	< 34.7	34.7		5	3/19/2015	75-09-2
Naphthalene	< 10	10	< 52.4	52.4		5	3/19/2015	91-20-3
Nonane	**80**	**5.0**	**418**	**26.2**		5	3/19/2015	111-84-2
Octane	**15**	**5.0**	**70.8**	**23.4**		5	3/19/2015	111-65-9
o-Xylene	< 2.5	2.5	< 10.9	10.9		5	3/19/2015	95-47-6
Propene (Propylene)	< 5.0	5.0	< 8.60	8.60		5	3/19/2015	115-07-1
Propylbenzene	< 5.0	5.0	< 24.6	24.6		5	3/19/2015	103-65-1
Sec-Butyl benzene	< 5.0	5.0	< 27.5	27.5		5	3/19/2015	135-98-8
Styrene	< 2.5	2.5	< 10.7	10.7		5	3/19/2015	100-42-5
Tert-Butyl benzene	< 5.0	5.0	< 27.5	27.5		5	3/19/2015	98-06-6
Tetrachloroethene	**9.5**	**2.5**	**64.4**	**17.0**		5	3/19/2015	127-18-4
Tetrahydrofuran	< 10	10	< 29.5	29.5	L5	5	3/19/2015	109-99-9
Toluene	**4.8**	**2.5**	**17.9**	**9.43**		5	3/19/2015	108-88-3
trans-1,2-Dichloroethene	< 2.5	2.5	< 9.90	9.90		5	3/19/2015	156-60-5
trans-1,3-Dichloropropene	< 2.5	2.5	< 11.4	11.4		5	3/19/2015	542-75-6
Trichloroethene	< 2.5	2.5	< 13.4	13.4		5	3/19/2015	79-01-6
Trichlorofluoromethane(F-11)	< 2.5	2.5	< 14.1	14.1		5	3/19/2015	75-69-4
Trichlorotrifluoroethane(F-113)	< 2.5	2.5	< 19.2	19.2		5	3/19/2015	76-13-1
Vinyl acetate	< 2.5	2.5	< 8.80	8.80	L5	5	3/19/2015	108-05-4
Vinyl chloride	**6.2**	**2.5**	**15.9**	**6.40**		5	3/19/2015	75-01-4
Surr: 4-Bromofluorobenzene	77.0	70-130	%REC					

Tentatively Identified Compounds (TIC's)

Difluoroethane	< 50	50	ppbv		T4	5	3/19/2015

Airtech Environmental Laboratories (AEL) - AZ 0740

4620 E.Elwood St., Suite 13, Phoenix, AZ 85040 480-968-5888 Fax 480-966-1888

Client:	AMEC F/W	**Client Sample ID:**	MW-7-SG-031015
Project:	Broadway Pantana	**Project Number:**	14.2014-2029
Lab Order:	15C013	**Collection:**	3/10/2015
Lab ID:	11	**Matrix:**	Soil Vapor

	ppbv		ug/M^3				Date	
Analyses	**Result**	**Limit**	**Result**	**Limit**	**Qual**	**DF**	**Analyzed**	**CAS#**
VOLATILE ORGANICS IN AIR		**TO-15**					Analyst: JJ	
1,1,1-Trichloroethane	< 1.0	1.0	< 5.46	5.46		2	3/19/2015	71-55-6
1,1,2,2-Tetrachloroethane	< 1.0	1.0	< 6.87	6.87		2	3/19/2015	79-34-5
1,1,2-Trichloroethane	< 1.0	1.0	< 5.46	5.46		2	3/19/2015	79-00-5
1,1-Dichloroethane	< 1.0	1.0	< 4.05	4.05		2	3/19/2015	75-34-3
1,1-Dichloroethene	< 1.0	1.0	< 3.97	3.97		2	3/19/2015	75-35-4
1,2,4-Trichlorobenzene	< 4.0	4.0	< 29.7	29.7	L5	2	3/19/2015	120-82-1
1,2,4-Trimethylbenzene	< 1.0	1.0	< 4.92	4.92		2	3/19/2015	95-63-6
1,2-Dibromoethane	< 1.0	1.0	< 7.68	7.68		2	3/19/2015	106-93-4
1,2-Dichlorobenzene	< 1.0	1.0	< 6.01	6.01		2	3/19/2015	95-50-1
1,2-Dichloroethane	< 1.0	1.0	< 4.05	4.05		2	3/19/2015	107-06-2
1,2-Dichloropropane	< 1.0	1.0	< 4.62	4.62		2	3/19/2015	78-87-5
1,3,5-Trimethylbenzene	< 1.0	1.0	< 4.92	4.92		2	3/19/2015	108-67-8
1,3-Butadiene	< 1.0	1.0	< 2.21	2.21	L5	2	3/19/2015	106-99-0
1,3-Dichlorobenzene	< 1.0	1.0	< 6.01	6.01		2	3/19/2015	541-73-1
1,4-Dichlorobenzene	< 1.0	1.0	< 6.01	6.01		2	3/19/2015	106-46-7
1,4-Dioxane	< 4.0	4.0	< 14.4	14.4		2	3/19/2015	123-91-1
2,2,4-Trimethylpentane	< 1.0	1.0	< 4.66	4.66	L5	2	3/19/2015	540-84-1
2-Butanone (MEK)	< 10	10	< 29.5	29.5		2	3/19/2015	78-93-3
2-Hexanone	< 10	10	< 41.0	41.0	L5	2	3/19/2015	591-78-6
2-Propanol (IPA)	< 10	10	< 24.5	24.5	L5	2	3/19/2015	67-63-0
4-Ethyltoluene	< 2.0	2.0	< 9.84	9.84		2	3/19/2015	622-96-8
4-Methyl-2-pentanone (MIK)	< 10	10	< 41.0	41.0	L5	2	3/19/2015	108-10-1
Acetone	< 10	10	< 23.8	23.8		2	3/19/2015	67-64-1
Allyl chloride	< 2.0	2.0	< 6.26	6.26		2	3/19/2015	107-05-1
Benzene	< 1.0	1.0	< 3.19	3.19		2	3/19/2015	71-43-2
Benzyl chloride	< 4.0	4.0	< 20.7	20.7		2	3/19/2015	100-44-7
Bromodichloromethane	< 1.0	1.0	< 6.70	6.70		2	3/19/2015	75-27-4
Bromoethene(Vinyl Bromide)	< 1.0	1.0	< 4.37	4.37		2	3/19/2015	593-60-2
Bromoform	< 1.0	1.0	< 10.3	10.3	L5	2	3/19/2015	75-25-2
Bromomethane	< 1.0	1.0	< 3.88	3.88		2	3/19/2015	74-83-9
Butyl benzene	< 2.0	2.0	< 11.0	11.0		2	3/19/2015	104-51-8
Carbon disulfide	**23**	**4.0**	**72.3**	**12.4**		2	3/19/2015	75-15-0
Carbon tetrachloride	< 1.0	1.0	< 6.29	6.29		2	3/19/2015	56-23-5
Chlorobenzene	< 1.0	1.0	< 4.60	4.60		2	3/19/2015	108-90-7
Chloroethane	< 1.0	1.0	< 2.64	2.64		2	3/19/2015	75-00-3
Chloroform	< 1.0	1.0	< 4.88	4.88		2	3/19/2015	67-66-3
Chloromethane	< 4.0	4.0	< 8.28	8.28		2	3/19/2015	74-87-3
cis-1,2-Dichloroethene	< 1.0	1.0	< 3.96	3.96		2	3/19/2015	156-59-2
cis-1,3-Dichloropropene	< 1.0	1.0	< 4.54	4.54		2	3/19/2015	542-75-6
Cyclohexane	< 1.0	1.0	< 3.44	3.44		2	3/19/2015	110-82-7
Dibromochloromethane	< 1.0	1.0	< 8.52	8.52		2	3/19/2015	124-48-1
Dichlorodifluoromethane(F-12)	**2.1**	**2.0**	**10.2**	**9.90**		2	3/19/2015	75-71-8
Dichlorotetrafluoroethane(F-114)	**7.9**	**1.0**	**55.1**	**6.99**		2	3/19/2015	76-14-2
Ethanol	< 10	10	< 18.8	18.8		2	3/19/2015	64-17-5
Ethyl Acetate	< 1.0	1.0	< 3.60	3.60	L5	2	3/19/2015	141-78-6
Ethylbenzene	< 1.0	1.0	< 4.34	4.34		2	3/19/2015	100-41-4

Airtech Environmental Laboratories (AEL) - AZ 0740

4620 E.Elwood St., Suite 13, Phoenix, AZ 85040 480-968-5888 Fax 480-966-1888

Client:	AMEC F/W	**Client Sample ID:**	MW-7-SG-031015
Project:	Broadway Pantana	**Project Number:**	14.2014-2029
Lab Order:	15C013	**Collection:**	3/10/2015
Lab ID:	11	**Matrix:**	Soil Vapor

	ppbv		ug/M^3				Date	
Analyses	**Result**	**Limit**	**Result**	**Limit**	**Qual**	**DF**	**Analyzed**	**CAS#**
VOLATILE ORGANICS IN AIR		**TO-15**					Analyst: JJ	
Heptane	< 1.0	1.0	< 4.10	4.10		2	3/19/2015	142-82-5
Hexachlorobutadiene	< 2.0	2.0	< 21.3	21.3	L5	2	3/19/2015	87-68-3
Hexane	< 2.0	2.0	< 7.04	7.04		2	3/19/2015	110-54-3
Isopropylbenzene	< 2.0	2.0	< 9.84	9.84		2	3/19/2015	98-82-8
m&p-Xylene	< 2.0	2.0	< 8.68	8.68		2	3/19/2015	179601-23-1
Methyl tert-butyl ether	< 4.0	4.0	< 14.4	14.4		2	3/19/2015	1634-04-4
Methylcyclohexane	< 2.0	2.0	< 8.04	8.04		2	3/19/2015	108-87-2
Methylene chloride	< 4.0	4.0	< 13.9	13.9		2	3/19/2015	75-09-2
Naphthalene	< 4.0	4.0	< 21.0	21.0		2	3/19/2015	91-20-3
Nonane	< 2.0	2.0	< 10.5	10.5		2	3/19/2015	111-84-2
Octane	< 2.0	2.0	< 9.34	9.34		2	3/19/2015	111-65-9
o-Xylene	< 1.0	1.0	< 4.34	4.34		2	3/19/2015	95-47-6
Propene (Propylene)	< 2.0	2.0	< 3.44	3.44		2	3/19/2015	115-07-1
Propylbenzene	< 2.0	2.0	< 9.84	9.84		2	3/19/2015	103-65-1
Sec-Butyl benzene	< 2.0	2.0	< 11.0	11.0		2	3/19/2015	135-98-8
Styrene	< 1.0	1.0	< 4.26	4.26		2	3/19/2015	100-42-5
Tert-Butyl benzene	< 2.0	2.0	< 11.0	11.0		2	3/19/2015	98-06-6
Tetrachloroethene	< 1.0	1.0	< 6.78	6.78		2	3/19/2015	127-18-4
Tetrahydrofuran	< 4.0	4.0	< 11.8	11.8	L5	2	3/19/2015	109-99-9
Toluene	< 1.0	1.0	< 3.77	3.77		2	3/19/2015	108-88-3
trans-1,2-Dichloroethene	< 1.0	1.0	< 3.96	3.96		2	3/19/2015	156-60-5
trans-1,3-Dichloropropene	< 1.0	1.0	< 4.54	4.54		2	3/19/2015	542-75-6
Trichloroethene	< 1.0	1.0	< 5.37	5.37		2	3/19/2015	79-01-6
Trichlorofluoromethane(F-11)	< 1.0	1.0	< 5.62	5.62		2	3/19/2015	75-69-4
Trichlorotrifluoroethane(F-113)	< 1.0	1.0	< 7.66	7.66		2	3/19/2015	76-13-1
Vinyl acetate	< 1.0	1.0	< 3.52	3.52	L5	2	3/19/2015	108-05-4
Vinyl chloride	< 1.0	1.0	< 2.56	2.56		2	3/19/2015	75-01-4
Surr: 4-Bromofluorobenzene	89.4	70-130	%REC					

Tentatively Identified Compounds (TIC's)

Difluoroethane	< 20	20	ppbv		T4	2	3/19/2015

Airtech Environmental Laboratories (AEL) - AZ 0740

4620 E.Elwood St., Suite 13, Phoenix, AZ 85040 480-968-5888 Fax 480-966-1888

Client:	AMEC F/W	**Client Sample ID:**	MW-6-SG-031015
Project:	Broadway Pantana	**Project Number:**	14.2014-2029
Lab Order:	15C013	**Collection:**	3/10/2015
Lab ID:	12	**Matrix:**	Soil Vapor

	ppbv		ug/M^3				Date	
Analyses	**Result**	**Limit**	**Result**	**Limit**	**Qual**	**DF**	**Analyzed**	**CAS#**
VOLATILE ORGANICS IN AIR		**TO-15**					Analyst: JJ	
1,1,1-Trichloroethane	< 1.0	1.0	< 5.46	5.46		2	3/19/2015	71-55-6
1,1,2,2-Tetrachloroethane	< 1.0	1.0	< 6.87	6.87		2	3/19/2015	79-34-5
1,1,2-Trichloroethane	< 1.0	1.0	< 5.46	5.46		2	3/19/2015	79-00-5
1,1-Dichloroethane	< 1.0	1.0	< 4.05	4.05		2	3/19/2015	75-34-3
1,1-Dichloroethene	< 1.0	1.0	< 3.97	3.97		2	3/19/2015	75-35-4
1,2,4-Trichlorobenzene	< 4.0	4.0	< 29.7	29.7	L5	2	3/19/2015	120-82-1
1,2,4-Trimethylbenzene	< 1.0	1.0	< 4.92	4.92		2	3/19/2015	95-63-6
1,2-Dibromoethane	< 1.0	1.0	< 7.68	7.68		2	3/19/2015	106-93-4
1,2-Dichlorobenzene	< 1.0	1.0	< 6.01	6.01		2	3/19/2015	95-50-1
1,2-Dichloroethane	< 1.0	1.0	< 4.05	4.05		2	3/19/2015	107-06-2
1,2-Dichloropropane	< 1.0	1.0	< 4.62	4.62		2	3/19/2015	78-87-5
1,3,5-Trimethylbenzene	< 1.0	1.0	< 4.92	4.92		2	3/19/2015	108-67-8
1,3-Butadiene	< 1.0	1.0	< 2.21	2.21	L5	2	3/19/2015	106-99-0
1,3-Dichlorobenzene	< 1.0	1.0	< 6.01	6.01		2	3/19/2015	541-73-1
1,4-Dichlorobenzene	< 1.0	1.0	< 6.01	6.01		2	3/19/2015	106-46-7
1,4-Dioxane	< 4.0	4.0	< 14.4	14.4		2	3/19/2015	123-91-1
2,2,4-Trimethylpentane	**14**	**1.0**	**65.9**	**4.66**	L5	2	3/19/2015	540-84-1
2-Butanone (MEK)	< 10	10	< 29.5	29.5		2	3/19/2015	78-93-3
2-Hexanone	< 10	10	< 41.0	41.0	L5	2	3/19/2015	591-78-6
2-Propanol (IPA)	< 10	10	< 24.5	24.5	L5	2	3/19/2015	67-63-0
4-Ethyltoluene	< 2.0	2.0	< 9.84	9.84		2	3/19/2015	622-96-8
4-Methyl-2-pentanone (MIK)	< 10	10	< 41.0	41.0	L5	2	3/19/2015	108-10-1
Acetone	< 10	10	< 23.8	23.8		2	3/19/2015	67-64-1
Allyl chloride	< 2.0	2.0	< 6.26	6.26		2	3/19/2015	107-05-1
Benzene	**2.1**	**1.0**	**6.76**	**3.19**		2	3/19/2015	71-43-2
Benzyl chloride	< 4.0	4.0	< 20.7	20.7		2	3/19/2015	100-44-7
Bromodichloromethane	< 1.0	1.0	< 6.70	6.70		2	3/19/2015	75-27-4
Bromoethene(Vinyl Bromide)	< 1.0	1.0	< 4.37	4.37		2	3/19/2015	593-60-2
Bromoform	< 1.0	1.0	< 10.3	10.3	L5	2	3/19/2015	75-25-2
Bromomethane	< 1.0	1.0	< 3.88	3.88		2	3/19/2015	74-83-9
Butyl benzene	< 2.0	2.0	< 11.0	11.0		2	3/19/2015	104-51-8
Carbon disulfide	< 4.0	4.0	< 12.4	12.4		2	3/19/2015	75-15-0
Carbon tetrachloride	< 1.0	1.0	< 6.29	6.29		2	3/19/2015	56-23-5
Chlorobenzene	< 1.0	1.0	< 4.60	4.60		2	3/19/2015	108-90-7
Chloroethane	< 1.0	1.0	< 2.64	2.64		2	3/19/2015	75-00-3
Chloroform	**1.6**	**1.0**	**8.00**	**4.88**		2	3/19/2015	67-66-3
Chloromethane	< 4.0	4.0	< 8.28	8.28		2	3/19/2015	74-87-3
cis-1,2-Dichloroethene	**2.4**	**1.0**	**9.50**	**3.96**		2	3/19/2015	156-59-2
cis-1,3-Dichloropropene	< 1.0	1.0	< 4.54	4.54		2	3/19/2015	542-75-6
Cyclohexane	**1.9**	**1.0**	**6.60**	**3.44**		2	3/19/2015	110-82-7
Dibromochloromethane	< 1.0	1.0	< 8.52	8.52		2	3/19/2015	124-48-1
Dichlorodifluoromethane(F-12)	< 2.0	2.0	< 9.90	9.90		2	3/19/2015	75-71-8
Dichlorotetrafluoroethane(F-114)	**2.3**	**1.0**	**16.2**	**6.99**		2	3/19/2015	76-14-2
Ethanol	< 10	10	< 18.8	18.8		2	3/19/2015	64-17-5
Ethyl Acetate	**4.5**	**1.0**	**16.1**	**3.60**	L5	2	3/19/2015	141-78-6
Ethylbenzene	< 1.0	1.0	< 4.34	4.34		2	3/19/2015	100-41-4

Airtech Environmental Laboratories (AEL) - AZ 0740

4620 E.Elwood St., Suite 13, Phoenix, AZ 85040 480-968-5888 Fax 480-966-1888

Client:	AMEC F/W	**Client Sample ID:**	MW-6-SG-031015
Project:	Broadway Pantana	**Project Number:**	14.2014-2029
Lab Order:	15C013	**Collection:**	3/10/2015
Lab ID:	12	**Matrix:**	Soil Vapor

	ppbv		ug/M^3				Date	
Analyses	**Result**	**Limit**	**Result**	**Limit**	**Qual**	**DF**	**Analyzed**	**CAS#**
VOLATILE ORGANICS IN AIR		**TO-15**					Analyst: JJ	
Heptane	**8.3**	**1.0**	**34.2**	**4.10**		2	3/19/2015	142-82-5
Hexachlorobutadiene	< 2.0	2.0	< 21.3	21.3	L5	2	3/19/2015	87-68-3
Hexane	**2.0**	**2.0**	**7.11**	**7.04**		2	3/19/2015	110-54-3
Isopropylbenzene	< 2.0	2.0	< 9.84	9.84		2	3/19/2015	98-82-8
m&p-Xylene	< 2.0	2.0	< 8.68	8.68		2	3/19/2015	179601-23-1
Methyl tert-butyl ether	< 4.0	4.0	< 14.4	14.4		2	3/19/2015	1634-04-4
Methylcyclohexane	**7.3**	**2.0**	**29.3**	**8.04**		2	3/19/2015	108-87-2
Methylene chloride	< 4.0	4.0	< 13.9	13.9		2	3/19/2015	75-09-2
Naphthalene	< 4.0	4.0	< 21.0	21.0		2	3/19/2015	91-20-3
Nonane	< 2.0	2.0	< 10.5	10.5		2	3/19/2015	111-84-2
Octane	< 2.0	2.0	< 9.34	9.34		2	3/19/2015	111-65-9
o-Xylene	< 1.0	1.0	< 4.34	4.34		2	3/19/2015	95-47-6
Propene (Propylene)	< 2.0	2.0	< 3.44	3.44		2	3/19/2015	115-07-1
Propylbenzene	< 2.0	2.0	< 9.84	9.84		2	3/19/2015	103-65-1
Sec-Butyl benzene	< 2.0	2.0	< 11.0	11.0		2	3/19/2015	135-98-8
Styrene	< 1.0	1.0	< 4.26	4.26		2	3/19/2015	100-42-5
Tert-Butyl benzene	< 2.0	2.0	< 11.0	11.0		2	3/19/2015	98-06-6
Tetrachloroethene	**3.9**	**1.0**	**26.3**	**6.78**		2	3/19/2015	127-18-4
Tetrahydrofuran	< 4.0	4.0	< 11.8	11.8	L5	2	3/19/2015	109-99-9
Toluene	< 1.0	1.0	< 3.77	3.77		2	3/19/2015	108-88-3
trans-1,2-Dichloroethene	< 1.0	1.0	< 3.96	3.96		2	3/19/2015	156-60-5
trans-1,3-Dichloropropene	< 1.0	1.0	< 4.54	4.54		2	3/19/2015	542-75-6
Trichloroethene	< 1.0	1.0	< 5.37	5.37		2	3/19/2015	79-01-6
Trichlorofluoromethane(F-11)	< 1.0	1.0	< 5.62	5.62		2	3/19/2015	75-69-4
Trichlorotrifluoroethane(F-113)	< 1.0	1.0	< 7.66	7.66		2	3/19/2015	76-13-1
Vinyl acetate	< 1.0	1.0	< 3.52	3.52	L5	2	3/19/2015	108-05-4
Vinyl chloride	< 1.0	1.0	< 2.56	2.56		2	3/19/2015	75-01-4
Surr: 4-Bromofluorobenzene	90.0	70-130	%REC					

Tentatively Identified Compounds (TIC's)

Difluoroethane	< 20	20	ppbv		T4	2	3/19/2015

Airtech Environmental Laboratories (AEL) - AZ 0740

4620 E.Elwood St., Suite 13, Phoenix, AZ 85040 480-968-5888 Fax 480-966-1888

Client:	AMEC F/W	**Client Sample ID:**	BSDP-3-50-SG-031015
Project:	Broadway Pantana	**Project Number:**	14.2014-2029
Lab Order:	15C013	**Collection:**	3/10/2015
Lab ID:	13	**Matrix:**	Soil Vapor

	ppbv		ug/M^3				Date	
Analyses	**Result**	**Limit**	**Result**	**Limit**	**Qual**	**DF**	**Analyzed**	**CAS#**
VOLATILE ORGANICS IN AIR		**TO-15**					Analyst: JJ	
1,1,1-Trichloroethane	< 10	10	< 54.6	54.6		20	3/17/2015	71-55-6
1,1-Dichloroethane	< 10	10	< 40.5	40.5		20	3/17/2015	75-34-3
1,1-Dichloroethene	< 10	10	< 39.7	39.7		20	3/17/2015	75-35-4
Benzene	**20**	**10**	**63.2**	**31.9**		20	3/17/2015	71-43-2
cis-1,2-Dichloroethene	**210**	**10**	**833**	**39.6**		20	3/17/2015	156-59-2
Dichlorodifluoromethane(F-12)	**303**	**20**	**1,500**	**99.0**		20	3/17/2015	75-71-8
Dichlorotetrafluoroethane(F-114)	**69**	**10**	**484**	**69.9**		20	3/17/2015	76-14-2
Ethylbenzene	< 10	10	< 43.4	43.4		20	3/17/2015	100-41-4
m&p-Xylene	< 20	20	< 86.8	86.8		20	3/17/2015	179601-23-1
o-Xylene	< 10	10	< 43.4	43.4		20	3/17/2015	95-47-6
Tetrachloroethene	**141**	**10**	**956**	**67.8**		20	3/17/2015	127-18-4
Toluene	< 10	10	< 37.7	37.7		20	3/17/2015	108-88-3
trans-1,2-Dichloroethene	**11**	**10**	**42.8**	**39.6**		20	3/17/2015	156-60-5
Trichloroethene	**194**	**10**	**1,040**	**53.7**		20	3/17/2015	79-01-6
Trichlorofluoromethane(F-11)	< 10	10	< 56.2	56.2		20	3/17/2015	75-69-4
Trichlorotrifluoroethane(F-113)	< 10	10	< 76.6	76.6		20	3/17/2015	76-13-1
Vinyl chloride	**12**	**10**	**30.7**	**25.6**		20	3/17/2015	75-01-4
Surr: 4-Bromofluorobenzene	96.3	70-130	%REC					

Tentatively Identified Compounds (TIC's)

Difluoroethane	< 200	200	ppbv		T4	20	3/17/2015

Airtech Environmental Laboratories (AEL) - AZ 0740

4620 E.Elwood St., Suite 13, Phoenix, AZ 85040 480-968-5888 Fax 480-966-1888

Client:	AMEC F/W	**Client Sample ID:**	BSDP-3-100-SG-031015
Project:	Broadway Pantana	**Project Number:**	14.2014-2029
Lab Order:	15C013	**Collection:**	3/10/2015
Lab ID:	14	**Matrix:**	Soil Vapor

	ppbv		ug/M^3				Date	
Analyses	**Result**	**Limit**	**Result**	**Limit**	**Qual**	**DF**	**Analyzed**	**CAS#**
VOLATILE ORGANICS IN AIR		**TO-15**					Analyst: JJ	
1,1,1-Trichloroethane	< 10	10	< 54.6	54.6		20	3/18/2015	71-55-6
1,1-Dichloroethane	< 10	10	< 40.5	40.5		20	3/18/2015	75-34-3
1,1-Dichloroethene	< 10	10	< 39.7	39.7		20	3/18/2015	75-35-4
Benzene	**14**	**10**	**43.4**	**31.9**		20	3/18/2015	71-43-2
cis-1,2-Dichloroethene	**220**	**10**	**870**	**39.6**		20	3/18/2015	156-59-2
Dichlorodifluoromethane(F-12)	**518**	**20**	**2,560**	**99.0**		20	3/18/2015	75-71-8
Dichlorotetrafluoroethane(F-114)	**90**	**10**	**628**	**69.9**		20	3/18/2015	76-14-2
Ethylbenzene	< 10	10	< 43.4	43.4		20	3/18/2015	100-41-4
m&p-Xylene	< 20	20	< 86.8	86.8		20	3/18/2015	179601-23-1
o-Xylene	< 10	10	< 43.4	43.4		20	3/18/2015	95-47-6
Tetrachloroethene	**359**	**10**	**2,440**	**67.8**		20	3/18/2015	127-18-4
Toluene	< 10	10	< 37.7	37.7		20	3/18/2015	108-88-3
trans-1,2-Dichloroethene	**13**	**10**	**49.9**	**39.6**		20	3/18/2015	156-60-5
Trichloroethene	**179**	**10**	**962**	**53.7**		20	3/18/2015	79-01-6
Trichlorofluoromethane(F-11)	< 10	10	< 56.2	56.2		20	3/18/2015	75-69-4
Trichlorotrifluoroethane(F-113)	< 10	10	< 76.6	76.6		20	3/18/2015	76-13-1
Vinyl chloride	**11**	**10**	**28.7**	**25.6**		20	3/18/2015	75-01-4
Surr: 4-Bromofluorobenzene	93.7	70-130	%REC					

Tentatively Identified Compounds (TIC's)

Difluoroethane	< 200	200	ppbv		T4	20	3/18/2015

Airtech Environmental Laboratories (AEL) - AZ 0740

4620 E.Elwood St., Suite 13, Phoenix, AZ 85040 480-968-5888 Fax 480-966-1888

Client:	AMEC F/W	**Client Sample ID:**	BSDP-3-150-SG-031015
Project:	Broadway Pantana	**Project Number:**	14.2014-2029
Lab Order:	15C013	**Collection:**	3/10/2015
Lab ID:	15	**Matrix:**	Soil Vapor

Analyses	ppbv Result	ppbv Limit	ug/M^3 Result	ug/M^3 Limit	Qual	DF	Date Analyzed	CAS#
VOLATILE ORGANICS IN AIR		**TO-15**					Analyst: JJ	
1,1,1-Trichloroethane	< 10	10	< 54.6	54.6		20	3/18/2015	71-55-6
1,1-Dichloroethane	< 10	10	< 40.5	40.5		20	3/18/2015	75-34-3
1,1-Dichloroethene	< 10	10	< 39.7	39.7		20	3/18/2015	75-35-4
Benzene	< 10	10	< 31.9	31.9		20	3/18/2015	71-43-2
cis-1,2-Dichloroethene	**52**	**10**	**206**	**39.6**		20	3/18/2015	156-59-2
Dichlorodifluoromethane(F-12)	**564**	**20**	**2,790**	**99.0**		20	3/18/2015	75-71-8
Dichlorotetrafluoroethane(F-114)	**71**	**10**	**493**	**69.9**		20	3/18/2015	76-14-2
Ethylbenzene	< 10	10	< 43.4	43.4		20	3/18/2015	100-41-4
m&p-Xylene	< 20	20	< 86.8	86.8		20	3/18/2015	179601-23-1
o-Xylene	< 10	10	< 43.4	43.4		20	3/18/2015	95-47-6
Tetrachloroethene	**437**	**10**	**2,960**	**67.8**		20	3/18/2015	127-18-4
Toluene	< 10	10	< 37.7	37.7		20	3/18/2015	108-88-3
trans-1,2-Dichloroethene	< 10	10	< 39.6	39.6		20	3/18/2015	156-60-5
Trichloroethene	**91**	**10**	**491**	**53.7**		20	3/18/2015	79-01-6
Trichlorofluoromethane(F-11)	**15**	**10**	**86.5**	**56.2**		20	3/18/2015	75-69-4
Trichlorotrifluoroethane(F-113)	< 10	10	< 76.6	76.6		20	3/18/2015	76-13-1
Vinyl chloride	< 10	10	< 25.6	25.6		20	3/18/2015	75-01-4
Surr: 4-Bromofluorobenzene	85.3	70-130	%REC					

Tentatively Identified Compounds (TIC's)

Difluoroethane	< 200	200	ppbv		T4	20	3/18/2015	

Airtech Environmental Laboratories (AEL) - AZ 0740

4620 E.Elwood St., Suite 13, Phoenix, AZ 85040 480-968-5888 Fax 480-966-1888

Client:	AMEC F/W	**Client Sample ID:**	BSDP-4-50-SG-031015
Project:	Broadway Pantana	**Project Number:**	14.2014-2029
Lab Order:	15C013	**Collection:**	3/10/2015
Lab ID:	16	**Matrix:**	Soil Vapor

	ppbv		ug/M^3				Date	
Analyses	**Result**	**Limit**	**Result**	**Limit**	**Qual**	**DF**	**Analyzed**	**CAS#**
VOLATILE ORGANICS IN AIR		**TO-15**					Analyst: JJ	
1,1,1-Trichloroethane	< 50	50	< 273	273		100	3/18/2015	71-55-6
1,1-Dichloroethane	< 50	50	< 203	203		100	3/18/2015	75-34-3
1,1-Dichloroethene	< 50	50	< 199	199		100	3/18/2015	75-35-4
Benzene	**111**	**50**	**354**	**160**		100	3/18/2015	71-43-2
cis-1,2-Dichloroethene	**670**	**50**	**2,650**	**198**		100	3/18/2015	156-59-2
Dichlorodifluoromethane(F-12)	**2,540**	**100**	**12,600**	**495**		100	3/18/2015	75-71-8
Dichlorotetrafluoroethane(F-114)	**247**	**50**	**1,730**	**350**		100	3/18/2015	76-14-2
Ethylbenzene	< 50	50	< 217	217		100	3/18/2015	100-41-4
m&p-Xylene	< 100	100	< 434	434		100	3/18/2015	179601-23-1
o-Xylene	< 50	50	< 217	217		100	3/18/2015	95-47-6
Tetrachloroethene	**3,180**	**50**	**21,600**	**339**		100	3/18/2015	127-18-4
Toluene	< 50	50	< 189	189		100	3/18/2015	108-88-3
trans-1,2-Dichloroethene	< 50	50	< 198	198		100	3/18/2015	156-60-5
Trichloroethene	**794**	**50**	**4,260**	**269**		100	3/18/2015	79-01-6
Trichlorofluoromethane(F-11)	**55**	**50**	**309**	**281**		100	3/18/2015	75-69-4
Trichlorotrifluoroethane(F-113)	< 50	50	< 383	383		100	3/18/2015	76-13-1
Vinyl chloride	< 50	50	< 128	128		100	3/18/2015	75-01-4
Surr: 4-Bromofluorobenzene	94.2	70-130	%REC					

Tentatively Identified Compounds (TIC's)

Difluoroethane	< 1,000	1,000	ppbv		T4	100	3/18/2015	

Airtech Environmental Laboratories (AEL) - AZ 0740

4620 E.Elwood St., Suite 13, Phoenix, AZ 85040 480-968-5888 Fax 480-966-1888

Client:	AMEC F/W	**Client Sample ID:**	BSDP-4-100-SG-031015
Project:	Broadway Pantana	**Project Number:**	14.2014-2029
Lab Order:	15C013	**Collection:**	3/10/2015
Lab ID:	17	**Matrix:**	Soil Vapor

	ppbv		ug/M^3				Date	
Analyses	**Result**	**Limit**	**Result**	**Limit**	**Qual**	**DF**	**Analyzed**	**CAS#**
VOLATILE ORGANICS IN AIR		**TO-15**					Analyst: JJ	
1,1,1-Trichloroethane	< 100	100	< 546	546		200	3/17/2015	71-55-6
1,1-Dichloroethane	< 100	100	< 405	405		200	3/17/2015	75-34-3
1,1-Dichloroethene	< 100	100	< 397	397		200	3/17/2015	75-35-4
Benzene	**128**	**100**	**408**	**319**		200	3/17/2015	71-43-2
cis-1,2-Dichloroethene	**568**	**100**	**2,250**	**396**		200	3/17/2015	156-59-2
Dichlorodifluoromethane(F-12)	**3,250**	**200**	**16,100**	**990**		200	3/17/2015	75-71-8
Dichlorotetrafluoroethane(F-114)	**274**	**100**	**1,920**	**699**		200	3/17/2015	76-14-2
Ethylbenzene	< 100	100	< 434	434		200	3/17/2015	100-41-4
m&p-Xylene	< 200	200	< 868	868		200	3/17/2015	179601-23-1
o-Xylene	< 100	100	< 434	434		200	3/17/2015	95-47-6
Tetrachloroethene	**3,020**	**100**	**20,500**	**678**		200	3/17/2015	127-18-4
Toluene	< 100	100	< 377	377		200	3/17/2015	108-88-3
trans-1,2-Dichloroethene	< 100	100	< 396	396		200	3/17/2015	156-60-5
Trichloroethene	**674**	**100**	**3,620**	**537**		200	3/17/2015	79-01-6
Trichlorofluoromethane(F-11)	< 100	100	< 562	562		200	3/17/2015	75-69-4
Trichlorotrifluoroethane(F-113)	< 100	100	< 766	766		200	3/17/2015	76-13-1
Vinyl chloride	< 100	100	< 256	256		200	3/17/2015	75-01-4
Surr: 4-Bromofluorobenzene	92.8	70-130	%REC					

Tentatively Identified Compounds (TIC's)

Difluoroethane	< 2,000	2,000	ppbv	T4	200	3/17/2015	

Airtech Environmental Laboratories (AEL) - AZ 0740

4620 E.Elwood St., Suite 13, Phoenix, AZ 85040 480-968-5888 Fax 480-966-1888

Client:	AMEC F/W	**Client Sample ID:**	BSDP-4-150-SG-031015
Project:	Broadway Pantana	**Project Number:**	14.2014-2029
Lab Order:	15C013	**Collection:**	3/10/2015
Lab ID:	18	**Matrix:**	Soil Vapor

Analyses	ppbv Result	ppbv Limit	ug/M^3 Result	ug/M^3 Limit	Qual	DF	Date Analyzed	CAS#
VOLATILE ORGANICS IN AIR		**TO-15**					Analyst: JJ	
1,1,1-Trichloroethane	< 100	100	< 546	546		200	3/25/2015	71-55-6
1,1-Dichloroethane	< 100	100	< 405	405		200	3/25/2015	75-34-3
1,1-Dichloroethene	< 100	100	< 397	397		200	3/25/2015	75-35-4
Benzene	**160**	**100**	**510**	**319**		200	3/25/2015	71-43-2
cis-1,2-Dichloroethene	**224**	**100**	**887**	**396**		200	3/25/2015	156-59-2
Dichlorodifluoromethane(F-12)	**5,320**	**200**	**26,300**	**990**		200	3/25/2015	75-71-8
Dichlorotetrafluoroethane(F-114)	**360**	**100**	**2,520**	**699**		200	3/25/2015	76-14-2
Ethylbenzene	< 100	100	< 434	434		200	3/25/2015	100-41-4
m&p-Xylene	< 200	200	< 868	868		200	3/25/2015	179601-23-1
o-Xylene	< 100	100	< 434	434		200	3/25/2015	95-47-6
Tetrachloroethene	**3,170**	**100**	**21,500**	**678**		200	3/25/2015	127-18-4
Toluene	< 100	100	< 377	377		200	3/25/2015	108-88-3
trans-1,2-Dichloroethene	< 100	100	< 396	396		200	3/25/2015	156-60-5
Trichloroethene	**568**	**100**	**3,050**	**537**		200	3/25/2015	79-01-6
Trichlorofluoromethane(F-11)	**116**	**100**	**652**	**562**		200	3/25/2015	75-69-4
Trichlorotrifluoroethane(F-113)	< 100	100	< 766	766		200	3/25/2015	76-13-1
Vinyl chloride	< 100	100	< 256	256		200	3/25/2015	75-01-4
Surr: 4-Bromofluorobenzene	97.6	70-130	%REC					

Tentatively Identified Compounds (TIC's)

Difluoroethane	< 2,000	2,000	ppbv		T4	200	3/25/2015	

Airtech Environmental Laboratories (AEL) - AZ 0740

4620 E.Elwood St., Suite 13, Phoenix, AZ 85040 480-968-5888 Fax 480-966-1888

Client:	AMEC F/W	**Client Sample ID:**	BP-23-200-SG-031115
Project:	Broadway Pantana	**Project Number:**	14.2014-2029
Lab Order:	15C013	**Collection:**	3/11/2015
Lab ID:	19	**Matrix:**	Soil Vapor

	ppbv		ug/M^3				Date	
Analyses	**Result**	**Limit**	**Result**	**Limit**	**Qual**	**DF**	**Analyzed**	**CAS#**
VOLATILE ORGANICS IN AIR		**TO-15**					Analyst: JJ	
1,1,1-Trichloroethane	< 1.0	1.0	< 5.46	5.46		2	3/18/2015	71-55-6
1,1-Dichloroethane	< 1.0	1.0	< 4.05	4.05		2	3/18/2015	75-34-3
1,1-Dichloroethene	< 1.0	1.0	< 3.97	3.97		2	3/18/2015	75-35-4
Benzene	< 1.0	1.0	< 3.19	3.19		2	3/18/2015	71-43-2
cis-1,2-Dichloroethene	< 1.0	1.0	< 3.96	3.96		2	3/18/2015	156-59-2
Dichlorodifluoromethane(F-12)	< 2.0	2.0	< 9.90	9.90		2	3/18/2015	75-71-8
Dichlorotetrafluoroethane(F-114)	< 1.0	1.0	< 6.99	6.99		2	3/18/2015	76-14-2
Ethylbenzene	< 1.0	1.0	< 4.34	4.34		2	3/18/2015	100-41-4
m&p-Xylene	< 2.0	2.0	< 8.68	8.68		2	3/18/2015	179601-23-1
o-Xylene	< 1.0	1.0	< 4.34	4.34		2	3/18/2015	95-47-6
Tetrachloroethene	**7.6**	**1.0**	**51.7**	**6.78**		2	3/18/2015	127-18-4
Toluene	**2.5**	**1.0**	**9.27**	**3.77**		2	3/18/2015	108-88-3
trans-1,2-Dichloroethene	< 1.0	1.0	< 3.96	3.96		2	3/18/2015	156-60-5
Trichloroethene	< 1.0	1.0	< 5.37	5.37		2	3/18/2015	79-01-6
Trichlorofluoromethane(F-11)	< 1.0	1.0	< 5.62	5.62		2	3/18/2015	75-69-4
Trichlorotrifluoroethane(F-113)	< 1.0	1.0	< 7.66	7.66		2	3/18/2015	76-13-1
Vinyl chloride	< 1.0	1.0	< 2.56	2.56		2	3/18/2015	75-01-4
Surr: 4-Bromofluorobenzene	91.1	70-130	%REC					

Tentatively Identified Compounds (TIC's)

Difluoroethane	< 20	20	ppbv		T4	2	3/18/2015

Airtech Environmental Laboratories (AEL) - AZ 0740

4620 E.Elwood St., Suite 13, Phoenix, AZ 85040 480-968-5888 Fax 480-966-1888

Client:	AMEC F/W	**Client Sample ID:**	BP-23-250-SG-031115
Project:	Broadway Pantana	**Project Number:**	14.2014-2029
Lab Order:	15C013	**Collection:**	3/11/2015
Lab ID:	20	**Matrix:**	Soil Vapor

	ppbv		ug/M^3				Date	
Analyses	**Result**	**Limit**	**Result**	**Limit**	**Qual**	**DF**	**Analyzed**	**CAS#**
VOLATILE ORGANICS IN AIR		**TO-15**					Analyst: JJ	
1,1,1-Trichloroethane	< 2.5	2.5	< 13.7	13.7		5	3/18/2015	71-55-6
1,1-Dichloroethane	< 2.5	2.5	< 10.1	10.1		5	3/18/2015	75-34-3
1,1-Dichloroethene	< 2.5	2.5	< 9.93	9.93		5	3/18/2015	75-35-4
Benzene	**3.4**	**2.5**	**10.8**	**7.98**		5	3/18/2015	71-43-2
cis-1,2-Dichloroethene	< 2.5	2.5	< 9.90	9.90		5	3/18/2015	156-59-2
Dichlorodifluoromethane(F-12)	< 5.0	5.0	< 24.8	24.8		5	3/18/2015	75-71-8
Dichlorotetrafluoroethane(F-114)	< 2.5	2.5	< 17.5	17.5		5	3/18/2015	76-14-2
Ethylbenzene	< 2.5	2.5	< 10.9	10.9		5	3/18/2015	100-41-4
m&p-Xylene	< 5.0	5.0	< 21.7	21.7		5	3/18/2015	179601-23-1
o-Xylene	< 2.5	2.5	< 10.9	10.9		5	3/18/2015	95-47-6
Tetrachloroethene	**122**	**2.5**	**827**	**17.0**		5	3/18/2015	127-18-4
Toluene	< 2.5	2.5	< 9.43	9.43		5	3/18/2015	108-88-3
trans-1,2-Dichloroethene	< 2.5	2.5	< 9.90	9.90		5	3/18/2015	156-60-5
Trichloroethene	**10**	**2.5**	**54.2**	**13.4**		5	3/18/2015	79-01-6
Trichlorofluoromethane(F-11)	< 2.5	2.5	< 14.1	14.1		5	3/18/2015	75-69-4
Trichlorotrifluoroethane(F-113)	< 2.5	2.5	< 19.2	19.2		5	3/18/2015	76-13-1
Vinyl chloride	< 2.5	2.5	< 6.40	6.40		5	3/18/2015	75-01-4
Surr: 4-Bromofluorobenzene	90.7	70-130	%REC					

Tentatively Identified Compounds (TIC's)

Difluoroethane	< 50	50	ppbv		T4	5	3/18/2015

Airtech Environmental Laboratories (AEL) - AZ 0740

4620 E.Elwood St., Suite 13, Phoenix, AZ 85040 480-968-5888 Fax 480-966-1888

Client:	AMEC F/W	**Client Sample ID:**	BP-23-300-SG-031115
Project:	Broadway Pantana	**Project Number:**	14.2014-2029
Lab Order:	15C013	**Collection:**	3/11/2015
Lab ID:	21	**Matrix:**	Soil Vapor

	ppbv		ug/M^3				Date	
Analyses	**Result**	**Limit**	**Result**	**Limit**	**Qual**	**DF**	**Analyzed**	**CAS#**
VOLATILE ORGANICS IN AIR		**TO-15**					Analyst: JJ	
1,1,1-Trichloroethane	< 2.5	2.5	< 13.7	13.7		5	3/20/2015	71-55-6
1,1-Dichloroethane	< 2.5	2.5	< 10.1	10.1		5	3/20/2015	75-34-3
1,1-Dichloroethene	< 2.5	2.5	< 9.93	9.93		5	3/20/2015	75-35-4
Benzene	**3.4**	**2.5**	**10.8**	**7.98**		5	3/20/2015	71-43-2
cis-1,2-Dichloroethene	< 2.5	2.5	< 9.90	9.90		5	3/20/2015	156-59-2
Dichlorodifluoromethane(F-12)	**6.0**	**5.0**	**29.5**	**24.8**		5	3/20/2015	75-71-8
Dichlorotetrafluoroethane(F-114)	< 2.5	2.5	< 17.5	17.5		5	3/20/2015	76-14-2
Ethylbenzene	**2.9**	**2.5**	**12.4**	**10.9**		5	3/20/2015	100-41-4
m&p-Xylene	**7.5**	**5.0**	**32.6**	**21.7**		5	3/20/2015	179601-23-1
o-Xylene	< 2.5	2.5	< 10.9	10.9		5	3/20/2015	95-47-6
Tetrachloroethene	**176**	**2.5**	**1,190**	**17.0**		5	3/20/2015	127-18-4
Toluene	**3.1**	**2.5**	**11.5**	**9.43**		5	3/20/2015	108-88-3
trans-1,2-Dichloroethene	< 2.5	2.5	< 9.90	9.90		5	3/20/2015	156-60-5
Trichloroethene	**14**	**2.5**	**74.6**	**13.4**		5	3/20/2015	79-01-6
Trichlorofluoromethane(F-11)	< 2.5	2.5	< 14.1	14.1		5	3/20/2015	75-69-4
Trichlorotrifluoroethane(F-113)	< 2.5	2.5	< 19.2	19.2		5	3/20/2015	76-13-1
Vinyl chloride	< 2.5	2.5	< 6.40	6.40		5	3/20/2015	75-01-4
Surr: 4-Bromofluorobenzene	83.6	70-130	%REC					

Tentatively Identified Compounds (TIC's)

Difluoroethane	< 50	50	ppbv		T4	5	3/20/2015

Airtech Environmental Laboratories (AEL) - AZ 0740

4620 E.Elwood St., Suite 13, Phoenix, AZ 85040 480-968-5888 Fax 480-966-1888

Client:	AMEC F/W	**Client Sample ID:**	BP-23-350-SG-031115
Project:	Broadway Pantana	**Project Number:**	14.2014-2029
Lab Order:	15C013	**Collection:**	3/11/2015
Lab ID:	22	**Matrix:**	Soil Vapor

	ppbv		ug/M^3				Date	
Analyses	**Result**	**Limit**	**Result**	**Limit**	**Qual**	**DF**	**Analyzed**	**CAS#**
VOLATILE ORGANICS IN AIR		**TO-15**					Analyst: JJ	
1,1,1-Trichloroethane	< 2.5	2.5	< 13.7	13.7		5	3/18/2015	71-55-6
1,1-Dichloroethane	< 2.5	2.5	< 10.1	10.1		5	3/18/2015	75-34-3
1,1-Dichloroethene	< 2.5	2.5	< 9.93	9.93		5	3/18/2015	75-35-4
Benzene	< 2.5	2.5	< 7.98	7.98		5	3/18/2015	71-43-2
cis-1,2-Dichloroethene	**3.2**	**2.5**	**12.7**	**9.90**		5	3/18/2015	156-59-2
Dichlorodifluoromethane(F-12)	**12**	**5.0**	**57.7**	**24.8**		5	3/18/2015	75-71-8
Dichlorotetrafluoroethane(F-114)	< 2.5	2.5	< 17.5	17.5		5	3/18/2015	76-14-2
Ethylbenzene	< 2.5	2.5	< 10.9	10.9		5	3/18/2015	100-41-4
m&p-Xylene	< 5.0	5.0	< 21.7	21.7		5	3/18/2015	179601-23-1
o-Xylene	< 2.5	2.5	< 10.9	10.9		5	3/18/2015	95-47-6
Tetrachloroethene	**89**	**2.5**	**604**	**17.0**		5	3/18/2015	127-18-4
Toluene	**4.2**	**2.5**	**15.8**	**9.43**		5	3/18/2015	108-88-3
trans-1,2-Dichloroethene	< 2.5	2.5	< 9.90	9.90		5	3/18/2015	156-60-5
Trichloroethene	**9.5**	**2.5**	**51.0**	**13.4**		5	3/18/2015	79-01-6
Trichlorofluoromethane(F-11)	< 2.5	2.5	< 14.1	14.1		5	3/18/2015	75-69-4
Trichlorotrifluoroethane(F-113)	< 2.5	2.5	< 19.2	19.2		5	3/18/2015	76-13-1
Vinyl chloride	< 2.5	2.5	< 6.40	6.40		5	3/18/2015	75-01-4
Surr: 4-Bromofluorobenzene	92.2	70-130	%REC					

Tentatively Identified Compounds (TIC's)

Difluoroethane	< 50	50	ppbv		T4	5	3/18/2015

Airtech Environmental Laboratories (AEL) - AZ 0740

4620 E.Elwood St., Suite 13, Phoenix, AZ 85040 480-968-5888 Fax 480-966-1888

Client:	AMEC F/W	**Client Sample ID:**	BP-23-350-SG-031115-DUP
Project:	Broadway Pantana	**Project Number:**	14.2014-2029
Lab Order:	15C013	**Collection:**	3/11/2015
Lab ID:	23	**Matrix:**	Soil Vapor

	ppbv		ug/M^3				Date	
Analyses	**Result**	**Limit**	**Result**	**Limit**	**Qual**	**DF**	**Analyzed**	**CAS#**
VOLATILE ORGANICS IN AIR		**TO-15**					Analyst: JJ	
1,1,1-Trichloroethane	< 2.5	2.5	< 13.7	13.7		5	3/18/2015	71-55-6
1,1-Dichloroethane	< 2.5	2.5	< 10.1	10.1		5	3/18/2015	75-34-3
1,1-Dichloroethene	< 2.5	2.5	< 9.93	9.93		5	3/18/2015	75-35-4
Benzene	< 2.5	2.5	< 7.98	7.98		5	3/18/2015	71-43-2
cis-1,2-Dichloroethene	**4.0**	**2.5**	**15.6**	**9.90**		5	3/18/2015	156-59-2
Dichlorodifluoromethane(F-12)	**13**	**5.0**	**64.8**	**24.8**		5	3/18/2015	75-71-8
Dichlorotetrafluoroethane(F-114)	< 2.5	2.5	< 17.5	17.5		5	3/18/2015	76-14-2
Ethylbenzene	< 2.5	2.5	< 10.9	10.9		5	3/18/2015	100-41-4
m&p-Xylene	< 5.0	5.0	< 21.7	21.7		5	3/18/2015	179601-23-1
o-Xylene	< 2.5	2.5	< 10.9	10.9		5	3/18/2015	95-47-6
Tetrachloroethene	**107**	**2.5**	**724**	**17.0**		5	3/18/2015	127-18-4
Toluene	**5.2**	**2.5**	**19.4**	**9.43**		5	3/18/2015	108-88-3
trans-1,2-Dichloroethene	< 2.5	2.5	< 9.90	9.90		5	3/18/2015	156-60-5
Trichloroethene	**12**	**2.5**	**62.8**	**13.4**		5	3/18/2015	79-01-6
Trichlorofluoromethane(F-11)	< 2.5	2.5	< 14.1	14.1		5	3/18/2015	75-69-4
Trichlorotrifluoroethane(F-113)	< 2.5	2.5	< 19.2	19.2		5	3/18/2015	76-13-1
Vinyl chloride	< 2.5	2.5	< 6.40	6.40		5	3/18/2015	75-01-4
Surr: 4-Bromofluorobenzene	93.4	70-130	%REC					

Tentatively Identified Compounds (TIC's)

Difluoroethane	< 50	50	ppbv		T4	5	3/18/2015

Airtech Environmental Laboratories (AEL) - AZ 0740

4620 E.Elwood St., Suite 13, Phoenix, AZ 85040 480-968-5888 Fax 480-966-1888

Client:	AMEC F/W	**Client Sample ID:**	BP-22-200-SG-031115
Project:	Broadway Pantana	**Project Number:**	14.2014-2029
Lab Order:	15C013	**Collection:**	3/11/2015
Lab ID:	24	**Matrix:**	Soil Vapor

	ppbv		ug/M^3				Date	
Analyses	**Result**	**Limit**	**Result**	**Limit**	**Qual**	**DF**	**Analyzed**	**CAS#**
VOLATILE ORGANICS IN AIR		**TO-15**					Analyst: JJ	
1,1,1-Trichloroethane	< 1.0	1.0	< 5.46	5.46		2	3/25/2015	71-55-6
1,1-Dichloroethane	< 1.0	1.0	< 4.05	4.05		2	3/25/2015	75-34-3
1,1-Dichloroethene	< 1.0	1.0	< 3.97	3.97		2	3/25/2015	75-35-4
Benzene	< 1.0	1.0	< 3.19	3.19		2	3/25/2015	71-43-2
cis-1,2-Dichloroethene	< 1.0	1.0	< 3.96	3.96		2	3/25/2015	156-59-2
Dichlorodifluoromethane(F-12)	< 2.0	2.0	< 9.90	9.90		2	3/25/2015	75-71-8
Dichlorotetrafluoroethane(F-114)	< 1.0	1.0	< 6.99	6.99		2	3/25/2015	76-14-2
Ethylbenzene	< 1.0	1.0	< 4.34	4.34		2	3/25/2015	100-41-4
m&p-Xylene	< 2.0	2.0	< 8.68	8.68		2	3/25/2015	179601-23-1
o-Xylene	< 1.0	1.0	< 4.34	4.34		2	3/25/2015	95-47-6
Tetrachloroethene	**17**	**1.0**	**118**	**6.78**		2	3/25/2015	127-18-4
Toluene	**1.3**	**1.0**	**4.98**	**3.77**		2	3/25/2015	108-88-3
trans-1,2-Dichloroethene	< 1.0	1.0	< 3.96	3.96		2	3/25/2015	156-60-5
Trichloroethene	< 1.0	1.0	< 5.37	5.37		2	3/25/2015	79-01-6
Trichlorofluoromethane(F-11)	< 1.0	1.0	< 5.62	5.62		2	3/25/2015	75-69-4
Trichlorotrifluoroethane(F-113)	< 1.0	1.0	< 7.66	7.66		2	3/25/2015	76-13-1
Vinyl chloride	< 1.0	1.0	< 2.56	2.56		2	3/25/2015	75-01-4
Surr: 4-Bromofluorobenzene	89.7	70-130	%REC					

Tentatively Identified Compounds (TIC's)

Difluoroethane	< 20	20	ppbv		T4	2	3/25/2015	

Airtech Environmental Laboratories (AEL) - AZ 0740

4620 E.Elwood St., Suite 13, Phoenix, AZ 85040 480-968-5888 Fax 480-966-1888

Client:	AMEC F/W	**Client Sample ID:**	BP-22-250-SG-031115
Project:	Broadway Pantana	**Project Number:**	14.2014-2029
Lab Order:	15C013	**Collection:**	3/11/2015
Lab ID:	25	**Matrix:**	Soil Vapor

	ppbv		ug/M^3				Date	
Analyses	**Result**	**Limit**	**Result**	**Limit**	**Qual**	**DF**	**Analyzed**	**CAS#**
VOLATILE ORGANICS IN AIR		**TO-15**					Analyst: JJ	
1,1,1-Trichloroethane	< 1.0	1.0	< 5.46	5.46		2	3/25/2015	71-55-6
1,1-Dichloroethane	< 1.0	1.0	< 4.05	4.05		2	3/25/2015	75-34-3
1,1-Dichloroethene	< 1.0	1.0	< 3.97	3.97		2	3/25/2015	75-35-4
Benzene	< 1.0	1.0	< 3.19	3.19		2	3/25/2015	71-43-2
cis-1,2-Dichloroethene	< 1.0	1.0	< 3.96	3.96		2	3/25/2015	156-59-2
Dichlorodifluoromethane(F-12)	< 2.0	2.0	< 9.90	9.90		2	3/25/2015	75-71-8
Dichlorotetrafluoroethane(F-114)	< 1.0	1.0	< 6.99	6.99		2	3/25/2015	76-14-2
Ethylbenzene	< 1.0	1.0	< 4.34	4.34		2	3/25/2015	100-41-4
m&p-Xylene	< 2.0	2.0	< 8.68	8.68		2	3/25/2015	179601-23-1
o-Xylene	< 1.0	1.0	< 4.34	4.34		2	3/25/2015	95-47-6
Tetrachloroethene	**9.1**	**1.0**	**62.0**	**6.78**		2	3/25/2015	127-18-4
Toluene	< 1.0	1.0	< 3.77	3.77		2	3/25/2015	108-88-3
trans-1,2-Dichloroethene	< 1.0	1.0	< 3.96	3.96		2	3/25/2015	156-60-5
Trichloroethene	< 1.0	1.0	< 5.37	5.37		2	3/25/2015	79-01-6
Trichlorofluoromethane(F-11)	< 1.0	1.0	< 5.62	5.62		2	3/25/2015	75-69-4
Trichlorotrifluoroethane(F-113)	< 1.0	1.0	< 7.66	7.66		2	3/25/2015	76-13-1
Vinyl chloride	< 1.0	1.0	< 2.56	2.56		2	3/25/2015	75-01-4
Surr: 4-Bromofluorobenzene	90.1	70-130	%REC					

Tentatively Identified Compounds (TIC's)

Difluoroethane	< 20	20	ppbv		T4	2	3/25/2015	

Airtech Environmental Laboratories (AEL) - AZ 0740

4620 E.Elwood St., Suite 13, Phoenix, AZ 85040 480-968-5888 Fax 480-966-1888

Client:	AMEC F/W	**Client Sample ID:**	BP-22-300-SG-031115
Project:	Broadway Pantana	**Project Number:**	14.2014-2029
Lab Order:	15C013	**Collection:**	3/11/2015
Lab ID:	26	**Matrix:**	Soil Vapor

	ppbv		ug/M^3				Date	
Analyses	**Result**	**Limit**	**Result**	**Limit**	**Qual**	**DF**	**Analyzed**	**CAS#**
VOLATILE ORGANICS IN AIR		**TO-15**					Analyst: JJ	
1,1,1-Trichloroethane	< 1.0	1.0	< 5.46	5.46		2	3/25/2015	71-55-6
1,1-Dichloroethane	< 1.0	1.0	< 4.05	4.05		2	3/25/2015	75-34-3
1,1-Dichloroethene	< 1.0	1.0	< 3.97	3.97		2	3/25/2015	75-35-4
Benzene	< 1.0	1.0	< 3.19	3.19		2	3/25/2015	71-43-2
cis-1,2-Dichloroethene	< 1.0	1.0	< 3.96	3.96		2	3/25/2015	156-59-2
Dichlorodifluoromethane(F-12)	**4.8**	**2.0**	**23.8**	**9.90**		2	3/25/2015	75-71-8
Dichlorotetrafluoroethane(F-114)	< 1.0	1.0	< 6.99	6.99		2	3/25/2015	76-14-2
Ethylbenzene	< 1.0	1.0	< 4.34	4.34		2	3/25/2015	100-41-4
m&p-Xylene	< 2.0	2.0	< 8.68	8.68		2	3/25/2015	179601-23-1
o-Xylene	< 1.0	1.0	< 4.34	4.34		2	3/25/2015	95-47-6
Tetrachloroethene	**66**	**1.0**	**450**	**6.78**		2	3/25/2015	127-18-4
Toluene	< 1.0	1.0	< 3.77	3.77		2	3/25/2015	108-88-3
trans-1,2-Dichloroethene	< 1.0	1.0	< 3.96	3.96		2	3/25/2015	156-60-5
Trichloroethene	**1.9**	**1.0**	**10.2**	**5.37**		2	3/25/2015	79-01-6
Trichlorofluoromethane(F-11)	< 1.0	1.0	< 5.62	5.62		2	3/25/2015	75-69-4
Trichlorotrifluoroethane(F-113)	< 1.0	1.0	< 7.66	7.66		2	3/25/2015	76-13-1
Vinyl chloride	< 1.0	1.0	< 2.56	2.56		2	3/25/2015	75-01-4
Surr: 4-Bromofluorobenzene	93.2	70-130	%REC					

Tentatively Identified Compounds (TIC's)

Difluoroethane	< 20	20	ppbv		T4	2	3/25/2015	

Airtech Environmental Laboratories (AEL) - AZ 0740

4620 E.Elwood St., Suite 13, Phoenix, AZ 85040 480-968-5888 Fax 480-966-1888

Client:	AMEC F/W	**Client Sample ID:**	BP-22-350-SG-031115
Project:	Broadway Pantana	**Project Number:**	14.2014-2029
Lab Order:	15C013	**Collection:**	3/11/2015
Lab ID:	27	**Matrix:**	Soil Vapor

	ppbv		ug/M^3				Date	
Analyses	**Result**	**Limit**	**Result**	**Limit**	**Qual**	**DF**	**Analyzed**	**CAS#**
VOLATILE ORGANICS IN AIR		**TO-15**					Analyst: JJ	
1,1,1-Trichloroethane	< 1.0	1.0	< 5.46	5.46		2	3/25/2015	71-55-6
1,1-Dichloroethane	< 1.0	1.0	< 4.05	4.05		2	3/25/2015	75-34-3
1,1-Dichloroethene	< 1.0	1.0	< 3.97	3.97		2	3/25/2015	75-35-4
Benzene	**1.0**	**1.0**	**3.25**	**3.19**		2	3/25/2015	71-43-2
cis-1,2-Dichloroethene	< 1.0	1.0	< 3.96	3.96		2	3/25/2015	156-59-2
Dichlorodifluoromethane(F-12)	< 2.0	2.0	< 9.90	9.90		2	3/25/2015	75-71-8
Dichlorotetrafluoroethane(F-114)	< 1.0	1.0	< 6.99	6.99		2	3/25/2015	76-14-2
Ethylbenzene	< 1.0	1.0	< 4.34	4.34		2	3/25/2015	100-41-4
m&p-Xylene	**3.6**	**2.0**	**15.6**	**8.68**		2	3/25/2015	179601-23-1
o-Xylene	**1.3**	**1.0**	**5.47**	**4.34**		2	3/25/2015	95-47-6
Tetrachloroethene	**18**	**1.0**	**123**	**6.78**		2	3/25/2015	127-18-4
Toluene	**4.9**	**1.0**	**18.5**	**3.77**		2	3/25/2015	108-88-3
trans-1,2-Dichloroethene	< 1.0	1.0	< 3.96	3.96		2	3/25/2015	156-60-5
Trichloroethene	**4.9**	**1.0**	**26.5**	**5.37**		2	3/25/2015	79-01-6
Trichlorofluoromethane(F-11)	< 1.0	1.0	< 5.62	5.62		2	3/25/2015	75-69-4
Trichlorotrifluoroethane(F-113)	< 1.0	1.0	< 7.66	7.66		2	3/25/2015	76-13-1
Vinyl chloride	< 1.0	1.0	< 2.56	2.56		2	3/25/2015	75-01-4
Surr: 4-Bromofluorobenzene	93.3	70-130	%REC					

Tentatively Identified Compounds (TIC's)

Difluoroethane	< 20	20	ppbv		T4	2	3/25/2015	

Airtech Environmental Laboratories (AEL) - AZ 0740

4620 E.Elwood St., Suite 13, Phoenix, AZ 85040 480-968-5888 Fax 480-966-1888

Client:	AMEC F/W	**Client Sample ID:**	MW-5-SG-031115
Project:	Broadway Pantana	**Project Number:**	14.2014-2029
Lab Order:	15C013	**Collection:**	3/11/2015
Lab ID:	28	**Matrix:**	Soil Vapor

	ppbv		ug/M^3				Date	
Analyses	**Result**	**Limit**	**Result**	**Limit**	**Qual**	**DF**	**Analyzed**	**CAS#**
VOLATILE ORGANICS IN AIR		**TO-15**					Analyst: JJ	
1,1,1-Trichloroethane	< 1.0	1.0	< 5.46	5.46		2	3/20/2015	71-55-6
1,1,2,2-Tetrachloroethane	< 1.0	1.0	< 6.87	6.87		2	3/20/2015	79-34-5
1,1,2-Trichloroethane	< 1.0	1.0	< 5.46	5.46		2	3/20/2015	79-00-5
1,1-Dichloroethane	< 1.0	1.0	< 4.05	4.05		2	3/20/2015	75-34-3
1,1-Dichloroethene	< 1.0	1.0	< 3.97	3.97		2	3/20/2015	75-35-4
1,2,4-Trichlorobenzene	< 4.0	4.0	< 29.7	29.7	L5	2	3/20/2015	120-82-1
1,2,4-Trimethylbenzene	< 1.0	1.0	< 4.92	4.92		2	3/20/2015	95-63-6
1,2-Dibromoethane	< 1.0	1.0	< 7.68	7.68		2	3/20/2015	106-93-4
1,2-Dichlorobenzene	< 1.0	1.0	< 6.01	6.01		2	3/20/2015	95-50-1
1,2-Dichloroethane	**4.9**	**1.0**	**19.7**	**4.05**		2	3/20/2015	107-06-2
1,2-Dichloropropane	< 1.0	1.0	< 4.62	4.62		2	3/20/2015	78-87-5
1,3,5-Trimethylbenzene	< 1.0	1.0	< 4.92	4.92		2	3/20/2015	108-67-8
1,3-Butadiene	< 1.0	1.0	< 2.21	2.21	L5	2	3/20/2015	106-99-0
1,3-Dichlorobenzene	< 1.0	1.0	< 6.01	6.01		2	3/20/2015	541-73-1
1,4-Dichlorobenzene	**5.4**	**1.0**	**32.2**	**6.01**		2	3/20/2015	106-46-7
1,4-Dioxane	< 4.0	4.0	< 14.4	14.4		2	3/20/2015	123-91-1
2,2,4-Trimethylpentane	< 1.0	1.0	< 4.66	4.66	L5	2	3/20/2015	540-84-1
2-Butanone (MEK)	< 10	10	< 29.5	29.5		2	3/20/2015	78-93-3
2-Hexanone	< 10	10	< 41.0	41.0	L5	2	3/20/2015	591-78-6
2-Propanol (IPA)	< 10	10	< 24.5	24.5	L5	2	3/20/2015	67-63-0
4-Ethyltoluene	< 2.0	2.0	< 9.84	9.84		2	3/20/2015	622-96-8
4-Methyl-2-pentanone (MIK)	< 10	10	< 41.0	41.0	L5	2	3/20/2015	108-10-1
Acetone	< 10	10	< 23.8	23.8		2	3/20/2015	67-64-1
Allyl chloride	< 2.0	2.0	< 6.26	6.26		2	3/20/2015	107-05-1
Benzene	**10**	**1.0**	**33.0**	**3.19**		2	3/20/2015	71-43-2
Benzyl chloride	< 4.0	4.0	< 20.7	20.7		2	3/20/2015	100-44-7
Bromodichloromethane	< 1.0	1.0	< 6.70	6.70		2	3/20/2015	75-27-4
Bromoethene(Vinyl Bromide)	< 1.0	1.0	< 4.37	4.37		2	3/20/2015	593-60-2
Bromoform	< 1.0	1.0	< 10.3	10.3	L5	2	3/20/2015	75-25-2
Bromomethane	< 1.0	1.0	< 3.88	3.88		2	3/20/2015	74-83-9
Butyl benzene	< 2.0	2.0	< 11.0	11.0		2	3/20/2015	104-51-8
Carbon disulfide	< 4.0	4.0	< 12.4	12.4		2	3/20/2015	75-15-0
Carbon tetrachloride	< 1.0	1.0	< 6.29	6.29		2	3/20/2015	56-23-5
Chlorobenzene	**2.3**	**1.0**	**10.7**	**4.60**		2	3/20/2015	108-90-7
Chloroethane	< 1.0	1.0	< 2.64	2.64		2	3/20/2015	75-00-3
Chloroform	< 1.0	1.0	< 4.88	4.88		2	3/20/2015	67-66-3
Chloromethane	< 4.0	4.0	< 8.28	8.28		2	3/20/2015	74-87-3
cis-1,2-Dichloroethene	**4.3**	**1.0**	**17.2**	**3.96**		2	3/20/2015	156-59-2
cis-1,3-Dichloropropene	< 1.0	1.0	< 4.54	4.54		2	3/20/2015	542-75-6
Cyclohexane	**6.2**	**1.0**	**21.4**	**3.44**		2	3/20/2015	110-82-7
Dibromochloromethane	< 1.0	1.0	< 8.52	8.52		2	3/20/2015	124-48-1
Dichlorodifluoromethane(F-12)	**5.7**	**2.0**	**28.4**	**9.90**		2	3/20/2015	75-71-8
Dichlorotetrafluoroethane(F-114)	**8.8**	**1.0**	**61.4**	**6.99**		2	3/20/2015	76-14-2
Ethanol	< 10	10	< 18.8	18.8		2	3/20/2015	64-17-5
Ethyl Acetate	< 1.0	1.0	< 3.60	3.60	L5	2	3/20/2015	141-78-6
Ethylbenzene	**9.5**	**1.0**	**41.2**	**4.34**		2	3/20/2015	100-41-4

Airtech Environmental Laboratories (AEL) - AZ 0740

4620 E.Elwood St., Suite 13, Phoenix, AZ 85040 480-968-5888 Fax 480-966-1888

Client:	AMEC F/W	**Client Sample ID:**	MW-5-SG-031115
Project:	Broadway Pantana	**Project Number:**	14.2014-2029
Lab Order:	15C013	**Collection:**	3/11/2015
Lab ID:	28	**Matrix:**	Soil Vapor

	ppbv		ug/M^3				Date	
Analyses	**Result**	**Limit**	**Result**	**Limit**	**Qual**	**DF**	**Analyzed**	**CAS#**
VOLATILE ORGANICS IN AIR	**TO-15**						Analyst: JJ	
Heptane	**89**	**1.0**	**365**	**4.10**		2	3/20/2015	142-82-5
Hexachlorobutadiene	< 2.0	2.0	< 21.3	21.3	L5	2	3/20/2015	87-68-3
Hexane	< 2.0	2.0	< 7.04	7.04		2	3/20/2015	110-54-3
Isopropylbenzene	< 2.0	2.0	< 9.84	9.84		2	3/20/2015	98-82-8
m&p-Xylene	< 2.0	2.0	< 8.68	8.68		2	3/20/2015	179601-23-1
Methyl tert-butyl ether	< 4.0	4.0	< 14.4	14.4		2	3/20/2015	1634-04-4
Methylcyclohexane	**13**	**2.0**	**51.0**	**8.04**		2	3/20/2015	108-87-2
Methylene chloride	< 4.0	4.0	< 13.9	13.9		2	3/20/2015	75-09-2
Naphthalene	< 4.0	4.0	< 21.0	21.0		2	3/20/2015	91-20-3
Nonane	**23**	**2.0**	**118**	**10.5**		2	3/20/2015	111-84-2
Octane	**13**	**2.0**	**60.0**	**9.34**		2	3/20/2015	111-65-9
o-Xylene	< 1.0	1.0	< 4.34	4.34		2	3/20/2015	95-47-6
Propene (Propylene)	< 2.0	2.0	< 3.44	3.44		2	3/20/2015	115-07-1
Propylbenzene	< 2.0	2.0	< 9.84	9.84		2	3/20/2015	103-65-1
Sec-Butyl benzene	< 2.0	2.0	< 11.0	11.0		2	3/20/2015	135-98-8
Styrene	< 1.0	1.0	< 4.26	4.26		2	3/20/2015	100-42-5
Tert-Butyl benzene	< 2.0	2.0	< 11.0	11.0		2	3/20/2015	98-06-6
Tetrachloroethene	**3.3**	**1.0**	**22.5**	**6.78**		2	3/20/2015	127-18-4
Tetrahydrofuran	< 4.0	4.0	< 11.8	11.8	L5	2	3/20/2015	109-99-9
Toluene	**2.2**	**1.0**	**8.22**	**3.77**		2	3/20/2015	108-88-3
trans-1,2-Dichloroethene	< 1.0	1.0	< 3.96	3.96		2	3/20/2015	156-60-5
trans-1,3-Dichloropropene	< 1.0	1.0	< 4.54	4.54		2	3/20/2015	542-75-6
Trichloroethene	< 1.0	1.0	< 5.37	5.37		2	3/20/2015	79-01-6
Trichlorofluoromethane(F-11)	< 1.0	1.0	< 5.62	5.62		2	3/20/2015	75-69-4
Trichlorotrifluoroethane(F-113)	< 1.0	1.0	< 7.66	7.66		2	3/20/2015	76-13-1
Vinyl acetate	< 1.0	1.0	< 3.52	3.52	L5	2	3/20/2015	108-05-4
Vinyl chloride	**2.4**	**1.0**	**6.04**	**2.56**		2	3/20/2015	75-01-4
Surr: 4-Bromofluorobenzene	75.9	70-130	%REC					

Tentatively Identified Compounds (TIC's)

Difluoroethane	< 20	20	ppbv		T4	2	3/20/2015

Airtech Environmental Laboratories (AEL) - AZ 0740

4620 E.Elwood St., Suite 13, Phoenix, AZ 85040 480-968-5888 Fax 480-966-1888

Client:	AMEC F/W	**Client Sample ID:**	N/A
Project:	Broadway Pantana	**Project Number:**	14.2014-2029
Lab Order:	15C013	**Collection:**	N/A
Lab ID:	Blank	**Matrix:**	Air

Method QC Data

Batch: MS010317 Analyst: JJ

Analyses	ppbv Result	ppbv Limit	ug/M^3 Result	ug/M^3 Limit	Qual	DF	Date Analyzed	CAS#
VOLATILE ORGANICS IN AIR		**TO-15**					Analyst: JJ	
1,1,1-Trichloroethane	< 0.5	0.5	< 2.73	2.73		1	3/17/2015	71-55-6
1,1-Dichloroethane	< 0.5	0.5	< 2.03	2.03		1	3/17/2015	75-34-3
1,1-Dichloroethene	< 0.5	0.5	< 1.99	1.99		1	3/17/2015	75-35-4
Benzene	< 0.5	0.5	< 1.60	1.60		1	3/17/2015	71-43-2
cis-1,2-Dichloroethene	< 0.5	0.5	< 1.98	1.98		1	3/17/2015	156-59-2
Dichlorodifluoromethane(F-12)	< 1.0	1.0	< 4.95	4.95		1	3/17/2015	75-71-8
Dichlorotetrafluoroethane(F-114)	< 0.5	0.5	< 3.50	3.50		1	3/17/2015	76-14-2
Ethylbenzene	< 0.5	0.5	< 2.17	2.17		1	3/17/2015	100-41-4
m&p-Xylene	< 1.0	1.0	< 4.34	4.34		1	3/17/2015	179601-23-1
o-Xylene	< 0.5	0.5	< 2.17	2.17		1	3/17/2015	95-47-6
Tetrachloroethene	< 0.5	0.5	< 3.39	3.39		1	3/17/2015	127-18-4
Toluene	< 0.5	0.5	< 1.89	1.89		1	3/17/2015	108-88-3
trans-1,2-Dichloroethene	< 0.5	0.5	< 1.98	1.98		1	3/17/2015	156-60-5
Trichloroethene	< 0.5	0.5	< 2.69	2.69		1	3/17/2015	79-01-6
Trichlorofluoromethane(F-11)	< 0.5	0.5	< 2.81	2.81		1	3/17/2015	75-69-4
Trichlorotrifluoroethane(F-113)	< 0.5	0.5	< 3.83	3.83		1	3/17/2015	76-13-1
Vinyl chloride	< 0.5	0.5	< 1.28	1.28		1	3/17/2015	75-01-4
Surr: 4-Bromofluorobenzene	91.7	70-130	%REC					

Airtech Environmental Laboratories (AEL) - AZ 0740

4620 E.Elwood St., Suite 13, Phoenix, AZ 85040 480-968-5888 Fax 480-966-1888

Client:	AMEC F/W	**Client Sample ID:**	N/A
Project:	Broadway Pantana	**Project Number:**	14.2014-2029
Lab Order:	15C013	**Collection:**	N/A
Lab ID:	LCS/LCSD	**Matrix:**	Nitrogen

Method QC Data

Date Analyzed: 3/17/2015 Batch: MS010317 Analyst: JJ

Analyses	LCS Result	LCS %REC	LCSD Result	LCSD %REC	T.V.	%RPD	Unit	Qualifier LCS	Qualifier LCSD	Qualifier RPD
VOLATILE ORGANICS IN AIR	**TO-15**							70-130%		<25%
Dichlorodifluoromethane(F-12)	9.3	93.4	8.8	88.3	10.0	5.6	ppbv			
Dichlorotetrafluoroethane(F-114)	10.2	102	9.3	92.8	10.0	9.2	ppbv			
Vinyl Chloride	9.4	94.4	9.7	96.8	10.0	2.5	ppbv			
Trichlorofluoromethane (F-11)	9.7	97.0	9.2	91.9	10.0	5.4	ppbv			
1,1-Dichloroethene	9.5	95.4	9.7	97.2	10.0	1.9	ppbv			
Trichlorotrifluoroethane (F-113)	9.6	95.8	9.2	91.7	10.0	4.4	ppbv			
trans-1,2-Dichloroethene	9.9	99.0	9.8	97.9	10.0	1.1	ppbv			
1,1-Dichloroethane	9.5	95.4	9.5	95.1	10.0	0.3	ppbv			
cis-1,2-Dichloroethene	10.0	99.5	9.5	94.6	10.0	5.0	ppbv			
1,1,1-Trichloroethane	10.3	103	9.6	95.7	10.0	7.5	ppbv			
Benzene	10.2	102	9.6	95.9	10.0	6.6	ppbv			
Trichloroethene	9.5	94.7	9.2	92.4	10.0	2.5	ppbv			
Toluene	10.2	102	9.5	94.8	10.0	7.6	ppbv			
Tetrachloroethene	9.8	97.7	9.3	92.6	10.0	5.4	ppbv			
Ethylbenzene	10.4	104	10.1	101	10.0	2.9	ppbv			
m&p-Xylene	19.8	99.2	20.0	99.8	20.0	0.7	ppbv			
o-Xylene	9.8	97.8	9.5	94.8	10.0	3.1	ppbv			
Surr: 4-Bromofluorobenzene	9.9	99.3	10.1	101		1.3	%REC			
		70-130%		70-130%						

Airtech Environmental Laboratories (AEL) - AZ 0740

4620 E.Elwood St., Suite 13, Phoenix, AZ 85040 480-968-5888 Fax 480-966-1888

Client:	AMEC F/W	**Client Sample ID:**	N/A
Project:	Broadway Pantana	**Project Number:**	14.2014-2029
Lab Order:	15C013	**Collection:**	N/A
Lab ID:	Blank	**Matrix:**	Air

Method QC Data

Batch: MS010319 Analyst: JJ

Analyses	ppbv Result	ppbv Limit	ug/M^3 Result	ug/M^3 Limit	Qual	DF	Date Analyzed	CAS#
VOLATILE ORGANICS IN AIR		**TO-15**					Analyst: JJ	
1,1,1-Trichloroethane	< 0.5	0.5	< 2.73	2.73		1	3/19/2015	71-55-6
1,1,2,2-Tetrachloroethane	< 0.5	0.5	< 3.44	3.44		1	3/19/2015	79-34-5
1,1,2-Trichloroethane	< 0.5	0.5	< 2.73	2.73		1	3/19/2015	79-00-5
1,1-Dichloroethane	< 0.5	0.5	< 2.03	2.03		1	3/19/2015	75-34-3
1,1-Dichloroethene	< 0.5	0.5	< 1.99	1.99		1	3/19/2015	75-35-4
1,2,4-Trichlorobenzene	< 2.0	2.0	< 14.8	14.8		1	3/19/2015	120-82-1
1,2,4-Trimethylbenzene	< 0.5	0.5	< 2.46	2.46		1	3/19/2015	95-63-6
1,2-Dibromoethane	< 0.5	0.5	< 3.84	3.84		1	3/19/2015	106-93-4
1,2-Dichlorobenzene	< 0.5	0.5	< 3.01	3.01		1	3/19/2015	95-50-1
1,2-Dichloroethane	< 0.5	0.5	< 2.03	2.03		1	3/19/2015	107-06-2
1,2-Dichloropropane	< 0.5	0.5	< 2.31	2.31		1	3/19/2015	78-87-5
1,3,5-Trimethylbenzene	< 0.5	0.5	< 2.46	2.46		1	3/19/2015	108-67-8
1,3-Butadiene	< 0.5	0.5	< 1.11	1.11		1	3/19/2015	106-99-0
1,3-Dichlorobenzene	< 0.5	0.5	< 3.01	3.01		1	3/19/2015	541-73-1
1,4-Dichlorobenzene	< 0.5	0.5	< 3.01	3.01		1	3/19/2015	106-46-7
1,4-Dioxane	< 2.0	2.0	< 7.20	7.20		1	3/19/2015	123-91-1
2,2,4-Trimethylpentane	< 0.5	0.5	< 2.33	2.33		1	3/19/2015	540-84-1
2-Butanone (MEK)	< 5.0	5.0	< 14.8	14.8		1	3/19/2015	78-93-3
2-Hexanone	< 5.0	5.0	< 20.5	20.5		1	3/19/2015	591-78-6
2-Propanol (IPA)	< 5.0	5.0	< 12.3	12.3		1	3/19/2015	67-63-0
4-Ethyltoluene	< 1.0	1.0	< 4.92	4.92		1	3/19/2015	622-96-8
4-Methyl-2-pentanone (MIK)	< 5.0	5.0	< 20.5	20.5		1	3/19/2015	108-10-1
Acetone	< 5.0	5.0	< 11.9	11.9		1	3/19/2015	67-64-1
Allyl chloride	< 1.0	1.0	< 3.13	3.13		1	3/19/2015	107-05-1
Benzene	< 0.5	0.5	< 1.60	1.60		1	3/19/2015	71-43-2
Benzyl chloride	< 2.0	2.0	< 10.4	10.4		1	3/19/2015	100-44-7
Bromodichloromethane	< 0.5	0.5	< 3.35	3.35		1	3/19/2015	75-27-4
Bromoethene(Vinyl Bromide)	< 0.5	0.5	< 2.19	2.19		1	3/19/2015	593-60-2
Bromoform	< 0.5	0.5	< 5.17	5.17		1	3/19/2015	75-25-2
Bromomethane	< 0.5	0.5	< 1.94	1.94		1	3/19/2015	74-83-9
Butyl benzene	< 1.0	1.0	< 5.49	5.49		1	3/19/2015	104-51-8
Carbon disulfide	< 2.0	2.0	< 6.22	6.22		1	3/19/2015	75-15-0
Carbon tetrachloride	< 0.5	0.5	< 3.15	3.15		1	3/19/2015	56-23-5
Chlorobenzene	< 0.5	0.5	< 2.30	2.30		1	3/19/2015	108-90-7
Chloroethane	< 0.5	0.5	< 1.32	1.32		1	3/19/2015	75-00-3
Chloroform	< 0.5	0.5	< 2.44	2.44		1	3/19/2015	67-66-3
Chloromethane	< 2.0	2.0	< 4.14	4.14		1	3/19/2015	74-87-3
cis-1,2-Dichloroethene	< 0.5	0.5	< 1.98	1.98		1	3/19/2015	156-59-2
cis-1,3-Dichloropropene	< 0.5	0.5	< 2.27	2.27		1	3/19/2015	542-75-6
Cyclohexane	< 0.5	0.5	< 1.72	1.72		1	3/19/2015	110-82-7
Dibromochloromethane	< 0.5	0.5	< 4.26	4.26		1	3/19/2015	124-48-1
Dichlorodifluoromethane(F-12)	< 1.0	1.0	< 4.95	4.95		1	3/19/2015	75-71-8
Dichlorotetrafluoroethane(F-114)	< 0.5	0.5	< 3.50	3.50		1	3/19/2015	76-14-2
Ethanol	< 5.0	5.0	< 9.40	9.40		1	3/19/2015	64-17-5
Ethyl Acetate	< 0.5	0.5	< 1.80	1.80		1	3/19/2015	141-78-6
Ethylbenzene	< 0.5	0.5	< 2.17	2.17		1	3/19/2015	100-41-4

Airtech Environmental Laboratories (AEL) - AZ 0740

4620 E.Elwood St., Suite 13, Phoenix, AZ 85040 480-968-5888 Fax 480-966-1888

Client:	AMEC F/W	**Client Sample ID:**	N/A
Project:	Broadway Pantana	**Project Number:**	14.2014-2029
Lab Order:	15C013	**Collection:**	N/A
Lab ID:	Blank	**Matrix:**	Air

Method QC Data

Batch: MS010319 Analyst: JJ

Analyses	ppbv Result	ppbv Limit	ug/M^3 Result	ug/M^3 Limit	Qual	DF	Date Analyzed	
VOLATILE ORGANICS IN AIR		**TO-15**					Analyst: JJ	
Heptane	< 0.5	0.5	< 2.05	2.05		1	3/19/2015	142-82-5
Hexachlorobutadiene	< 1.0	1.0	< 10.7	10.7		1	3/19/2015	87-68-3
Hexane	< 1.0	1.0	< 3.52	3.52		1	3/19/2015	110-54-3
Isopropylbenzene	< 1.0	1.0	< 4.92	4.92		1	3/19/2015	98-82-8
m&p-Xylene	< 1.0	1.0	< 4.34	4.34		1	3/19/2015	179601-23-1
Methyl tert-butyl ether	< 2.0	2.0	< 7.22	7.22		1	3/19/2015	1634-04-4
Methylcyclohexane	< 1.0	1.0	< 4.02	4.02		1	3/19/2015	108-87-2
Methylene chloride	< 2.0	2.0	< 6.94	6.94		1	3/19/2015	75-09-2
Naphthalene	< 2.0	2.0	< 10.5	10.5		1	3/19/2015	91-20-3
Nonane	< 1.0	1.0	< 5.24	5.24		1	3/19/2015	111-84-2
Octane	< 1.0	1.0	< 4.67	4.67		1	3/19/2015	111-65-9
o-Xylene	< 0.5	0.5	< 2.17	2.17		1	3/19/2015	95-47-6
Propene (Propylene)	< 1.0	1.0	< 1.72	1.72		1	3/19/2015	115-07-1
Propylbenzene	< 1.0	1.0	< 4.92	4.92		1	3/19/2015	103-65-1
Sec-Butyl benzene	< 1.0	1.0	< 5.49	5.49		1	3/19/2015	135-98-8
Styrene	< 0.5	0.5	< 2.13	2.13		1	3/19/2015	100-42-5
Tert-Butyl benzene	< 1.0	1.0	< 5.49	5.49		1	3/19/2015	98-06-6
Tetrachloroethene	< 0.5	0.5	< 3.39	3.39		1	3/19/2015	127-18-4
Tetrahydrofuran	< 2.0	2.0	< 5.90	5.90		1	3/19/2015	109-99-9
Toluene	< 0.5	0.5	< 1.89	1.89		1	3/19/2015	108-88-3
trans-1,2-Dichloroethene	< 0.5	0.5	< 1.98	1.98		1	3/19/2015	156-60-5
trans-1,3-Dichloropropene	< 0.5	0.5	< 2.27	2.27		1	3/19/2015	542-75-6
Trichloroethene	< 0.5	0.5	< 2.69	2.69		1	3/19/2015	79-01-6
Trichlorofluoromethane(F-11)	< 0.5	0.5	< 2.81	2.81		1	3/19/2015	75-69-4
Trichlorotrifluoroethane(F-113)	< 0.5	0.5	< 3.83	3.83		1	3/19/2015	76-13-1
Vinyl acetate	< 0.5	0.5	< 1.76	1.76		1	3/19/2015	108-05-4
Vinyl chloride	< 0.5	0.5	< 1.28	1.28		1	3/19/2015	75-01-4
Surr: 4-Bromofluorobenzene	85.1	70-130	%REC					

Airtech Environmental Laboratories (AEL) - AZ 0740

4620 E.Elwood St., Suite 13, Phoenix, AZ 85040 480-968-5888 Fax 480-966-1888

Client:	AMEC F/W	**Client Sample ID:**	N/A
Project:	Broadway Pantana	**Project Number:**	14.2014-2029
Lab Order:	15C013	**Collection:**	N/A
Lab ID:	LCS/LCSD	**Matrix:**	Air

Method QC Data

Date Analyzed: 3/19/2015 Batch: MS010319 Analyst: JJ

Analyses	LCS Result	LCS %REC	LCSD Result	LCSD %REC	T.V.	%RPD	Unit	Qualifier LCS	Qualifier LCSD	Qualifier RPD
VOLATILE ORGANICS IN AIR	**TO-15**							70-130%		<25%
Propene (Propylene)	9.2	91.6	11.6	116	10.0	23.8	ppbv			
Dichlorodifluoromethane(F-12)	8.1	80.9	8.7	87.4	10.0	7.7	ppbv			
Chloromethane	10.2	102	12.5	125	10.0	19.9	ppbv			
Dichlorotetrafluoroethane(F-114)	9.0	89.8	8.9	88.9	10.0	1.0	ppbv			
Vinyl Chloride	9.7	96.8	10.1	101	10.0	3.8	ppbv			
1,3-Butadiene	13.3	133	15.1	151	10.0	13.0	ppbv	L5	L5	
Bromomethane	8.5	85.4	10.5	105	10.0	20.1	ppbv			
Ethanol	11.2	112	12.2	122	10.0	8.0	ppbv			
Chloroethane	7.7	77.1	8.5	84.5	10.0	9.2	ppbv			
Bromoethene(Vinyl Bromide)	8.8	87.7	9.0	89.8	10.0	2.4	ppbv			
Trichlorofluoromethane (F-11)	8.8	87.5	9.4	93.8	10.0	6.9	ppbv			
Acetone	9.6	95.5	10.7	107	10.0	11.5	ppbv			
Isopropyl Alcohol (2-Propanol)	11.2	112	13.8	138	10.0	21.0	ppbv		L5	
1,1-Dichloroethene	9.0	90.4	10.4	104	10.0	13.9	ppbv			
Trichlorotrifluoroethane (F-113)	8.3	83.3	8.6	86.4	10.0	3.7	ppbv			
Methylene Chloride	9.5	95.4	10.9	109	10.0	13.6	ppbv			
Allyl Chloride	9.0	90.2	9.7	96.6	10.0	6.9	ppbv			
Carbon disulfide	8.0	80.3	8.4	83.8	10.0	4.3	ppbv			
trans-1,2-Dichloroethene	8.7	87.1	9.0	89.7	10.0	2.9	ppbv			
Methyl tert-butyl ether	9.8	97.8	11.3	113	10.0	14.6	ppbv			
1,1-Dichloroethane	8.6	86.1	9.6	95.9	10.0	10.8	ppbv			
Vinyl acetate	13.8	138	17.0	170	10.0	20.7	ppbv	L5	L5	
2-Butanone (MEK)	9.7	97.0	10.8	108	10.0	10.9	ppbv			
Hexane	9.6	95.5	10.9	109	10.0	13.3	ppbv			
cis-1,2-Dichloroethene	9.1	91.1	9.4	94.1	10.0	3.2	ppbv			
Ethyl Acetate	13.9	139	16.8	168	10.0	18.6	ppbv	L5	L5	
Chloroform	8.6	85.5	9.0	89.8	10.0	4.9	ppbv			
Tetrahydrofuran	13.0	130	15.8	158	10.0	19.6	ppbv		L5	
1,1,1-Trichloroethane	9.4	94.3	9.9	99.2	10.0	5.1	ppbv			
1,2-Dichloroethane	10.7	107	11.7	117	10.0	8.1	ppbv			
Benzene	9.0	90.3	9.4	93.9	10.0	3.9	ppbv			
Carbon tetrachloride	10.1	101.1	10.6	106	10.0	4.6	ppbv			
Cyclohexane	9.6	96.1	10.8	108	10.0	11.7	ppbv			
2,2,4-Trimethylpentane	9.6	95.6	10.4	104	10.0	8.2	ppbv			
Heptane	12.2	122	14.1	141	10.0	14.2	ppbv		L5	
1,2-Dichloropropane	9.5	94.5	9.9	98.5	10.0	4.1	ppbv			
Trichloroethene	10.8	108	10.7	107	10.0	1.3	ppbv			
Bromodichloromethane	10.1	101	9.9	99.4	10.0	1.7	ppbv			
1,4-Dioxane	11.7	117	11.7	117	10.0	0.4	ppbv			
Methylcyclohexane	9.8	97.9	9.6	96.2	10.0	1.8	ppbv			
cis-1,3-Dichloropropene	9.9	99.1	9.8	98.2	10.0	0.9	ppbv			
4-methyl-2-pentanone	14.9	149	16.5	165	10.0	9.9	ppbv	L5	L5	
trans-1,3-Dichloropropene	11.5	115	11.4	114	10.0	0.5	ppbv			
Toluene	10.5	105	10.1	101	10.0	3.7	ppbv			

Airtech Environmental Laboratories (AEL) - AZ 0740

Client:	AMEC F/W	**Client Sample ID:**	N/A
Project:	Broadway Pantana	**Project Number:**	14.2014-2029
Lab Order:	15C013	**Collection:**	N/A
Lab ID:	LCS/LCSD	**Matrix:**	Air

Method QC Data

Date Analyzed: 3/19/2015 Batch: MS010319 Analyst: JJ

Analyses	LCS Result	LCS %REC	LCSD Result	LCSD %REC	T.V.	%RPD	Unit	Qualifier LCS	Qualifier LCSD	Qualifier RPD
VOLATILE ORGANICS IN AIR	**TO-15**							70-130%		<25%
1,1,2-Trichloroethane	10.0	100	9.6	95.9	10.0	3.9	ppbv			
2-Hexanone	16.5	165	18.0	180	10.0	8.3	ppbv	L5	L5	
n-Octane	10.7	107	11.7	117	10.0	8.2	ppbv			
Dibromochloromethane	12.6	126	12.3	123	10.0	2.9	ppbv			
1,2-Dibromoethane	11.0	110	10.6	106	10.0	3.9	ppbv			
Tetrachloroethene	12.1	121	11.6	116	10.0	3.5	ppbv			
Chlorobenzene	10.3	103	10.3	103	10.0	0.1	ppbv			
Ethylbenzene	11.1	111	11.0	110	10.0	0.8	ppbv			
m&p-Xylene	21.2	106	21.2	106	20.0	0.2	ppbv			
Bromoform	13.3	133	13.8	138	10.0	3.8	ppbv	L5	L5	
Styrene	9.8	98.2	9.7	97.3	10.0	0.9	ppbv			
Nonane	10.5	105	12.0	120	10.0	12.6	ppbv			
o-Xylene	9.8	98.4	9.7	96.8	10.0	1.6	ppbv			
1,1,2,2-Tetrachloroethane	9.3	92.6	9.2	91.6	10.0	1.1	ppbv			
Isopropylbenzene	10.7	107	10.7	107	10.0	0.1	ppbv			
n-Propylbenzene	10.2	102	10.2	102	10.0	0.2	ppbv			
4-Ethyltoluene	11.5	115	11.7	117	10.0	1.7	ppbv			
1,3,5-Trimethylbenzene	11.0	110	11.1	111	10.0	0.8	ppbv			
Tert-Butyl Benzene	10.5	105	10.6	106	10.0	1.0	ppbv			
1,2,4-Trimethylbenzene	10.9	109	10.9	109	10.0	0.0	ppbv			
Sec-Butyl Benzene	10.3	103	10.1	101	10.0	2.1	ppbv			
1,3-Dichlorobenzene	11.4	114	11.5	115	10.0	0.3	ppbv			
Benzyl chloride	11.9	119	12.2	122	10.0	2.4	ppbv			
1,4-Dichlorobenzene	12.1	121	12.1	121	10.0	0.1	ppbv			
1,2-Dichlorobenzene	12.4	124	12.2	122	10.0	2.3	ppbv			
n-Butyl Benzene	10.0	100	10.0	99.6	10.0	0.8	ppbv			
1,2,4-Trichlorobenzene	13.3	133	13.3	133	10.0	0.4	ppbv	L5	L5	
Naphthalene	11.9	119	11.7	117	10.0	1.4	ppbv			
Hexachlorobutadiene	13.5	135	13.6	136	10.0	0.6	ppbv	L5	L5	
Surr: 4-Bromofluorobenzene	9.0	89.8	9.1	91.0		1.3	%REC			
		70-130%		70-130%						

Airtech Environmental Laboratories (AEL) - AZ 0740

4620 E.Elwood St., Suite 13, Phoenix, AZ 85040 480-968-5888 Fax 480-966-1888

Client:	AMEC F/W	**Client Sample ID:**	N/A
Project:	Broadway Pantana	**Project Number:**	14.2014-2029
Lab Order:	15C013	**Collection:**	N/A
Lab ID:	Blank	**Matrix:**	Air

Method QC Data

Batch: MS010325 Analyst: JJ

Analyses	ppbv Result	ppbv Limit	ug/M^3 Result	ug/M^3 Limit	Qual	DF	Date Analyzed	CAS#
VOLATILE ORGANICS IN AIR		**TO-15**					Analyst: JJ	
1,1,1-Trichloroethane	< 0.5	0.5	< 2.73	2.73		1	3/25/2015	71-55-6
1,1-Dichloroethane	< 0.5	0.5	< 2.03	2.03		1	3/25/2015	75-34-3
1,1-Dichloroethene	< 0.5	0.5	< 1.99	1.99		1	3/25/2015	75-35-4
Benzene	< 0.5	0.5	< 1.60	1.60		1	3/25/2015	71-43-2
cis-1,2-Dichloroethene	< 0.5	0.5	< 1.98	1.98		1	3/25/2015	156-59-2
Dichlorodifluoromethane(F-12)	< 1.0	1.0	< 4.95	4.95		1	3/25/2015	75-71-8
Dichlorotetrafluoroethane(F-114)	< 0.5	0.5	< 3.50	3.50		1	3/25/2015	76-14-2
Ethylbenzene	< 0.5	0.5	< 2.17	2.17		1	3/25/2015	100-41-4
m&p-Xylene	< 1.0	1.0	< 4.34	4.34		1	3/25/2015	179601-23-1
o-Xylene	< 0.5	0.5	< 2.17	2.17		1	3/25/2015	95-47-6
Tetrachloroethene	< 0.5	0.5	< 3.39	3.39		1	3/25/2015	127-18-4
Toluene	< 0.5	0.5	< 1.89	1.89		1	3/25/2015	108-88-3
trans-1,2-Dichloroethene	< 0.5	0.5	< 1.98	1.98		1	3/25/2015	156-60-5
Trichloroethene	< 0.5	0.5	< 2.69	2.69		1	3/25/2015	79-01-6
Trichlorofluoromethane(F-11)	< 0.5	0.5	< 2.81	2.81		1	3/25/2015	75-69-4
Trichlorotrifluoroethane(F-113)	< 0.5	0.5	< 3.83	3.83		1	3/25/2015	76-13-1
Vinyl chloride	< 0.5	0.5	< 1.28	1.28		1	3/25/2015	75-01-4
Surr: 4-Bromofluorobenzene	91.7	70-130	%REC					

Airtech Environmental Laboratories (AEL) - AZ 0740

4620 E.Elwood St., Suite 13, Phoenix, AZ 85040 480-968-5888 Fax 480-966-1888

Client:	AMEC F/W	**Client Sample ID:**	N/A
Project:	Broadway Pantana	**Project Number:**	14.2014-2029
Lab Order:	15C013	**Collection:**	N/A
Lab ID:	LCS/LCSD	**Matrix:**	Air

Method QC Data

Date Analyzed: 3/25/2015 Batch: MS010325 Analyst: JJ

Analyses	LCS Result	LCS %REC	LCSD Result	LCSD %REC	T.V.	%RPD	Unit	Qualifier LCS	Qualifier LCSD	Qualifier RPD
VOLATILE ORGANICS IN AIR	**TO-15**							70-130%		<25%
Dichlorodifluoromethane(F-12)	10.1	101	10.1	101	10.0	0.3	ppbv			
Dichlorotetrafluoroethane(F-114)	10.3	103	10.0	99.9	10.0	3.3	ppbv			
Vinyl Chloride	9.5	95.0	9.8	97.7	10.0	2.8	ppbv			
Trichlorofluoromethane (F-11)	10.7	107	10.2	102	10.0	4.5	ppbv			
1,1-Dichloroethene	10.5	105	10.1	101	10.0	4.3	ppbv			
Trichlorotrifluoroethane (F-113)	10.6	106	9.7	97.3	10.0	8.1	ppbv			
trans-1,2-Dichloroethene	10.9	109	10.3	103	10.0	5.8	ppbv			
1,1-Dichloroethane	10.4	104	9.8	98.3	10.0	5.5	ppbv			
cis-1,2-Dichloroethene	10.9	109	10.0	100	10.0	8.7	ppbv			
1,1,1-Trichloroethane	10.8	108	9.7	97.2	10.0	10.6	ppbv			
Benzene	9.8	97.5	9.0	90.2	10.0	7.8	ppbv			
Trichloroethene	10.8	108	9.9	99.4	10.0	7.9	ppbv			
Toluene	10.4	104	9.3	93.2	10.0	11.2	ppbv			
Tetrachloroethene	10.7	107	9.9	98.7	10.0	7.6	ppbv			
Ethylbenzene	10.5	105	9.3	92.8	10.0	12.4	ppbv			
m&p-Xylene	21.0	105	18.8	94.0	20.0	11.2	ppbv			
o-Xylene	9.7	96.7	8.8	88.0	10.0	9.4	ppbv			
Surr: 4-Bromofluorobenzene	10.0	99.8	10.0	100		0.0	%REC			
		70-130%		70-130%						

Airtech Environmental Laboratories (AEL) - AZ 0740

4620 E.Elwood St., Suite 13, Phoenix, AZ 85040 480-968-5888 Fax 480-966-1888

Client:	AMEC F/W	**Client Sample ID:**	NA
Project:	Broadway Pantana	**Project Number:**	14.2014-2029
Lab Order:	15C013	**Collection:**	NA
Lab ID:	Standards	**Matrix:**	Nitrogen

AEL ID#	STD Name	Vendor	SGI Order#	Description	CONC.	Accuracy	Exp.Date
S-140820-01	Stock	Scott Gas	T9Z90001-110	TO-14 39 Analytes	1.0 ppmv	± 5%	8/20/2015
S-140820-02	Stock	Scott Gas	TO900015-110	TO-15 25 Analytes	1.0 ppmv	± 5%	8/20/2015
S-140624-01	Stock	Spectra Gases	111672570	14 Additional Compounds	1.0 ppmv	± 5%	6/23/2015
S-141201-01	Stock	Spectra Gases	TB500009-110	TO-15 IS 4 Compounds	1.0 ppmv	± 5%	12/1/2015
A-150223-02	Working Std	AEL Dilution		TO-15 74 Analytes	10 ppbv	± 5%	5/23/2015
A-150323-02	Working Std	AEL Dilution		TO-15 74 Analytes	10 ppbv	± 5%	6/23/2015
A-150223-01	Working IS	AEL Dilution		TO-15 IS 4 Compounds	50 ppbv	± 5%	5/23/2015
A-150310-01	Working IS	AEL Dilution		TO-15 IS 4 Compounds	50 ppbv	± 5%	6/10/2015
A-150323-01	Working IS	AEL Dilution		TO-15 IS 4 Compounds	50 ppbv	± 5%	6/23/2015

Airtech Environmental Laboratories (AEL)
4620 E.Elwood St., Suite 13, Phoenix, AZ 85040 480-968-5888 Fax 480-966-1888

Date: March 27, 2015

Client:	Alex Yiannakakis	Work Order #:	15C013
Company:	AMEC F/W	Project Name:	Broadway Pantana
Address:	4600 E Washington St #600	Project Number:	14.2014-2029
	Phoenix, AZ 85040	Received Date:	3/12/2015

Dear Client:

Airtech Environmental Laboratories received twenty-eight (28) samples for analysis.

All analyses met laboratory QA/QC with any exceptions addressed in the Case Narrative.

If you have any questions or concerns regarding your samples analysis, please contact the laboratory at 480-968-5888

Sincerely,

Yu Min Shi
Technical Director
Airtech Environmental Labs

Arizona ADHS License No. AZ0740

Airtech Environmental Laboratories (AEL)
4620 E.Elwood St., Suite 13, Phoenix, AZ 85040 480-968-5888 Fax 480-966-1888

Date: March 27, 2015

Client:	Alex Yiannakakis	Work Order #:	15C013
Company:	AMEC F/W	Project Name:	Broadway Pantana
Address:	4600 E Washington St #600	Project Number:	14.2014-2029
	Phoenix, AZ 85040	Received Date:	3/12/2015

SAMPLE SUMMARY

LAB ID	CLIENT ID	METHOD	SAMPLE DATE	SAMPLE TIME
15C013-01	PRUD-2-SG-030915	TO-15	3/9/2015	1443
15C013-02	PRUD-4-SG-030915	TO-15	3/9/2015	1525
15C013-03	PRUD-3-SG-030915	TO-15	3/9/2015	1553
15C013-04	PRUD-19-SG-030915	TO-15	3/9/2015	1630
15C013-05	PRUD-18-SG-030915	TO-15	3/9/2015	1705
15C013-06	PRUD-17-SG-030915	TO-15	3/9/2015	1733
15C013-07	PRUD-16-SG-030915	TO-15	3/9/2015	1800
15C013-08	MW-9-SG-031015	TO-15	3/10/2015	0915
15C013-09	MW-8-SG-031015	TO-15	3/10/2015	0945
15C013-10	MW-8-SG-031015-DUP	TO-15	3/10/2015	0945
15C013-11	MW-7-SG-031015	TO-15	3/10/2015	1023
15C013-12	MW-6-SG-031015	TO-15	3/10/2015	1057
15C013-13	BSDP-3-50-SG-031015	TO-15	3/10/2015	1235
15C013-14	BSDP-3-100-SG-031015	TO-15	3/10/2015	1300
15C013-15	BSDP-3-150-SG-031015	TO-15	3/10/2015	1327
15C013-16	BSDP-4-48-SG-031015	TO-15	3/10/2015	1400
15C013-17	BSDP-4-100-SG-031015	TO-15	3/10/2015	1433
15C013-18	BSDP-4-150-SG-031015	TO-15	3/10/2015	1503
15C013-19	BP-23-200-SG-031115	TO-15	3/11/2015	0750
15C013-20	BP-23-250-SG-031115	TO-15	3/11/2015	0820
15C013-21	BP-23-300-SG-031115	TO-15	3/11/2015	0850
15C013-22	BP-23-440-SG-031115	TO-15	3/11/2015	0955
15C013-23	BP-23-440-SG-031115-DUP	TO-15	3/11/2015	0955
15C013-24	BP-22-200-SG-031115	TO-15	3/11/2015	1044
15C013-25	BP-22-250-SG-031115	TO-15	3/11/2015	1110
15C013-26	BP-22-300-SG-031115	TO-15	3/11/2015	1145
15C013-27	BP-22-438-SG-031115	TO-15	3/11/2015	1243
15C013-28	MW-5-SG-031115	TO-15	3/11/2015	1513

Airtech Environmental Laboratories (AEL)
4620 E.Elwood St., Suite 13, Phoenix, AZ 85040 480-968-5888 Fax 480-966-1888

Date: March 27, 2015

Client:	Alex Yiannakakis	Work Order #:	15C013
Company:	AMEC F/W	Project Name:	Broadway Pantana
Address:	4600 E Washington St #600	Project Number:	14.2014-2029
	Phoenix, AZ 85040	Received Date:	03/12/15

Case Narrative

All samples and QC associated with your samples met the quality control objectives.
Data qualifiers in this report are in accordance with ADEQ Data Qualifiers.

L5: The associated blank spike recovery was above the laboratory/method acceptance limits. Analyte not detected in sample.

T4: Tentatively identified compound. Concentration is estimated and based on the closest internal standard.

Airtech Environmental Laboratories (AEL) - AZ 0740
4620 E.Elwood St., Suite 13, Phoenix, AZ 85040 480-968-5888 Fax 480-966-1888

Client:	AMEC F/W	**Client Sample ID:**	N/A
Project:	Broadway Pantana	**Project Number:**	14.2014-2029
Lab Order:	15C013	**Collection:**	N/A
Lab ID:	Kits QC	**Matrix:**	Air

		Canister				Grab Sampler	
		Type		Vacuum	Vacuum	Type	
	Client	1.0 liter		before sampled	after sampled	5 minute-fill 1.0L canister	
AEL#	ID	SN#	Clean Batch#	Hg inch	psia	SN#	Clean Batch#
15C013-01	PRUD-2-SG-030915	E2407	1502-08	29.1	12.55	082	1502-08
15C013-02	PRUD-4-SG-030915	E2094	1502-08	29.1	10.89	136	1502-08
15C013-03	PRUD-3-SG-030915	E2393	1502-08	29.1	10.68	050	1412-09
15C013-04	PRUD-19-SG-030915	E2412	1502-14	29.1	12.90	037	1502-07
15C013-05	PRUD-18-SG-030915	1817	1502-14	29.1	11.93	073	1502-07
15C013-06	PRUD-17-SG-030915	E2294	1502-14	29.1	12.76	074	1502-07
15C013-07	PRUD-16-SG-030915	1886	1502-14	29.1	11.80	137	1502-07
15C013-08	MW-9-SG-031015	E2103	1502-14	29.1	11.19	116	1502-03
15C013-09	MW-8-SG-031015	1881	1502-15	29.1	12.83	140	1502-07
15C013-10	MW-8-SG-031015-DUP	E2350	1502-15	29.1	13.28	126	1502-03
15C013-11	MW-7-SG-031015	E2387	1502-14	29.1	12.96	070	1502-03
15C013-12	MW-6-SG-031015	E2087	1502-14	29.1	12.13	106	1502-03
15C013-13	BSDP-3-50-SG-031015	E2391	1502-16	29.1	11.81	055	1412-09
15C013-14	BSDP-3-100-SG-031015	E2397	1502-16	29.1	12.23	132	1502-07
15C013-15	BSDP-3-150-SG-031015	1809	1502-16	29.1	11.68	145	1412-07
15C013-16	BSDP-4-48-SG-031015	1793	1502-16	29.1	11.70	047	1412-09
15C013-17	BSDP-4-100-SG-031015	1865	1502-16	29.1	12.02	127	1412-07
15C013-18	BSDP-4-150-SG-031015	E2352	1502-16	29.1	12.35	078	1412-05
15C013-19	BP-23-200-SG-031115	1839	1502-16	29.1	12.63	107	1412-09
15C013-20	BP-23-250-SG-031115	1794	1502-16	29.1	12.88	016	1412-08

Airtech Environmental Laboratories (AEL) - AZ 0740
4620 E.Elwood St., Suite 13, Phoenix, AZ 85040 480-968-5888 Fax 480-966-1888

Client:	AMEC F/W	**Client Sample ID:**	N/A
Project:	Broadway Pantana	**Project Number:**	14.2014-2029
Lab Order:	15C013	**Collection:**	N/A
Lab ID:	Kits QC	**Matrix:**	Air

		Canister				Grab Sampler	
		Type		Vacuum	Vacuum	Type	
	Client	1.0 liter		before sampled	after sampled	5 minute-fill 1.0L canister	
AEL#	ID	SN#	Clean Batch#	Hg inch	psia	SN#	Clean Batch#
15C013-21	BP-23-300-SG-031115	E2370	1502-16	29.1	13.43	018	1412-09
15C013-22	BP-23-440-SG-031115	1858	1502-09	29.1	11.50	091	1502-04
15C013-23	BP-23-440-SG-031115-DUP	1864	1502-15	29.1	11.63	081	1502-04
15C013-24	BP-22-200-SG-031115	E2089	1502-15	29.1	11.64	024	1502-07
15C013-25	BP-22-250-SG-031115	E2406	1502-15	29.1	11.83	045	1502-07
15C013-26	BP-22-300-SG-031115	1816	1502-15	29.1	11.16	142	1502-07
15C013-27	BP-22-438-SG-031115	1797	1502-14	29.1	10.26	128	1502-07
15C013-28	MW-5-SG-031115	E2371	1502-15	29.1	12.28	115	1502-07

Airtech Environmental Laboratories (AEL) - AZ 0740

4620 E.Elwood St., Suite 13, Phoenix, AZ 85040 480-968-5888 Fax 480-966-1888

Client:	AMEC F/W	**Client Sample ID:**	PRUD-2-SG-030915
Project:	Broadway Pantana	**Project Number:**	14.2014-2029
Lab Order:	15C013	**Collection:**	3/9/2015
Lab ID:	01	**Matrix:**	Soil Vapor

	ppbv		ug/M^3				Date	
Analyses	**Result**	**Limit**	**Result**	**Limit**	**Qual**	**DF**	**Analyzed**	**CAS#**
VOLATILE ORGANICS IN AIR		**TO-15**					Analyst: JJ	
1,1,1-Trichloroethane	< 1.0	1.0	< 5.46	5.46		2	3/19/2015	71-55-6
1,1,2,2-Tetrachloroethane	< 1.0	1.0	< 6.87	6.87		2	3/19/2015	79-34-5
1,1,2-Trichloroethane	< 1.0	1.0	< 5.46	5.46		2	3/19/2015	79-00-5
1,1-Dichloroethane	< 1.0	1.0	< 4.05	4.05		2	3/19/2015	75-34-3
1,1-Dichloroethene	< 1.0	1.0	< 3.97	3.97		2	3/19/2015	75-35-4
1,2,4-Trichlorobenzene	< 4.0	4.0	< 29.7	29.7	L5	2	3/19/2015	120-82-1
1,2,4-Trimethylbenzene	< 1.0	1.0	< 4.92	4.92		2	3/19/2015	95-63-6
1,2-Dibromoethane	< 1.0	1.0	< 7.68	7.68		2	3/19/2015	106-93-4
1,2-Dichlorobenzene	< 1.0	1.0	< 6.01	6.01		2	3/19/2015	95-50-1
1,2-Dichloroethane	< 1.0	1.0	< 4.05	4.05		2	3/19/2015	107-06-2
1,2-Dichloropropane	< 1.0	1.0	< 4.62	4.62		2	3/19/2015	78-87-5
1,3,5-Trimethylbenzene	< 1.0	1.0	< 4.92	4.92		2	3/19/2015	108-67-8
1,3-Butadiene	< 1.0	1.0	< 2.21	2.21	L5	2	3/19/2015	106-99-0
1,3-Dichlorobenzene	< 1.0	1.0	< 6.01	6.01		2	3/19/2015	541-73-1
1,4-Dichlorobenzene	< 1.0	1.0	< 6.01	6.01		2	3/19/2015	106-46-7
1,4-Dioxane	< 4.0	4.0	< 14.4	14.4		2	3/19/2015	123-91-1
2,2,4-Trimethylpentane	< 1.0	1.0	< 4.66	4.66	L5	2	3/19/2015	540-84-1
2-Butanone (MEK)	< 10	10	< 29.5	29.5		2	3/19/2015	78-93-3
2-Hexanone	< 10	10	< 41.0	41.0	L5	2	3/19/2015	591-78-6
2-Propanol (IPA)	< 10	10	< 24.5	24.5	L5	2	3/19/2015	67-63-0
4-Ethyltoluene	< 2.0	2.0	< 9.84	9.84		2	3/19/2015	622-96-8
4-Methyl-2-pentanone (MIK)	< 10	10	< 41.0	41.0	L5	2	3/19/2015	108-10-1
Acetone	< 10	10	< 23.8	23.8		2	3/19/2015	67-64-1
Allyl chloride	< 2.0	2.0	< 6.26	6.26		2	3/19/2015	107-05-1
Benzene	< 1.0	1.0	< 3.19	3.19		2	3/19/2015	71-43-2
Benzyl chloride	< 4.0	4.0	< 20.7	20.7		2	3/19/2015	100-44-7
Bromodichloromethane	< 1.0	1.0	< 6.70	6.70		2	3/19/2015	75-27-4
Bromoethene(Vinyl Bromide)	< 1.0	1.0	< 4.37	4.37		2	3/19/2015	593-60-2
Bromoform	< 1.0	1.0	< 10.3	10.3	L5	2	3/19/2015	75-25-2
Bromomethane	< 1.0	1.0	< 3.88	3.88		2	3/19/2015	74-83-9
Butyl benzene	< 2.0	2.0	< 11.0	11.0		2	3/19/2015	104-51-8
Carbon disulfide	**5.6**	**4.0**	**17.4**	**12.4**		2	3/19/2015	75-15-0
Carbon tetrachloride	< 1.0	1.0	< 6.29	6.29		2	3/19/2015	56-23-5
Chlorobenzene	< 1.0	1.0	< 4.60	4.60		2	3/19/2015	108-90-7
Chloroethane	< 1.0	1.0	< 2.64	2.64		2	3/19/2015	75-00-3
Chloroform	< 1.0	1.0	< 4.88	4.88		2	3/19/2015	67-66-3
Chloromethane	< 4.0	4.0	< 8.28	8.28		2	3/19/2015	74-87-3
cis-1,2-Dichloroethene	< 1.0	1.0	< 3.96	3.96		2	3/19/2015	156-59-2
cis-1,3-Dichloropropene	< 1.0	1.0	< 4.54	4.54		2	3/19/2015	542-75-6
Cyclohexane	< 1.0	1.0	< 3.44	3.44		2	3/19/2015	110-82-7
Dibromochloromethane	< 1.0	1.0	< 8.52	8.52		2	3/19/2015	124-48-1
Dichlorodifluoromethane(F-12)	**2.1**	**2.0**	**10.5**	**9.90**		2	3/19/2015	75-71-8
Dichlorotetrafluoroethane(F-114)	< 1.0	1.0	< 6.99	6.99		2	3/19/2015	76-14-2
Ethanol	< 10	10	< 18.8	18.8		2	3/19/2015	64-17-5
Ethyl Acetate	< 1.0	1.0	< 3.60	3.60	L5	2	3/19/2015	141-78-6
Ethylbenzene	< 1.0	1.0	< 4.34	4.34		2	3/19/2015	100-41-4

Airtech Environmental Laboratories (AEL) - AZ 0740

4620 E.Elwood St., Suite 13, Phoenix, AZ 85040 480-968-5888 Fax 480-966-1888

Client:	AMEC F/W	**Client Sample ID:**	PRUD-2-SG-030915
Project:	Broadway Pantana	**Project Number:**	14.2014-2029
Lab Order:	15C013	**Collection:**	3/9/2015
Lab ID:	01	**Matrix:**	Soil Vapor

	ppbv		ug/M^3				Date	
Analyses	**Result**	**Limit**	**Result**	**Limit**	**Qual**	**DF**	**Analyzed**	**CAS#**
VOLATILE ORGANICS IN AIR		**TO-15**					Analyst: JJ	
Heptane	< 1.0	1.0	< 4.10	4.10		2	3/19/2015	142-82-5
Hexachlorobutadiene	< 2.0	2.0	< 21.3	21.3	L5	2	3/19/2015	87-68-3
Hexane	< 2.0	2.0	< 7.04	7.04		2	3/19/2015	110-54-3
Isopropylbenzene	< 2.0	2.0	< 9.84	9.84		2	3/19/2015	98-82-8
m&p-Xylene	< 2.0	2.0	< 8.68	8.68		2	3/19/2015	179601-23-1
Methyl tert-butyl ether	< 4.0	4.0	< 14.4	14.4		2	3/19/2015	1634-04-4
Methylcyclohexane	< 2.0	2.0	< 8.04	8.04		2	3/19/2015	108-87-2
Methylene chloride	< 4.0	4.0	< 13.9	13.9		2	3/19/2015	75-09-2
Naphthalene	< 4.0	4.0	< 21.0	21.0		2	3/19/2015	91-20-3
Nonane	< 2.0	2.0	< 10.5	10.5		2	3/19/2015	111-84-2
Octane	< 2.0	2.0	< 9.34	9.34		2	3/19/2015	111-65-9
o-Xylene	< 1.0	1.0	< 4.34	4.34		2	3/19/2015	95-47-6
Propene (Propylene)	< 2.0	2.0	< 3.44	3.44		2	3/19/2015	115-07-1
Propylbenzene	< 2.0	2.0	< 9.84	9.84		2	3/19/2015	103-65-1
Sec-Butyl benzene	< 2.0	2.0	< 11.0	11.0		2	3/19/2015	135-98-8
Styrene	< 1.0	1.0	< 4.26	4.26		2	3/19/2015	100-42-5
Tert-Butyl benzene	< 2.0	2.0	< 11.0	11.0		2	3/19/2015	98-06-6
Tetrachloroethene	**4.4**	**1.0**	**29.6**	**6.78**		2	3/19/2015	127-18-4
Tetrahydrofuran	< 4.0	4.0	< 11.8	11.8	L5	2	3/19/2015	109-99-9
Toluene	< 1.0	1.0	< 3.77	3.77		2	3/19/2015	108-88-3
trans-1,2-Dichloroethene	< 1.0	1.0	< 3.96	3.96		2	3/19/2015	156-60-5
trans-1,3-Dichloropropene	< 1.0	1.0	< 4.54	4.54		2	3/19/2015	542-75-6
Trichloroethene	< 1.0	1.0	< 5.37	5.37		2	3/19/2015	79-01-6
Trichlorofluoromethane(F-11)	< 1.0	1.0	< 5.62	5.62		2	3/19/2015	75-69-4
Trichlorotrifluoroethane(F-113)	< 1.0	1.0	< 7.66	7.66		2	3/19/2015	76-13-1
Vinyl acetate	< 1.0	1.0	< 3.52	3.52	L5	2	3/19/2015	108-05-4
Vinyl chloride	< 1.0	1.0	< 2.56	2.56		2	3/19/2015	75-01-4
Surr: 4-Bromofluorobenzene	83.5	70-130	%REC					

Tentatively Identified Compounds (TIC's)

Difluoroethane	< 20	20	ppbv		T4	2	3/19/2015

Airtech Environmental Laboratories (AEL) - AZ 0740

4620 E.Elwood St., Suite 13, Phoenix, AZ 85040 480-968-5888 Fax 480-966-1888

Client:	AMEC F/W	**Client Sample ID:**	PRUD-4-SG-030915
Project:	Broadway Pantana	**Project Number:**	14.2014-2029
Lab Order:	15C013	**Collection:**	3/9/2015
Lab ID:	02	**Matrix:**	Soil Vapor

	ppbv		ug/M^3				Date	
Analyses	**Result**	**Limit**	**Result**	**Limit**	**Qual**	**DF**	**Analyzed**	**CAS#**
VOLATILE ORGANICS IN AIR		**TO-15**					Analyst: JJ	
1,1,1-Trichloroethane	< 1.0	1.0	< 5.46	5.46		2	3/19/2015	71-55-6
1,1,2,2-Tetrachloroethane	< 1.0	1.0	< 6.87	6.87		2	3/19/2015	79-34-5
1,1,2-Trichloroethane	< 1.0	1.0	< 5.46	5.46		2	3/19/2015	79-00-5
1,1-Dichloroethane	< 1.0	1.0	< 4.05	4.05		2	3/19/2015	75-34-3
1,1-Dichloroethene	< 1.0	1.0	< 3.97	3.97		2	3/19/2015	75-35-4
1,2,4-Trichlorobenzene	< 4.0	4.0	< 29.7	29.7	L5	2	3/19/2015	120-82-1
1,2,4-Trimethylbenzene	< 1.0	1.0	< 4.92	4.92		2	3/19/2015	95-63-6
1,2-Dibromoethane	< 1.0	1.0	< 7.68	7.68		2	3/19/2015	106-93-4
1,2-Dichlorobenzene	< 1.0	1.0	< 6.01	6.01		2	3/19/2015	95-50-1
1,2-Dichloroethane	< 1.0	1.0	< 4.05	4.05		2	3/19/2015	107-06-2
1,2-Dichloropropane	< 1.0	1.0	< 4.62	4.62		2	3/19/2015	78-87-5
1,3,5-Trimethylbenzene	< 1.0	1.0	< 4.92	4.92		2	3/19/2015	108-67-8
1,3-Butadiene	< 1.0	1.0	< 2.21	2.21	L5	2	3/19/2015	106-99-0
1,3-Dichlorobenzene	< 1.0	1.0	< 6.01	6.01		2	3/19/2015	541-73-1
1,4-Dichlorobenzene	< 1.0	1.0	< 6.01	6.01		2	3/19/2015	106-46-7
1,4-Dioxane	< 4.0	4.0	< 14.4	14.4		2	3/19/2015	123-91-1
2,2,4-Trimethylpentane	< 1.0	1.0	< 4.66	4.66	L5	2	3/19/2015	540-84-1
2-Butanone (MEK)	< 10	10	< 29.5	29.5		2	3/19/2015	78-93-3
2-Hexanone	< 10	10	< 41.0	41.0	L5	2	3/19/2015	591-78-6
2-Propanol (IPA)	< 10	10	< 24.5	24.5	L5	2	3/19/2015	67-63-0
4-Ethyltoluene	< 2.0	2.0	< 9.84	9.84		2	3/19/2015	622-96-8
4-Methyl-2-pentanone (MIK)	< 10	10	< 41.0	41.0	L5	2	3/19/2015	108-10-1
Acetone	< 10	10	< 23.8	23.8		2	3/19/2015	67-64-1
Allyl chloride	< 2.0	2.0	< 6.26	6.26		2	3/19/2015	107-05-1
Benzene	< 1.0	1.0	< 3.19	3.19		2	3/19/2015	71-43-2
Benzyl chloride	< 4.0	4.0	< 20.7	20.7		2	3/19/2015	100-44-7
Bromodichloromethane	< 1.0	1.0	< 6.70	6.70		2	3/19/2015	75-27-4
Bromoethene(Vinyl Bromide)	< 1.0	1.0	< 4.37	4.37		2	3/19/2015	593-60-2
Bromoform	< 1.0	1.0	< 10.3	10.3	L5	2	3/19/2015	75-25-2
Bromomethane	< 1.0	1.0	< 3.88	3.88		2	3/19/2015	74-83-9
Butyl benzene	< 2.0	2.0	< 11.0	11.0		2	3/19/2015	104-51-8
Carbon disulfide	< 4.0	4.0	< 12.4	12.4		2	3/19/2015	75-15-0
Carbon tetrachloride	< 1.0	1.0	< 6.29	6.29		2	3/19/2015	56-23-5
Chlorobenzene	< 1.0	1.0	< 4.60	4.60		2	3/19/2015	108-90-7
Chloroethane	< 1.0	1.0	< 2.64	2.64		2	3/19/2015	75-00-3
Chloroform	< 1.0	1.0	< 4.88	4.88		2	3/19/2015	67-66-3
Chloromethane	< 4.0	4.0	< 8.28	8.28		2	3/19/2015	74-87-3
cis-1,2-Dichloroethene	< 1.0	1.0	< 3.96	3.96		2	3/19/2015	156-59-2
cis-1,3-Dichloropropene	< 1.0	1.0	< 4.54	4.54		2	3/19/2015	542-75-6
Cyclohexane	< 1.0	1.0	< 3.44	3.44		2	3/19/2015	110-82-7
Dibromochloromethane	< 1.0	1.0	< 8.52	8.52		2	3/19/2015	124-48-1
Dichlorodifluoromethane(F-12)	**8.4**	**2.0**	**41.5**	**9.90**		2	3/19/2015	75-71-8
Dichlorotetrafluoroethane(F-114)	< 1.0	1.0	< 6.99	6.99		2	3/19/2015	76-14-2
Ethanol	< 10	10	< 18.8	18.8		2	3/19/2015	64-17-5
Ethyl Acetate	< 1.0	1.0	< 3.60	3.60	L5	2	3/19/2015	141-78-6
Ethylbenzene	< 1.0	1.0	< 4.34	4.34		2	3/19/2015	100-41-4

Airtech Environmental Laboratories (AEL) - AZ 0740

4620 E.Elwood St., Suite 13, Phoenix, AZ 85040 480-968-5888 Fax 480-966-1888

Client:	AMEC F/W	**Client Sample ID:**	PRUD-4-SG-030915
Project:	Broadway Pantana	**Project Number:**	14.2014-2029
Lab Order:	15C013	**Collection:**	3/9/2015
Lab ID:	02	**Matrix:**	Soil Vapor

	ppbv		ug/M^3				Date	
Analyses	**Result**	**Limit**	**Result**	**Limit**	**Qual**	**DF**	**Analyzed**	**CAS#**
VOLATILE ORGANICS IN AIR		**TO-15**					Analyst: JJ	
Heptane	< 1.0	1.0	< 4.10	4.10		2	3/19/2015	142-82-5
Hexachlorobutadiene	< 2.0	2.0	< 21.3	21.3	L5	2	3/19/2015	87-68-3
Hexane	< 2.0	2.0	< 7.04	7.04		2	3/19/2015	110-54-3
Isopropylbenzene	< 2.0	2.0	< 9.84	9.84		2	3/19/2015	98-82-8
m&p-Xylene	< 2.0	2.0	< 8.68	8.68		2	3/19/2015	179601-23-1
Methyl tert-butyl ether	< 4.0	4.0	< 14.4	14.4		2	3/19/2015	1634-04-4
Methylcyclohexane	< 2.0	2.0	< 8.04	8.04		2	3/19/2015	108-87-2
Methylene chloride	< 4.0	4.0	< 13.9	13.9		2	3/19/2015	75-09-2
Naphthalene	< 4.0	4.0	< 21.0	21.0		2	3/19/2015	91-20-3
Nonane	< 2.0	2.0	< 10.5	10.5		2	3/19/2015	111-84-2
Octane	< 2.0	2.0	< 9.34	9.34		2	3/19/2015	111-65-9
o-Xylene	< 1.0	1.0	< 4.34	4.34		2	3/19/2015	95-47-6
Propene (Propylene)	< 2.0	2.0	< 3.44	3.44		2	3/19/2015	115-07-1
Propylbenzene	< 2.0	2.0	< 9.84	9.84		2	3/19/2015	103-65-1
Sec-Butyl benzene	< 2.0	2.0	< 11.0	11.0		2	3/19/2015	135-98-8
Styrene	< 1.0	1.0	< 4.26	4.26		2	3/19/2015	100-42-5
Tert-Butyl benzene	< 2.0	2.0	< 11.0	11.0		2	3/19/2015	98-06-6
Tetrachloroethene	**1.5**	**1.0**	**10.2**	**6.78**		2	3/19/2015	127-18-4
Tetrahydrofuran	< 4.0	4.0	< 11.8	11.8	L5	2	3/19/2015	109-99-9
Toluene	< 1.0	1.0	< 3.77	3.77		2	3/19/2015	108-88-3
trans-1,2-Dichloroethene	< 1.0	1.0	< 3.96	3.96		2	3/19/2015	156-60-5
trans-1,3-Dichloropropene	< 1.0	1.0	< 4.54	4.54		2	3/19/2015	542-75-6
Trichloroethene	< 1.0	1.0	< 5.37	5.37		2	3/19/2015	79-01-6
Trichlorofluoromethane(F-11)	< 1.0	1.0	< 5.62	5.62		2	3/19/2015	75-69-4
Trichlorotrifluoroethane(F-113)	< 1.0	1.0	< 7.66	7.66		2	3/19/2015	76-13-1
Vinyl acetate	< 1.0	1.0	< 3.52	3.52	L5	2	3/19/2015	108-05-4
Vinyl chloride	< 1.0	1.0	< 2.56	2.56		2	3/19/2015	75-01-4
Surr: 4-Bromofluorobenzene	84.2	70-130	%REC					

Tentatively Identified Compounds (TIC's)

Difluoroethane	< 20	20	ppbv		T4	2	3/19/2015

Airtech Environmental Laboratories (AEL) - AZ 0740

4620 E.Elwood St., Suite 13, Phoenix, AZ 85040 480-968-5888 Fax 480-966-1888

Client:	AMEC F/W	**Client Sample ID:**	PRUD-3-SG-030915
Project:	Broadway Pantana	**Project Number:**	14.2014-2029
Lab Order:	15C013	**Collection:**	3/9/2015
Lab ID:	03	**Matrix:**	Soil Vapor

	ppbv		ug/M^3				Date	
Analyses	**Result**	**Limit**	**Result**	**Limit**	**Qual**	**DF**	**Analyzed**	**CAS#**
VOLATILE ORGANICS IN AIR		**TO-15**					Analyst: JJ	
1,1,1-Trichloroethane	< 1.0	1.0	< 5.46	5.46		2	3/19/2015	71-55-6
1,1,2,2-Tetrachloroethane	< 1.0	1.0	< 6.87	6.87		2	3/19/2015	79-34-5
1,1,2-Trichloroethane	< 1.0	1.0	< 5.46	5.46		2	3/19/2015	79-00-5
1,1-Dichloroethane	< 1.0	1.0	< 4.05	4.05		2	3/19/2015	75-34-3
1,1-Dichloroethene	< 1.0	1.0	< 3.97	3.97		2	3/19/2015	75-35-4
1,2,4-Trichlorobenzene	< 4.0	4.0	< 29.7	29.7	L5	2	3/19/2015	120-82-1
1,2,4-Trimethylbenzene	< 1.0	1.0	< 4.92	4.92		2	3/19/2015	95-63-6
1,2-Dibromoethane	< 1.0	1.0	< 7.68	7.68		2	3/19/2015	106-93-4
1,2-Dichlorobenzene	< 1.0	1.0	< 6.01	6.01		2	3/19/2015	95-50-1
1,2-Dichloroethane	< 1.0	1.0	< 4.05	4.05		2	3/19/2015	107-06-2
1,2-Dichloropropane	< 1.0	1.0	< 4.62	4.62		2	3/19/2015	78-87-5
1,3,5-Trimethylbenzene	< 1.0	1.0	< 4.92	4.92		2	3/19/2015	108-67-8
1,3-Butadiene	< 1.0	1.0	< 2.21	2.21	L5	2	3/19/2015	106-99-0
1,3-Dichlorobenzene	< 1.0	1.0	< 6.01	6.01		2	3/19/2015	541-73-1
1,4-Dichlorobenzene	< 1.0	1.0	< 6.01	6.01		2	3/19/2015	106-46-7
1,4-Dioxane	< 4.0	4.0	< 14.4	14.4		2	3/19/2015	123-91-1
2,2,4-Trimethylpentane	< 1.0	1.0	< 4.66	4.66	L5	2	3/19/2015	540-84-1
2-Butanone (MEK)	< 10	10	< 29.5	29.5		2	3/19/2015	78-93-3
2-Hexanone	< 10	10	< 41.0	41.0	L5	2	3/19/2015	591-78-6
2-Propanol (IPA)	< 10	10	< 24.5	24.5	L5	2	3/19/2015	67-63-0
4-Ethyltoluene	< 2.0	2.0	< 9.84	9.84		2	3/19/2015	622-96-8
4-Methyl-2-pentanone (MIK)	< 10	10	< 41.0	41.0	L5	2	3/19/2015	108-10-1
Acetone	< 10	10	< 23.8	23.8		2	3/19/2015	67-64-1
Allyl chloride	< 2.0	2.0	< 6.26	6.26		2	3/19/2015	107-05-1
Benzene	< 1.0	1.0	< 3.19	3.19		2	3/19/2015	71-43-2
Benzyl chloride	< 4.0	4.0	< 20.7	20.7		2	3/19/2015	100-44-7
Bromodichloromethane	< 1.0	1.0	< 6.70	6.70		2	3/19/2015	75-27-4
Bromoethene(Vinyl Bromide)	< 1.0	1.0	< 4.37	4.37		2	3/19/2015	593-60-2
Bromoform	< 1.0	1.0	< 10.3	10.3	L5	2	3/19/2015	75-25-2
Bromomethane	< 1.0	1.0	< 3.88	3.88		2	3/19/2015	74-83-9
Butyl benzene	< 2.0	2.0	< 11.0	11.0		2	3/19/2015	104-51-8
Carbon disulfide	< 4.0	4.0	< 12.4	12.4		2	3/19/2015	75-15-0
Carbon tetrachloride	< 1.0	1.0	< 6.29	6.29		2	3/19/2015	56-23-5
Chlorobenzene	< 1.0	1.0	< 4.60	4.60		2	3/19/2015	108-90-7
Chloroethane	< 1.0	1.0	< 2.64	2.64		2	3/19/2015	75-00-3
Chloroform	< 1.0	1.0	< 4.88	4.88		2	3/19/2015	67-66-3
Chloromethane	< 4.0	4.0	< 8.28	8.28		2	3/19/2015	74-87-3
cis-1,2-Dichloroethene	< 1.0	1.0	< 3.96	3.96		2	3/19/2015	156-59-2
cis-1,3-Dichloropropene	< 1.0	1.0	< 4.54	4.54		2	3/19/2015	542-75-6
Cyclohexane	< 1.0	1.0	< 3.44	3.44		2	3/19/2015	110-82-7
Dibromochloromethane	< 1.0	1.0	< 8.52	8.52		2	3/19/2015	124-48-1
Dichlorodifluoromethane(F-12)	< 2.0	2.0	< 9.90	9.90		2	3/19/2015	75-71-8
Dichlorotetrafluoroethane(F-114)	< 1.0	1.0	< 6.99	6.99		2	3/19/2015	76-14-2
Ethanol	< 10	10	< 18.8	18.8		2	3/19/2015	64-17-5
Ethyl Acetate	< 1.0	1.0	< 3.60	3.60	L5	2	3/19/2015	141-78-6
Ethylbenzene	< 1.0	1.0	< 4.34	4.34		2	3/19/2015	100-41-4

Airtech Environmental Laboratories (AEL) - AZ 0740

4620 E.Elwood St., Suite 13, Phoenix, AZ 85040 480-968-5888 Fax 480-966-1888

Client:	AMEC F/W	**Client Sample ID:**	PRUD-3-SG-030915
Project:	Broadway Pantana	**Project Number:**	14.2014-2029
Lab Order:	15C013	**Collection:**	3/9/2015
Lab ID:	03	**Matrix:**	Soil Vapor

Analyses	ppbv Result	ppbv Limit	ug/M^3 Result	ug/M^3 Limit	Qual	DF	Date Analyzed	CAS#
VOLATILE ORGANICS IN AIR		**TO-15**					Analyst: JJ	
Heptane	< 1.0	1.0	< 4.10	4.10		2	3/19/2015	142-82-5
Hexachlorobutadiene	< 2.0	2.0	< 21.3	21.3	L5	2	3/19/2015	87-68-3
Hexane	< 2.0	2.0	< 7.04	7.04		2	3/19/2015	110-54-3
Isopropylbenzene	< 2.0	2.0	< 9.84	9.84		2	3/19/2015	98-82-8
m&p-Xylene	< 2.0	2.0	< 8.68	8.68		2	3/19/2015	179601-23-1
Methyl tert-butyl ether	< 4.0	4.0	< 14.4	14.4		2	3/19/2015	1634-04-4
Methylcyclohexane	< 2.0	2.0	< 8.04	8.04		2	3/19/2015	108-87-2
Methylene chloride	< 4.0	4.0	< 13.9	13.9		2	3/19/2015	75-09-2
Naphthalene	< 4.0	4.0	< 21.0	21.0		2	3/19/2015	91-20-3
Nonane	< 2.0	2.0	< 10.5	10.5		2	3/19/2015	111-84-2
Octane	< 2.0	2.0	< 9.34	9.34		2	3/19/2015	111-65-9
o-Xylene	< 1.0	1.0	< 4.34	4.34		2	3/19/2015	95-47-6
Propene (Propylene)	< 2.0	2.0	< 3.44	3.44		2	3/19/2015	115-07-1
Propylbenzene	< 2.0	2.0	< 9.84	9.84		2	3/19/2015	103-65-1
Sec-Butyl benzene	< 2.0	2.0	< 11.0	11.0		2	3/19/2015	135-98-8
Styrene	< 1.0	1.0	< 4.26	4.26		2	3/19/2015	100-42-5
Tert-Butyl benzene	< 2.0	2.0	< 11.0	11.0		2	3/19/2015	98-06-6
Tetrachloroethene	**3.5**	**1.0**	**23.5**	**6.78**		2	3/19/2015	127-18-4
Tetrahydrofuran	< 4.0	4.0	< 11.8	11.8	L5	2	3/19/2015	109-99-9
Toluene	< 1.0	1.0	< 3.77	3.77		2	3/19/2015	108-88-3
trans-1,2-Dichloroethene	< 1.0	1.0	< 3.96	3.96		2	3/19/2015	156-60-5
trans-1,3-Dichloropropene	< 1.0	1.0	< 4.54	4.54		2	3/19/2015	542-75-6
Trichloroethene	< 1.0	1.0	< 5.37	5.37		2	3/19/2015	79-01-6
Trichlorofluoromethane(F-11)	< 1.0	1.0	< 5.62	5.62		2	3/19/2015	75-69-4
Trichlorotrifluoroethane(F-113)	< 1.0	1.0	< 7.66	7.66		2	3/19/2015	76-13-1
Vinyl acetate	< 1.0	1.0	< 3.52	3.52	L5	2	3/19/2015	108-05-4
Vinyl chloride	< 1.0	1.0	< 2.56	2.56		2	3/19/2015	75-01-4
Surr: 4-Bromofluorobenzene	85.4	70-130	%REC					

Tentatively Identified Compounds (TIC's)

Difluoroethane	< 20	20	ppbv		T4	2	3/19/2015

Airtech Environmental Laboratories (AEL) - AZ 0740

4620 E.Elwood St., Suite 13, Phoenix, AZ 85040 480-968-5888 Fax 480-966-1888

Client:	AMEC F/W	**Client Sample ID:**	PRUD-19-SG-030915
Project:	Broadway Pantana	**Project Number:**	14.2014-2029
Lab Order:	15C013	**Collection:**	3/9/2015
Lab ID:	04	**Matrix:**	Soil Vapor

	ppbv		ug/M^3				Date	
Analyses	**Result**	**Limit**	**Result**	**Limit**	**Qual**	**DF**	**Analyzed**	**CAS#**
VOLATILE ORGANICS IN AIR		**TO-15**					Analyst: JJ	
1,1,1-Trichloroethane	< 1.0	1.0	< 5.46	5.46		2	3/19/2015	71-55-6
1,1,2,2-Tetrachloroethane	< 1.0	1.0	< 6.87	6.87		2	3/19/2015	79-34-5
1,1,2-Trichloroethane	< 1.0	1.0	< 5.46	5.46		2	3/19/2015	79-00-5
1,1-Dichloroethane	< 1.0	1.0	< 4.05	4.05		2	3/19/2015	75-34-3
1,1-Dichloroethene	< 1.0	1.0	< 3.97	3.97		2	3/19/2015	75-35-4
1,2,4-Trichlorobenzene	< 4.0	4.0	< 29.7	29.7	L5	2	3/19/2015	120-82-1
1,2,4-Trimethylbenzene	< 1.0	1.0	< 4.92	4.92		2	3/19/2015	95-63-6
1,2-Dibromoethane	< 1.0	1.0	< 7.68	7.68		2	3/19/2015	106-93-4
1,2-Dichlorobenzene	< 1.0	1.0	< 6.01	6.01		2	3/19/2015	95-50-1
1,2-Dichloroethane	< 1.0	1.0	< 4.05	4.05		2	3/19/2015	107-06-2
1,2-Dichloropropane	< 1.0	1.0	< 4.62	4.62		2	3/19/2015	78-87-5
1,3,5-Trimethylbenzene	< 1.0	1.0	< 4.92	4.92		2	3/19/2015	108-67-8
1,3-Butadiene	< 1.0	1.0	< 2.21	2.21	L5	2	3/19/2015	106-99-0
1,3-Dichlorobenzene	< 1.0	1.0	< 6.01	6.01		2	3/19/2015	541-73-1
1,4-Dichlorobenzene	< 1.0	1.0	< 6.01	6.01		2	3/19/2015	106-46-7
1,4-Dioxane	< 4.0	4.0	< 14.4	14.4		2	3/19/2015	123-91-1
2,2,4-Trimethylpentane	< 1.0	1.0	< 4.66	4.66	L5	2	3/19/2015	540-84-1
2-Butanone (MEK)	< 10	10	< 29.5	29.5		2	3/19/2015	78-93-3
2-Hexanone	< 10	10	< 41.0	41.0	L5	2	3/19/2015	591-78-6
2-Propanol (IPA)	< 10	10	< 24.5	24.5	L5	2	3/19/2015	67-63-0
4-Ethyltoluene	< 2.0	2.0	< 9.84	9.84		2	3/19/2015	622-96-8
4-Methyl-2-pentanone (MIK)	< 10	10	< 41.0	41.0	L5	2	3/19/2015	108-10-1
Acetone	< 10	10	< 23.8	23.8		2	3/19/2015	67-64-1
Allyl chloride	< 2.0	2.0	< 6.26	6.26		2	3/19/2015	107-05-1
Benzene	< 1.0	1.0	< 3.19	3.19		2	3/19/2015	71-43-2
Benzyl chloride	< 4.0	4.0	< 20.7	20.7		2	3/19/2015	100-44-7
Bromodichloromethane	< 1.0	1.0	< 6.70	6.70		2	3/19/2015	75-27-4
Bromoethene(Vinyl Bromide)	< 1.0	1.0	< 4.37	4.37		2	3/19/2015	593-60-2
Bromoform	< 1.0	1.0	< 10.3	10.3	L5	2	3/19/2015	75-25-2
Bromomethane	< 1.0	1.0	< 3.88	3.88		2	3/19/2015	74-83-9
Butyl benzene	< 2.0	2.0	< 11.0	11.0		2	3/19/2015	104-51-8
Carbon disulfide	< 4.0	4.0	< 12.4	12.4		2	3/19/2015	75-15-0
Carbon tetrachloride	< 1.0	1.0	< 6.29	6.29		2	3/19/2015	56-23-5
Chlorobenzene	< 1.0	1.0	< 4.60	4.60		2	3/19/2015	108-90-7
Chloroethane	< 1.0	1.0	< 2.64	2.64		2	3/19/2015	75-00-3
Chloroform	< 1.0	1.0	< 4.88	4.88		2	3/19/2015	67-66-3
Chloromethane	< 4.0	4.0	< 8.28	8.28		2	3/19/2015	74-87-3
cis-1,2-Dichloroethene	< 1.0	1.0	< 3.96	3.96		2	3/19/2015	156-59-2
cis-1,3-Dichloropropene	< 1.0	1.0	< 4.54	4.54		2	3/19/2015	542-75-6
Cyclohexane	< 1.0	1.0	< 3.44	3.44		2	3/19/2015	110-82-7
Dibromochloromethane	< 1.0	1.0	< 8.52	8.52		2	3/19/2015	124-48-1
Dichlorodifluoromethane(F-12)	< 2.0	2.0	< 9.90	9.90		2	3/19/2015	75-71-8
Dichlorotetrafluoroethane(F-114)	< 1.0	1.0	< 6.99	6.99		2	3/19/2015	76-14-2
Ethanol	< 10	10	< 18.8	18.8		2	3/19/2015	64-17-5
Ethyl Acetate	< 1.0	1.0	< 3.60	3.60	L5	2	3/19/2015	141-78-6
Ethylbenzene	< 1.0	1.0	< 4.34	4.34		2	3/19/2015	100-41-4

Airtech Environmental Laboratories (AEL) - AZ 0740

4620 E.Elwood St., Suite 13, Phoenix, AZ 85040 480-968-5888 Fax 480-966-1888

Client:	AMEC F/W	**Client Sample ID:**	PRUD-19-SG-030915
Project:	Broadway Pantana	**Project Number:**	14.2014-2029
Lab Order:	15C013	**Collection:**	3/9/2015
Lab ID:	04	**Matrix:**	Soil Vapor

	ppbv		ug/M^3				Date	
Analyses	**Result**	**Limit**	**Result**	**Limit**	**Qual**	**DF**	**Analyzed**	**CAS#**
VOLATILE ORGANICS IN AIR	**TO-15**						Analyst: JJ	
Heptane	< 1.0	1.0	< 4.10	4.10		2	3/19/2015	142-82-5
Hexachlorobutadiene	< 2.0	2.0	< 21.3	21.3	L5	2	3/19/2015	87-68-3
Hexane	< 2.0	2.0	< 7.04	7.04		2	3/19/2015	110-54-3
Isopropylbenzene	< 2.0	2.0	< 9.84	9.84		2	3/19/2015	98-82-8
m&p-Xylene	< 2.0	2.0	< 8.68	8.68		2	3/19/2015	179601-23-1
Methyl tert-butyl ether	< 4.0	4.0	< 14.4	14.4		2	3/19/2015	1634-04-4
Methylcyclohexane	< 2.0	2.0	< 8.04	8.04		2	3/19/2015	108-87-2
Methylene chloride	< 4.0	4.0	< 13.9	13.9		2	3/19/2015	75-09-2
Naphthalene	< 4.0	4.0	< 21.0	21.0		2	3/19/2015	91-20-3
Nonane	< 2.0	2.0	< 10.5	10.5		2	3/19/2015	111-84-2
Octane	< 2.0	2.0	< 9.34	9.34		2	3/19/2015	111-65-9
o-Xylene	< 1.0	1.0	< 4.34	4.34		2	3/19/2015	95-47-6
Propene (Propylene)	< 2.0	2.0	< 3.44	3.44		2	3/19/2015	115-07-1
Propylbenzene	< 2.0	2.0	< 9.84	9.84		2	3/19/2015	103-65-1
Sec-Butyl benzene	< 2.0	2.0	< 11.0	11.0		2	3/19/2015	135-98-8
Styrene	< 1.0	1.0	< 4.26	4.26		2	3/19/2015	100-42-5
Tert-Butyl benzene	< 2.0	2.0	< 11.0	11.0		2	3/19/2015	98-06-6
Tetrachloroethene	< 1.0	1.0	< 6.78	6.78		2	3/19/2015	127-18-4
Tetrahydrofuran	< 4.0	4.0	< 11.8	11.8	L5	2	3/19/2015	109-99-9
Toluene	< 1.0	1.0	< 3.77	3.77		2	3/19/2015	108-88-3
trans-1,2-Dichloroethene	< 1.0	1.0	< 3.96	3.96		2	3/19/2015	156-60-5
trans-1,3-Dichloropropene	< 1.0	1.0	< 4.54	4.54		2	3/19/2015	542-75-6
Trichloroethene	< 1.0	1.0	< 5.37	5.37		2	3/19/2015	79-01-6
Trichlorofluoromethane(F-11)	< 1.0	1.0	< 5.62	5.62		2	3/19/2015	75-69-4
Trichlorotrifluoroethane(F-113)	< 1.0	1.0	< 7.66	7.66		2	3/19/2015	76-13-1
Vinyl acetate	< 1.0	1.0	< 3.52	3.52	L5	2	3/19/2015	108-05-4
Vinyl chloride	< 1.0	1.0	< 2.56	2.56		2	3/19/2015	75-01-4
Surr: 4-Bromofluorobenzene	84.1	70-130	%REC					

Tentatively Identified Compounds (TIC's)

Difluoroethane	< 20	20	ppbv		T4	2	3/19/2015

Airtech Environmental Laboratories (AEL) - AZ 0740

4620 E.Elwood St., Suite 13, Phoenix, AZ 85040 480-968-5888 Fax 480-966-1888

Client:	AMEC F/W	**Client Sample ID:**	PRUD-18-SG-030915
Project:	Broadway Pantana	**Project Number:**	14.2014-2029
Lab Order:	15C013	**Collection:**	3/9/2015
Lab ID:	05	**Matrix:**	Soil Vapor

	ppbv		ug/M^3				Date	
Analyses	**Result**	**Limit**	**Result**	**Limit**	**Qual**	**DF**	**Analyzed**	**CAS#**
VOLATILE ORGANICS IN AIR		**TO-15**					Analyst: JJ	
1,1,1-Trichloroethane	< 1.0	1.0	< 5.46	5.46		2	3/19/2015	71-55-6
1,1,2,2-Tetrachloroethane	< 1.0	1.0	< 6.87	6.87		2	3/19/2015	79-34-5
1,1,2-Trichloroethane	< 1.0	1.0	< 5.46	5.46		2	3/19/2015	79-00-5
1,1-Dichloroethane	< 1.0	1.0	< 4.05	4.05		2	3/19/2015	75-34-3
1,1-Dichloroethene	< 1.0	1.0	< 3.97	3.97		2	3/19/2015	75-35-4
1,2,4-Trichlorobenzene	< 4.0	4.0	< 29.7	29.7	L5	2	3/19/2015	120-82-1
1,2,4-Trimethylbenzene	< 1.0	1.0	< 4.92	4.92		2	3/19/2015	95-63-6
1,2-Dibromoethane	< 1.0	1.0	< 7.68	7.68		2	3/19/2015	106-93-4
1,2-Dichlorobenzene	< 1.0	1.0	< 6.01	6.01		2	3/19/2015	95-50-1
1,2-Dichloroethane	< 1.0	1.0	< 4.05	4.05		2	3/19/2015	107-06-2
1,2-Dichloropropane	< 1.0	1.0	< 4.62	4.62		2	3/19/2015	78-87-5
1,3,5-Trimethylbenzene	< 1.0	1.0	< 4.92	4.92		2	3/19/2015	108-67-8
1,3-Butadiene	< 1.0	1.0	< 2.21	2.21	L5	2	3/19/2015	106-99-0
1,3-Dichlorobenzene	< 1.0	1.0	< 6.01	6.01		2	3/19/2015	541-73-1
1,4-Dichlorobenzene	< 1.0	1.0	< 6.01	6.01		2	3/19/2015	106-46-7
1,4-Dioxane	< 4.0	4.0	< 14.4	14.4		2	3/19/2015	123-91-1
2,2,4-Trimethylpentane	< 1.0	1.0	< 4.66	4.66	L5	2	3/19/2015	540-84-1
2-Butanone (MEK)	< 10	10	< 29.5	29.5		2	3/19/2015	78-93-3
2-Hexanone	< 10	10	< 41.0	41.0	L5	2	3/19/2015	591-78-6
2-Propanol (IPA)	< 10	10	< 24.5	24.5	L5	2	3/19/2015	67-63-0
4-Ethyltoluene	< 2.0	2.0	< 9.84	9.84		2	3/19/2015	622-96-8
4-Methyl-2-pentanone (MIK)	< 10	10	< 41.0	41.0	L5	2	3/19/2015	108-10-1
Acetone	< 10	10	< 23.8	23.8		2	3/19/2015	67-64-1
Allyl chloride	< 2.0	2.0	< 6.26	6.26		2	3/19/2015	107-05-1
Benzene	< 1.0	1.0	< 3.19	3.19		2	3/19/2015	71-43-2
Benzyl chloride	< 4.0	4.0	< 20.7	20.7		2	3/19/2015	100-44-7
Bromodichloromethane	< 1.0	1.0	< 6.70	6.70		2	3/19/2015	75-27-4
Bromoethene(Vinyl Bromide)	< 1.0	1.0	< 4.37	4.37		2	3/19/2015	593-60-2
Bromoform	< 1.0	1.0	< 10.3	10.3	L5	2	3/19/2015	75-25-2
Bromomethane	< 1.0	1.0	< 3.88	3.88		2	3/19/2015	74-83-9
Butyl benzene	< 2.0	2.0	< 11.0	11.0		2	3/19/2015	104-51-8
Carbon disulfide	< 4.0	4.0	< 12.4	12.4		2	3/19/2015	75-15-0
Carbon tetrachloride	< 1.0	1.0	< 6.29	6.29		2	3/19/2015	56-23-5
Chlorobenzene	< 1.0	1.0	< 4.60	4.60		2	3/19/2015	108-90-7
Chloroethane	< 1.0	1.0	< 2.64	2.64		2	3/19/2015	75-00-3
Chloroform	< 1.0	1.0	< 4.88	4.88		2	3/19/2015	67-66-3
Chloromethane	< 4.0	4.0	< 8.28	8.28		2	3/19/2015	74-87-3
cis-1,2-Dichloroethene	< 1.0	1.0	< 3.96	3.96		2	3/19/2015	156-59-2
cis-1,3-Dichloropropene	< 1.0	1.0	< 4.54	4.54		2	3/19/2015	542-75-6
Cyclohexane	< 1.0	1.0	< 3.44	3.44		2	3/19/2015	110-82-7
Dibromochloromethane	< 1.0	1.0	< 8.52	8.52		2	3/19/2015	124-48-1
Dichlorodifluoromethane(F-12)	< 2.0	2.0	< 9.90	9.90		2	3/19/2015	75-71-8
Dichlorotetrafluoroethane(F-114)	< 1.0	1.0	< 6.99	6.99		2	3/19/2015	76-14-2
Ethanol	< 10	10	< 18.8	18.8		2	3/19/2015	64-17-5
Ethyl Acetate	< 1.0	1.0	< 3.60	3.60	L5	2	3/19/2015	141-78-6
Ethylbenzene	< 1.0	1.0	< 4.34	4.34		2	3/19/2015	100-41-4

Airtech Environmental Laboratories (AEL) - AZ 0740

4620 E.Elwood St., Suite 13, Phoenix, AZ 85040 480-968-5888 Fax 480-966-1888

Client:	AMEC F/W	**Client Sample ID:**	PRUD-18-SG-030915
Project:	Broadway Pantana	**Project Number:**	14.2014-2029
Lab Order:	15C013	**Collection:**	3/9/2015
Lab ID:	05	**Matrix:**	Soil Vapor

	ppbv		ug/M^3				Date	
Analyses	**Result**	**Limit**	**Result**	**Limit**	**Qual**	**DF**	**Analyzed**	**CAS#**
VOLATILE ORGANICS IN AIR		**TO-15**					Analyst: JJ	
Heptane	< 1.0	1.0	< 4.10	4.10		2	3/19/2015	142-82-5
Hexachlorobutadiene	< 2.0	2.0	< 21.3	21.3	L5	2	3/19/2015	87-68-3
Hexane	< 2.0	2.0	< 7.04	7.04		2	3/19/2015	110-54-3
Isopropylbenzene	< 2.0	2.0	< 9.84	9.84		2	3/19/2015	98-82-8
m&p-Xylene	< 2.0	2.0	< 8.68	8.68		2	3/19/2015	179601-23-1
Methyl tert-butyl ether	< 4.0	4.0	< 14.4	14.4		2	3/19/2015	1634-04-4
Methylcyclohexane	< 2.0	2.0	< 8.04	8.04		2	3/19/2015	108-87-2
Methylene chloride	< 4.0	4.0	< 13.9	13.9		2	3/19/2015	75-09-2
Naphthalene	< 4.0	4.0	< 21.0	21.0		2	3/19/2015	91-20-3
Nonane	< 2.0	2.0	< 10.5	10.5		2	3/19/2015	111-84-2
Octane	< 2.0	2.0	< 9.34	9.34		2	3/19/2015	111-65-9
o-Xylene	< 1.0	1.0	< 4.34	4.34		2	3/19/2015	95-47-6
Propene (Propylene)	< 2.0	2.0	< 3.44	3.44		2	3/19/2015	115-07-1
Propylbenzene	< 2.0	2.0	< 9.84	9.84		2	3/19/2015	103-65-1
Sec-Butyl benzene	< 2.0	2.0	< 11.0	11.0		2	3/19/2015	135-98-8
Styrene	< 1.0	1.0	< 4.26	4.26		2	3/19/2015	100-42-5
Tert-Butyl benzene	< 2.0	2.0	< 11.0	11.0		2	3/19/2015	98-06-6
Tetrachloroethene	**1.5**	**1.0**	**10.0**	**6.78**		2	3/19/2015	127-18-4
Tetrahydrofuran	< 4.0	4.0	< 11.8	11.8	L5	2	3/19/2015	109-99-9
Toluene	< 1.0	1.0	< 3.77	3.77		2	3/19/2015	108-88-3
trans-1,2-Dichloroethene	< 1.0	1.0	< 3.96	3.96		2	3/19/2015	156-60-5
trans-1,3-Dichloropropene	< 1.0	1.0	< 4.54	4.54		2	3/19/2015	542-75-6
Trichloroethene	< 1.0	1.0	< 5.37	5.37		2	3/19/2015	79-01-6
Trichlorofluoromethane(F-11)	< 1.0	1.0	< 5.62	5.62		2	3/19/2015	75-69-4
Trichlorotrifluoroethane(F-113)	< 1.0	1.0	< 7.66	7.66		2	3/19/2015	76-13-1
Vinyl acetate	< 1.0	1.0	< 3.52	3.52	L5	2	3/19/2015	108-05-4
Vinyl chloride	< 1.0	1.0	< 2.56	2.56		2	3/19/2015	75-01-4
Surr: 4-Bromofluorobenzene	85.7	70-130	%REC					

Tentatively Identified Compounds (TIC's)

Difluoroethane	< 20	20	ppbv		T4	2	3/19/2015

Airtech Environmental Laboratories (AEL) - AZ 0740

4620 E.Elwood St., Suite 13, Phoenix, AZ 85040 480-968-5888 Fax 480-966-1888

Client:	AMEC F/W	**Client Sample ID:**	PRUD-17-SG-030915
Project:	Broadway Pantana	**Project Number:**	14.2014-2029
Lab Order:	15C013	**Collection:**	3/9/2015
Lab ID:	06	**Matrix:**	Soil Vapor

	ppbv		ug/M^3				Date	
Analyses	**Result**	**Limit**	**Result**	**Limit**	**Qual**	**DF**	**Analyzed**	**CAS#**
VOLATILE ORGANICS IN AIR		**TO-15**					Analyst: JJ	
1,1,1-Trichloroethane	< 1.0	1.0	< 5.46	5.46		2	3/19/2015	71-55-6
1,1,2,2-Tetrachloroethane	< 1.0	1.0	< 6.87	6.87		2	3/19/2015	79-34-5
1,1,2-Trichloroethane	< 1.0	1.0	< 5.46	5.46		2	3/19/2015	79-00-5
1,1-Dichloroethane	< 1.0	1.0	< 4.05	4.05		2	3/19/2015	75-34-3
1,1-Dichloroethene	< 1.0	1.0	< 3.97	3.97		2	3/19/2015	75-35-4
1,2,4-Trichlorobenzene	< 4.0	4.0	< 29.7	29.7	L5	2	3/19/2015	120-82-1
1,2,4-Trimethylbenzene	< 1.0	1.0	< 4.92	4.92		2	3/19/2015	95-63-6
1,2-Dibromoethane	< 1.0	1.0	< 7.68	7.68		2	3/19/2015	106-93-4
1,2-Dichlorobenzene	< 1.0	1.0	< 6.01	6.01		2	3/19/2015	95-50-1
1,2-Dichloroethane	< 1.0	1.0	< 4.05	4.05		2	3/19/2015	107-06-2
1,2-Dichloropropane	< 1.0	1.0	< 4.62	4.62		2	3/19/2015	78-87-5
1,3,5-Trimethylbenzene	< 1.0	1.0	< 4.92	4.92		2	3/19/2015	108-67-8
1,3-Butadiene	< 1.0	1.0	< 2.21	2.21	L5	2	3/19/2015	106-99-0
1,3-Dichlorobenzene	< 1.0	1.0	< 6.01	6.01		2	3/19/2015	541-73-1
1,4-Dichlorobenzene	< 1.0	1.0	< 6.01	6.01		2	3/19/2015	106-46-7
1,4-Dioxane	< 4.0	4.0	< 14.4	14.4		2	3/19/2015	123-91-1
2,2,4-Trimethylpentane	< 1.0	1.0	< 4.66	4.66	L5	2	3/19/2015	540-84-1
2-Butanone (MEK)	< 10	10	< 29.5	29.5		2	3/19/2015	78-93-3
2-Hexanone	< 10	10	< 41.0	41.0	L5	2	3/19/2015	591-78-6
2-Propanol (IPA)	< 10	10	< 24.5	24.5	L5	2	3/19/2015	67-63-0
4-Ethyltoluene	< 2.0	2.0	< 9.84	9.84		2	3/19/2015	622-96-8
4-Methyl-2-pentanone (MIK)	< 10	10	< 41.0	41.0	L5	2	3/19/2015	108-10-1
Acetone	< 10	10	< 23.8	23.8		2	3/19/2015	67-64-1
Allyl chloride	< 2.0	2.0	< 6.26	6.26		2	3/19/2015	107-05-1
Benzene	< 1.0	1.0	< 3.19	3.19		2	3/19/2015	71-43-2
Benzyl chloride	< 4.0	4.0	< 20.7	20.7		2	3/19/2015	100-44-7
Bromodichloromethane	< 1.0	1.0	< 6.70	6.70		2	3/19/2015	75-27-4
Bromoethene(Vinyl Bromide)	< 1.0	1.0	< 4.37	4.37		2	3/19/2015	593-60-2
Bromoform	< 1.0	1.0	< 10.3	10.3	L5	2	3/19/2015	75-25-2
Bromomethane	< 1.0	1.0	< 3.88	3.88		2	3/19/2015	74-83-9
Butyl benzene	< 2.0	2.0	< 11.0	11.0		2	3/19/2015	104-51-8
Carbon disulfide	< 4.0	4.0	< 12.4	12.4		2	3/19/2015	75-15-0
Carbon tetrachloride	< 1.0	1.0	< 6.29	6.29		2	3/19/2015	56-23-5
Chlorobenzene	< 1.0	1.0	< 4.60	4.60		2	3/19/2015	108-90-7
Chloroethane	< 1.0	1.0	< 2.64	2.64		2	3/19/2015	75-00-3
Chloroform	**1.2**	**1.0**	**5.76**	**4.88**		2	3/19/2015	67-66-3
Chloromethane	< 4.0	4.0	< 8.28	8.28		2	3/19/2015	74-87-3
cis-1,2-Dichloroethene	< 1.0	1.0	< 3.96	3.96		2	3/19/2015	156-59-2
cis-1,3-Dichloropropene	< 1.0	1.0	< 4.54	4.54		2	3/19/2015	542-75-6
Cyclohexane	< 1.0	1.0	< 3.44	3.44		2	3/19/2015	110-82-7
Dibromochloromethane	< 1.0	1.0	< 8.52	8.52		2	3/19/2015	124-48-1
Dichlorodifluoromethane(F-12)	< 2.0	2.0	< 9.90	9.90		2	3/19/2015	75-71-8
Dichlorotetrafluoroethane(F-114)	< 1.0	1.0	< 6.99	6.99		2	3/19/2015	76-14-2
Ethanol	< 10	10	< 18.8	18.8		2	3/19/2015	64-17-5
Ethyl Acetate	< 1.0	1.0	< 3.60	3.60	L5	2	3/19/2015	141-78-6
Ethylbenzene	< 1.0	1.0	< 4.34	4.34		2	3/19/2015	100-41-4

Airtech Environmental Laboratories (AEL) - AZ 0740

4620 E.Elwood St., Suite 13, Phoenix, AZ 85040 480-968-5888 Fax 480-966-1888

Client:	AMEC F/W	**Client Sample ID:**	PRUD-17-SG-030915
Project:	Broadway Pantana	**Project Number:**	14.2014-2029
Lab Order:	15C013	**Collection:**	3/9/2015
Lab ID:	06	**Matrix:**	Soil Vapor

	ppbv		ug/M^3				Date	
Analyses	**Result**	**Limit**	**Result**	**Limit**	**Qual**	**DF**	**Analyzed**	**CAS#**
VOLATILE ORGANICS IN AIR	**TO-15**						Analyst: JJ	
Heptane	< 1.0	1.0	< 4.10	4.10		2	3/19/2015	142-82-5
Hexachlorobutadiene	< 2.0	2.0	< 21.3	21.3	L5	2	3/19/2015	87-68-3
Hexane	< 2.0	2.0	< 7.04	7.04		2	3/19/2015	110-54-3
Isopropylbenzene	< 2.0	2.0	< 9.84	9.84		2	3/19/2015	98-82-8
m&p-Xylene	< 2.0	2.0	< 8.68	8.68		2	3/19/2015	179601-23-1
Methyl tert-butyl ether	< 4.0	4.0	< 14.4	14.4		2	3/19/2015	1634-04-4
Methylcyclohexane	< 2.0	2.0	< 8.04	8.04		2	3/19/2015	108-87-2
Methylene chloride	< 4.0	4.0	< 13.9	13.9		2	3/19/2015	75-09-2
Naphthalene	< 4.0	4.0	< 21.0	21.0		2	3/19/2015	91-20-3
Nonane	< 2.0	2.0	< 10.5	10.5		2	3/19/2015	111-84-2
Octane	< 2.0	2.0	< 9.34	9.34		2	3/19/2015	111-65-9
o-Xylene	< 1.0	1.0	< 4.34	4.34		2	3/19/2015	95-47-6
Propene (Propylene)	< 2.0	2.0	< 3.44	3.44		2	3/19/2015	115-07-1
Propylbenzene	< 2.0	2.0	< 9.84	9.84		2	3/19/2015	103-65-1
Sec-Butyl benzene	< 2.0	2.0	< 11.0	11.0		2	3/19/2015	135-98-8
Styrene	< 1.0	1.0	< 4.26	4.26		2	3/19/2015	100-42-5
Tert-Butyl benzene	< 2.0	2.0	< 11.0	11.0		2	3/19/2015	98-06-6
Tetrachloroethene	**6.1**	**1.0**	**41.1**	**6.78**		2	3/19/2015	127-18-4
Tetrahydrofuran	< 4.0	4.0	< 11.8	11.8	L5	2	3/19/2015	109-99-9
Toluene	< 1.0	1.0	< 3.77	3.77		2	3/19/2015	108-88-3
trans-1,2-Dichloroethene	< 1.0	1.0	< 3.96	3.96		2	3/19/2015	156-60-5
trans-1,3-Dichloropropene	< 1.0	1.0	< 4.54	4.54		2	3/19/2015	542-75-6
Trichloroethene	< 1.0	1.0	< 5.37	5.37		2	3/19/2015	79-01-6
Trichlorofluoromethane(F-11)	< 1.0	1.0	< 5.62	5.62		2	3/19/2015	75-69-4
Trichlorotrifluoroethane(F-113)	< 1.0	1.0	< 7.66	7.66		2	3/19/2015	76-13-1
Vinyl acetate	< 1.0	1.0	< 3.52	3.52	L5	2	3/19/2015	108-05-4
Vinyl chloride	< 1.0	1.0	< 2.56	2.56		2	3/19/2015	75-01-4
Surr: 4-Bromofluorobenzene	84.0	70-130	%REC					

Tentatively Identified Compounds (TIC's)

Difluoroethane	< 20	20	ppbv		T4	2	3/19/2015

Airtech Environmental Laboratories (AEL) - AZ 0740

4620 E.Elwood St., Suite 13, Phoenix, AZ 85040 480-968-5888 Fax 480-966-1888

Client:	AMEC F/W	**Client Sample ID:**	PRUD-16-SG-030915
Project:	Broadway Pantana	**Project Number:**	14.2014-2029
Lab Order:	15C013	**Collection:**	3/9/2015
Lab ID:	07	**Matrix:**	Soil Vapor

	ppbv		ug/M^3				Date	
Analyses	**Result**	**Limit**	**Result**	**Limit**	**Qual**	**DF**	**Analyzed**	**CAS#**
VOLATILE ORGANICS IN AIR		**TO-15**					Analyst: JJ	
1,1,1-Trichloroethane	< 1.0	1.0	< 5.46	5.46		2	3/19/2015	71-55-6
1,1,2,2-Tetrachloroethane	< 1.0	1.0	< 6.87	6.87		2	3/19/2015	79-34-5
1,1,2-Trichloroethane	< 1.0	1.0	< 5.46	5.46		2	3/19/2015	79-00-5
1,1-Dichloroethane	< 1.0	1.0	< 4.05	4.05		2	3/19/2015	75-34-3
1,1-Dichloroethene	< 1.0	1.0	< 3.97	3.97		2	3/19/2015	75-35-4
1,2,4-Trichlorobenzene	< 4.0	4.0	< 29.7	29.7	L5	2	3/19/2015	120-82-1
1,2,4-Trimethylbenzene	< 1.0	1.0	< 4.92	4.92		2	3/19/2015	95-63-6
1,2-Dibromoethane	< 1.0	1.0	< 7.68	7.68		2	3/19/2015	106-93-4
1,2-Dichlorobenzene	< 1.0	1.0	< 6.01	6.01		2	3/19/2015	95-50-1
1,2-Dichloroethane	< 1.0	1.0	< 4.05	4.05		2	3/19/2015	107-06-2
1,2-Dichloropropane	< 1.0	1.0	< 4.62	4.62		2	3/19/2015	78-87-5
1,3,5-Trimethylbenzene	< 1.0	1.0	< 4.92	4.92		2	3/19/2015	108-67-8
1,3-Butadiene	< 1.0	1.0	< 2.21	2.21	L5	2	3/19/2015	106-99-0
1,3-Dichlorobenzene	< 1.0	1.0	< 6.01	6.01		2	3/19/2015	541-73-1
1,4-Dichlorobenzene	< 1.0	1.0	< 6.01	6.01		2	3/19/2015	106-46-7
1,4-Dioxane	< 4.0	4.0	< 14.4	14.4		2	3/19/2015	123-91-1
2,2,4-Trimethylpentane	< 1.0	1.0	< 4.66	4.66	L5	2	3/19/2015	540-84-1
2-Butanone (MEK)	< 10	10	< 29.5	29.5		2	3/19/2015	78-93-3
2-Hexanone	< 10	10	< 41.0	41.0	L5	2	3/19/2015	591-78-6
2-Propanol (IPA)	< 10	10	< 24.5	24.5	L5	2	3/19/2015	67-63-0
4-Ethyltoluene	< 2.0	2.0	< 9.84	9.84		2	3/19/2015	622-96-8
4-Methyl-2-pentanone (MIK)	< 10	10	< 41.0	41.0	L5	2	3/19/2015	108-10-1
Acetone	< 10	10	< 23.8	23.8		2	3/19/2015	67-64-1
Allyl chloride	< 2.0	2.0	< 6.26	6.26		2	3/19/2015	107-05-1
Benzene	< 1.0	1.0	< 3.19	3.19		2	3/19/2015	71-43-2
Benzyl chloride	< 4.0	4.0	< 20.7	20.7		2	3/19/2015	100-44-7
Bromodichloromethane	< 1.0	1.0	< 6.70	6.70		2	3/19/2015	75-27-4
Bromoethene(Vinyl Bromide)	< 1.0	1.0	< 4.37	4.37		2	3/19/2015	593-60-2
Bromoform	< 1.0	1.0	< 10.3	10.3	L5	2	3/19/2015	75-25-2
Bromomethane	< 1.0	1.0	< 3.88	3.88		2	3/19/2015	74-83-9
Butyl benzene	< 2.0	2.0	< 11.0	11.0		2	3/19/2015	104-51-8
Carbon disulfide	< 4.0	4.0	< 12.4	12.4		2	3/19/2015	75-15-0
Carbon tetrachloride	< 1.0	1.0	< 6.29	6.29		2	3/19/2015	56-23-5
Chlorobenzene	< 1.0	1.0	< 4.60	4.60		2	3/19/2015	108-90-7
Chloroethane	< 1.0	1.0	< 2.64	2.64		2	3/19/2015	75-00-3
Chloroform	**2.2**	**1.0**	**10.5**	**4.88**		2	3/19/2015	67-66-3
Chloromethane	< 4.0	4.0	< 8.28	8.28		2	3/19/2015	74-87-3
cis-1,2-Dichloroethene	< 1.0	1.0	< 3.96	3.96		2	3/19/2015	156-59-2
cis-1,3-Dichloropropene	< 1.0	1.0	< 4.54	4.54		2	3/19/2015	542-75-6
Cyclohexane	< 1.0	1.0	< 3.44	3.44		2	3/19/2015	110-82-7
Dibromochloromethane	< 1.0	1.0	< 8.52	8.52		2	3/19/2015	124-48-1
Dichlorodifluoromethane(F-12)	< 2.0	2.0	< 9.90	9.90		2	3/19/2015	75-71-8
Dichlorotetrafluoroethane(F-114)	< 1.0	1.0	< 6.99	6.99		2	3/19/2015	76-14-2
Ethanol	< 10	10	< 18.8	18.8		2	3/19/2015	64-17-5
Ethyl Acetate	< 1.0	1.0	< 3.60	3.60	L5	2	3/19/2015	141-78-6
Ethylbenzene	< 1.0	1.0	< 4.34	4.34		2	3/19/2015	100-41-4

Airtech Environmental Laboratories (AEL) - AZ 0740

4620 E.Elwood St., Suite 13, Phoenix, AZ 85040 480-968-5888 Fax 480-966-1888

Client:	AMEC F/W	**Client Sample ID:**	PRUD-16-SG-030915
Project:	Broadway Pantana	**Project Number:**	14.2014-2029
Lab Order:	15C013	**Collection:**	3/9/2015
Lab ID:	07	**Matrix:**	Soil Vapor

	ppbv		ug/M^3				Date	
Analyses	**Result**	**Limit**	**Result**	**Limit**	**Qual**	**DF**	**Analyzed**	**CAS#**
VOLATILE ORGANICS IN AIR	**TO-15**						Analyst: JJ	
Heptane	< 1.0	1.0	< 4.10	4.10		2	3/19/2015	142-82-5
Hexachlorobutadiene	< 2.0	2.0	< 21.3	21.3	L5	2	3/19/2015	87-68-3
Hexane	< 2.0	2.0	< 7.04	7.04		2	3/19/2015	110-54-3
Isopropylbenzene	< 2.0	2.0	< 9.84	9.84		2	3/19/2015	98-82-8
m&p-Xylene	< 2.0	2.0	< 8.68	8.68		2	3/19/2015	179601-23-1
Methyl tert-butyl ether	< 4.0	4.0	< 14.4	14.4		2	3/19/2015	1634-04-4
Methylcyclohexane	< 2.0	2.0	< 8.04	8.04		2	3/19/2015	108-87-2
Methylene chloride	< 4.0	4.0	< 13.9	13.9		2	3/19/2015	75-09-2
Naphthalene	< 4.0	4.0	< 21.0	21.0		2	3/19/2015	91-20-3
Nonane	< 2.0	2.0	< 10.5	10.5		2	3/19/2015	111-84-2
Octane	< 2.0	2.0	< 9.34	9.34		2	3/19/2015	111-65-9
o-Xylene	< 1.0	1.0	< 4.34	4.34		2	3/19/2015	95-47-6
Propene (Propylene)	< 2.0	2.0	< 3.44	3.44		2	3/19/2015	115-07-1
Propylbenzene	< 2.0	2.0	< 9.84	9.84		2	3/19/2015	103-65-1
Sec-Butyl benzene	< 2.0	2.0	< 11.0	11.0		2	3/19/2015	135-98-8
Styrene	< 1.0	1.0	< 4.26	4.26		2	3/19/2015	100-42-5
Tert-Butyl benzene	< 2.0	2.0	< 11.0	11.0		2	3/19/2015	98-06-6
Tetrachloroethene	**16**	**1.0**	**111**	**6.78**		2	3/19/2015	127-18-4
Tetrahydrofuran	< 4.0	4.0	< 11.8	11.8	L5	2	3/19/2015	109-99-9
Toluene	< 1.0	1.0	< 3.77	3.77		2	3/19/2015	108-88-3
trans-1,2-Dichloroethene	< 1.0	1.0	< 3.96	3.96		2	3/19/2015	156-60-5
trans-1,3-Dichloropropene	< 1.0	1.0	< 4.54	4.54		2	3/19/2015	542-75-6
Trichloroethene	< 1.0	1.0	< 5.37	5.37		2	3/19/2015	79-01-6
Trichlorofluoromethane(F-11)	< 1.0	1.0	< 5.62	5.62		2	3/19/2015	75-69-4
Trichlorotrifluoroethane(F-113)	< 1.0	1.0	< 7.66	7.66		2	3/19/2015	76-13-1
Vinyl acetate	< 1.0	1.0	< 3.52	3.52	L5	2	3/19/2015	108-05-4
Vinyl chloride	< 1.0	1.0	< 2.56	2.56		2	3/19/2015	75-01-4
Surr: 4-Bromofluorobenzene	86.4	70-130	%REC					

Tentatively Identified Compounds (TIC's)

Difluoroethane	< 20	20	ppbv		T4	2	3/19/2015

Airtech Environmental Laboratories (AEL) - AZ 0740

4620 E.Elwood St., Suite 13, Phoenix, AZ 85040 480-968-5888 Fax 480-966-1888

Client:	AMEC F/W	**Client Sample ID:**	MW-9-SG-031015
Project:	Broadway Pantana	**Project Number:**	14.2014-2029
Lab Order:	15C013	**Collection:**	3/10/2015
Lab ID:	08	**Matrix:**	Soil Vapor

	ppbv		ug/M^3				Date	
Analyses	**Result**	**Limit**	**Result**	**Limit**	**Qual**	**DF**	**Analyzed**	**CAS#**
VOLATILE ORGANICS IN AIR		**TO-15**					Analyst: JJ	
1,1,1-Trichloroethane	< 1.0	1.0	< 5.46	5.46		2	3/19/2015	71-55-6
1,1,2,2-Tetrachloroethane	< 1.0	1.0	< 6.87	6.87		2	3/19/2015	79-34-5
1,1,2-Trichloroethane	< 1.0	1.0	< 5.46	5.46		2	3/19/2015	79-00-5
1,1-Dichloroethane	< 1.0	1.0	< 4.05	4.05		2	3/19/2015	75-34-3
1,1-Dichloroethene	< 1.0	1.0	< 3.97	3.97		2	3/19/2015	75-35-4
1,2,4-Trichlorobenzene	< 4.0	4.0	< 29.7	29.7	L5	2	3/19/2015	120-82-1
1,2,4-Trimethylbenzene	< 1.0	1.0	< 4.92	4.92		2	3/19/2015	95-63-6
1,2-Dibromoethane	< 1.0	1.0	< 7.68	7.68		2	3/19/2015	106-93-4
1,2-Dichlorobenzene	< 1.0	1.0	< 6.01	6.01		2	3/19/2015	95-50-1
1,2-Dichloroethane	< 1.0	1.0	< 4.05	4.05		2	3/19/2015	107-06-2
1,2-Dichloropropane	< 1.0	1.0	< 4.62	4.62		2	3/19/2015	78-87-5
1,3,5-Trimethylbenzene	< 1.0	1.0	< 4.92	4.92		2	3/19/2015	108-67-8
1,3-Butadiene	< 1.0	1.0	< 2.21	2.21	L5	2	3/19/2015	106-99-0
1,3-Dichlorobenzene	< 1.0	1.0	< 6.01	6.01		2	3/19/2015	541-73-1
1,4-Dichlorobenzene	< 1.0	1.0	< 6.01	6.01		2	3/19/2015	106-46-7
1,4-Dioxane	< 4.0	4.0	< 14.4	14.4		2	3/19/2015	123-91-1
2,2,4-Trimethylpentane	< 1.0	1.0	< 4.66	4.66	L5	2	3/19/2015	540-84-1
2-Butanone (MEK)	< 10	10	< 29.5	29.5		2	3/19/2015	78-93-3
2-Hexanone	< 10	10	< 41.0	41.0	L5	2	3/19/2015	591-78-6
2-Propanol (IPA)	< 10	10	< 24.5	24.5	L5	2	3/19/2015	67-63-0
4-Ethyltoluene	< 2.0	2.0	< 9.84	9.84		2	3/19/2015	622-96-8
4-Methyl-2-pentanone (MIK)	< 10	10	< 41.0	41.0	L5	2	3/19/2015	108-10-1
Acetone	< 10	10	< 23.8	23.8		2	3/19/2015	67-64-1
Allyl chloride	< 2.0	2.0	< 6.26	6.26		2	3/19/2015	107-05-1
Benzene	< 1.0	1.0	< 3.19	3.19		2	3/19/2015	71-43-2
Benzyl chloride	< 4.0	4.0	< 20.7	20.7		2	3/19/2015	100-44-7
Bromodichloromethane	< 1.0	1.0	< 6.70	6.70		2	3/19/2015	75-27-4
Bromoethene(Vinyl Bromide)	< 1.0	1.0	< 4.37	4.37		2	3/19/2015	593-60-2
Bromoform	< 1.0	1.0	< 10.3	10.3	L5	2	3/19/2015	75-25-2
Bromomethane	< 1.0	1.0	< 3.88	3.88		2	3/19/2015	74-83-9
Butyl benzene	< 2.0	2.0	< 11.0	11.0		2	3/19/2015	104-51-8
Carbon disulfide	< 4.0	4.0	< 12.4	12.4		2	3/19/2015	75-15-0
Carbon tetrachloride	< 1.0	1.0	< 6.29	6.29		2	3/19/2015	56-23-5
Chlorobenzene	< 1.0	1.0	< 4.60	4.60		2	3/19/2015	108-90-7
Chloroethane	< 1.0	1.0	< 2.64	2.64		2	3/19/2015	75-00-3
Chloroform	**3.3**	**1.0**	**16.1**	**4.88**		2	3/19/2015	67-66-3
Chloromethane	< 4.0	4.0	< 8.28	8.28		2	3/19/2015	74-87-3
cis-1,2-Dichloroethene	< 1.0	1.0	< 3.96	3.96		2	3/19/2015	156-59-2
cis-1,3-Dichloropropene	< 1.0	1.0	< 4.54	4.54		2	3/19/2015	542-75-6
Cyclohexane	**1.8**	**1.0**	**6.05**	**3.44**		2	3/19/2015	110-82-7
Dibromochloromethane	< 1.0	1.0	< 8.52	8.52		2	3/19/2015	124-48-1
Dichlorodifluoromethane(F-12)	**7.6**	**2.0**	**37.5**	**9.90**		2	3/19/2015	75-71-8
Dichlorotetrafluoroethane(F-114)	**2.9**	**1.0**	**20.3**	**6.99**		2	3/19/2015	76-14-2
Ethanol	< 10	10	< 18.8	18.8		2	3/19/2015	64-17-5
Ethyl Acetate	< 1.0	1.0	< 3.60	3.60	L5	2	3/19/2015	141-78-6
Ethylbenzene	< 1.0	1.0	< 4.34	4.34		2	3/19/2015	100-41-4

Airtech Environmental Laboratories (AEL) - AZ 0740

4620 E.Elwood St., Suite 13, Phoenix, AZ 85040 480-968-5888 Fax 480-966-1888

Client:	AMEC F/W	**Client Sample ID:**	MW-9-SG-031015
Project:	Broadway Pantana	**Project Number:**	14.2014-2029
Lab Order:	15C013	**Collection:**	3/10/2015
Lab ID:	08	**Matrix:**	Soil Vapor

	ppbv		ug/M^3				Date	
Analyses	**Result**	**Limit**	**Result**	**Limit**	**Qual**	**DF**	**Analyzed**	**CAS#**
VOLATILE ORGANICS IN AIR		**TO-15**					Analyst: JJ	
Heptane	**9.9**	**1.0**	**40.4**	**4.10**		2	3/19/2015	142-82-5
Hexachlorobutadiene	< 2.0	2.0	< 21.3	21.3	L5	2	3/19/2015	87-68-3
Hexane	**4.7**	**2.0**	**16.6**	**7.04**		2	3/19/2015	110-54-3
Isopropylbenzene	< 2.0	2.0	< 9.84	9.84		2	3/19/2015	98-82-8
m&p-Xylene	< 2.0	2.0	< 8.68	8.68		2	3/19/2015	179601-23-1
Methyl tert-butyl ether	< 4.0	4.0	< 14.4	14.4		2	3/19/2015	1634-04-4
Methylcyclohexane	< 2.0	2.0	< 8.04	8.04		2	3/19/2015	108-87-2
Methylene chloride	< 4.0	4.0	< 13.9	13.9		2	3/19/2015	75-09-2
Naphthalene	< 4.0	4.0	< 21.0	21.0		2	3/19/2015	91-20-3
Nonane	< 2.0	2.0	< 10.5	10.5		2	3/19/2015	111-84-2
Octane	< 2.0	2.0	< 9.34	9.34		2	3/19/2015	111-65-9
o-Xylene	< 1.0	1.0	< 4.34	4.34		2	3/19/2015	95-47-6
Propene (Propylene)	< 2.0	2.0	< 3.44	3.44		2	3/19/2015	115-07-1
Propylbenzene	< 2.0	2.0	< 9.84	9.84		2	3/19/2015	103-65-1
Sec-Butyl benzene	< 2.0	2.0	< 11.0	11.0		2	3/19/2015	135-98-8
Styrene	< 1.0	1.0	< 4.26	4.26		2	3/19/2015	100-42-5
Tert-Butyl benzene	< 2.0	2.0	< 11.0	11.0		2	3/19/2015	98-06-6
Tetrachloroethene	**2.8**	**1.0**	**19.1**	**6.78**		2	3/19/2015	127-18-4
Tetrahydrofuran	< 4.0	4.0	< 11.8	11.8	L5	2	3/19/2015	109-99-9
Toluene	**2.1**	**1.0**	**7.84**	**3.77**		2	3/19/2015	108-88-3
trans-1,2-Dichloroethene	< 1.0	1.0	< 3.96	3.96		2	3/19/2015	156-60-5
trans-1,3-Dichloropropene	< 1.0	1.0	< 4.54	4.54		2	3/19/2015	542-75-6
Trichloroethene	< 1.0	1.0	< 5.37	5.37		2	3/19/2015	79-01-6
Trichlorofluoromethane(F-11)	< 1.0	1.0	< 5.62	5.62		2	3/19/2015	75-69-4
Trichlorotrifluoroethane(F-113)	< 1.0	1.0	< 7.66	7.66		2	3/19/2015	76-13-1
Vinyl acetate	< 1.0	1.0	< 3.52	3.52	L5	2	3/19/2015	108-05-4
Vinyl chloride	< 1.0	1.0	< 2.56	2.56		2	3/19/2015	75-01-4
Surr: 4-Bromofluorobenzene	84.3	70-130	%REC					

Tentatively Identified Compounds (TIC's)

Difluoroethane	< 20	20	ppbv		T4	2	3/19/2015

Airtech Environmental Laboratories (AEL) - AZ 0740

4620 E.Elwood St., Suite 13, Phoenix, AZ 85040 480-968-5888 Fax 480-966-1888

Client:	AMEC F/W	**Client Sample ID:**	MW-8-SG-031015
Project:	Broadway Pantana	**Project Number:**	14.2014-2029
Lab Order:	15C013	**Collection:**	3/10/2015
Lab ID:	09	**Matrix:**	Soil Vapor

	ppbv		ug/M^3				Date	
Analyses	**Result**	**Limit**	**Result**	**Limit**	**Qual**	**DF**	**Analyzed**	**CAS#**
VOLATILE ORGANICS IN AIR		**TO-15**					Analyst: JJ	
1,1,1-Trichloroethane	< 2.5	2.5	< 13.7	13.7		5	3/19/2015	71-55-6
1,1,2,2-Tetrachloroethane	< 2.5	2.5	< 17.2	17.2		5	3/19/2015	79-34-5
1,1,2-Trichloroethane	< 2.5	2.5	< 13.7	13.7		5	3/19/2015	79-00-5
1,1-Dichloroethane	< 2.5	2.5	< 10.1	10.1		5	3/19/2015	75-34-3
1,1-Dichloroethene	< 2.5	2.5	< 9.93	9.93		5	3/19/2015	75-35-4
1,2,4-Trichlorobenzene	< 10	10	< 74.2	74.2	L5	5	3/19/2015	120-82-1
1,2,4-Trimethylbenzene	< 2.5	2.5	< 12.3	12.3		5	3/19/2015	95-63-6
1,2-Dibromoethane	< 2.5	2.5	< 19.2	19.2		5	3/19/2015	106-93-4
1,2-Dichlorobenzene	< 2.5	2.5	< 15.0	15.0		5	3/19/2015	95-50-1
1,2-Dichloroethane	< 2.5	2.5	< 10.1	10.1		5	3/19/2015	107-06-2
1,2-Dichloropropane	< 2.5	2.5	< 11.6	11.6		5	3/19/2015	78-87-5
1,3,5-Trimethylbenzene	< 2.5	2.5	< 12.3	12.3		5	3/19/2015	108-67-8
1,3-Butadiene	< 2.5	2.5	< 5.53	5.53	L5	5	3/19/2015	106-99-0
1,3-Dichlorobenzene	< 2.5	2.5	< 15.0	15.0		5	3/19/2015	541-73-1
1,4-Dichlorobenzene	< 2.5	2.5	< 15.0	15.0		5	3/19/2015	106-46-7
1,4-Dioxane	< 10	10	< 36.0	36.0		5	3/19/2015	123-91-1
2,2,4-Trimethylpentane	< 2.5	2.5	< 11.7	11.7	L5	5	3/19/2015	540-84-1
2-Butanone (MEK)	< 25	25	< 73.8	73.8		5	3/19/2015	78-93-3
2-Hexanone	< 25	25	< 103	103	L5	5	3/19/2015	591-78-6
2-Propanol (IPA)	< 25	25	< 61.3	61.3	L5	5	3/19/2015	67-63-0
4-Ethyltoluene	< 5.0	5.0	< 24.6	24.6		5	3/19/2015	622-96-8
4-Methyl-2-pentanone (MIK)	< 25	25	< 103	103	L5	5	3/19/2015	108-10-1
Acetone	< 25	25	< 59.5	59.5		5	3/19/2015	67-64-1
Allyl chloride	< 5.0	5.0	< 15.7	15.7		5	3/19/2015	107-05-1
Benzene	**8.1**	**2.5**	**25.8**	**7.98**		5	3/19/2015	71-43-2
Benzyl chloride	< 10	10	< 51.8	51.8		5	3/19/2015	100-44-7
Bromodichloromethane	< 2.5	2.5	< 16.8	16.8		5	3/19/2015	75-27-4
Bromoethene(Vinyl Bromide)	< 2.5	2.5	< 10.9	10.9		5	3/19/2015	593-60-2
Bromoform	< 2.5	2.5	< 25.9	25.9	L5	5	3/19/2015	75-25-2
Bromomethane	< 2.5	2.5	< 9.70	9.70		5	3/19/2015	74-83-9
Butyl benzene	< 5.0	5.0	< 27.5	27.5		5	3/19/2015	104-51-8
Carbon disulfide	< 10	10	< 31.1	31.1		5	3/19/2015	75-15-0
Carbon tetrachloride	< 2.5	2.5	< 15.7	15.7		5	3/19/2015	56-23-5
Chlorobenzene	< 2.5	2.5	< 11.5	11.5		5	3/19/2015	108-90-7
Chloroethane	< 2.5	2.5	< 6.60	6.60		5	3/19/2015	75-00-3
Chloroform	< 2.5	2.5	< 12.2	12.2		5	3/19/2015	67-66-3
Chloromethane	< 10	10	< 20.7	20.7		5	3/19/2015	74-87-3
cis-1,2-Dichloroethene	**6.4**	**2.5**	**25.3**	**9.90**		5	3/19/2015	156-59-2
cis-1,3-Dichloropropene	< 2.5	2.5	< 11.4	11.4		5	3/19/2015	542-75-6
Cyclohexane	**11**	**2.5**	**36.6**	**8.60**		5	3/19/2015	110-82-7
Dibromochloromethane	< 2.5	2.5	< 21.3	21.3		5	3/19/2015	124-48-1
Dichlorodifluoromethane(F-12)	< 5.0	5.0	< 24.8	24.8		5	3/19/2015	75-71-8
Dichlorotetrafluoroethane(F-114)	**27**	**2.5**	**188**	**17.5**		5	3/19/2015	76-14-2
Ethanol	< 25	25	< 47.0	47.0		5	3/19/2015	64-17-5
Ethyl Acetate	< 2.5	2.5	< 9.00	9.00	L5	5	3/19/2015	141-78-6
Ethylbenzene	**2.6**	**2.5**	**11.1**	**10.9**		5	3/19/2015	100-41-4

Airtech Environmental Laboratories (AEL) - AZ 0740

4620 E.Elwood St., Suite 13, Phoenix, AZ 85040 480-968-5888 Fax 480-966-1888

Client:	AMEC F/W	**Client Sample ID:**	MW-8-SG-031015
Project:	Broadway Pantana	**Project Number:**	14.2014-2029
Lab Order:	15C013	**Collection:**	3/10/2015
Lab ID:	09	**Matrix:**	Soil Vapor

	ppbv		ug/M^3				Date	
Analyses	**Result**	**Limit**	**Result**	**Limit**	**Qual**	**DF**	**Analyzed**	**CAS#**
VOLATILE ORGANICS IN AIR	**TO-15**						Analyst: JJ	
Heptane	**123**	**2.5**	**505**	**10.3**		5	3/19/2015	142-82-5
Hexachlorobutadiene	< 5.0	5.0	< 53.4	53.4	L5	5	3/19/2015	87-68-3
Hexane	**34**	**5.0**	**121**	**17.6**		5	3/19/2015	110-54-3
Isopropylbenzene	< 5.0	5.0	< 24.6	24.6		5	3/19/2015	98-82-8
m&p-Xylene	< 5.0	5.0	< 21.7	21.7		5	3/19/2015	179601-23-1
Methyl tert-butyl ether	< 10	10	< 36.1	36.1		5	3/19/2015	1634-04-4
Methylcyclohexane	**16**	**5.0**	**66.1**	**20.1**		5	3/19/2015	108-87-2
Methylene chloride	< 10	10	< 34.7	34.7		5	3/19/2015	75-09-2
Naphthalene	< 10	10	< 52.4	52.4		5	3/19/2015	91-20-3
Nonane	**59**	**5.0**	**307**	**26.2**		5	3/19/2015	111-84-2
Octane	**11**	**5.0**	**50.7**	**23.4**		5	3/19/2015	111-65-9
o-Xylene	< 2.5	2.5	< 10.9	10.9		5	3/19/2015	95-47-6
Propene (Propylene)	< 5.0	5.0	< 8.60	8.60		5	3/19/2015	115-07-1
Propylbenzene	< 5.0	5.0	< 24.6	24.6		5	3/19/2015	103-65-1
Sec-Butyl benzene	< 5.0	5.0	< 27.5	27.5		5	3/19/2015	135-98-8
Styrene	< 2.5	2.5	< 10.7	10.7		5	3/19/2015	100-42-5
Tert-Butyl benzene	< 5.0	5.0	< 27.5	27.5		5	3/19/2015	98-06-6
Tetrachloroethene	**7.4**	**2.5**	**50.2**	**17.0**		5	3/19/2015	127-18-4
Tetrahydrofuran	< 10	10	< 29.5	29.5	L5	5	3/19/2015	109-99-9
Toluene	**4.2**	**2.5**	**15.6**	**9.43**		5	3/19/2015	108-88-3
trans-1,2-Dichloroethene	< 2.5	2.5	< 9.90	9.90		5	3/19/2015	156-60-5
trans-1,3-Dichloropropene	< 2.5	2.5	< 11.4	11.4		5	3/19/2015	542-75-6
Trichloroethene	< 2.5	2.5	< 13.4	13.4		5	3/19/2015	79-01-6
Trichlorofluoromethane(F-11)	< 2.5	2.5	< 14.1	14.1		5	3/19/2015	75-69-4
Trichlorotrifluoroethane(F-113)	< 2.5	2.5	< 19.2	19.2		5	3/19/2015	76-13-1
Vinyl acetate	< 2.5	2.5	< 8.80	8.80	L5	5	3/19/2015	108-05-4
Vinyl chloride	**4.3**	**2.5**	**11.0**	**6.40**		5	3/19/2015	75-01-4
Surr: 4-Bromofluorobenzene	78.2	70-130	%REC					

Tentatively Identified Compounds (TIC's)

Difluoroethane	< 50	50	ppbv		T4	5	3/19/2015

Airtech Environmental Laboratories (AEL) - AZ 0740

4620 E.Elwood St., Suite 13, Phoenix, AZ 85040 480-968-5888 Fax 480-966-1888

Client:	AMEC F/W	**Client Sample ID:**	MW-8-SG-031015-DUP
Project:	Broadway Pantana	**Project Number:**	14.2014-2029
Lab Order:	15C013	**Collection:**	3/10/2015
Lab ID:	10	**Matrix:**	Soil Vapor

	ppbv		ug/M^3				Date	
Analyses	**Result**	**Limit**	**Result**	**Limit**	**Qual**	**DF**	**Analyzed**	**CAS#**
VOLATILE ORGANICS IN AIR		**TO-15**					Analyst: JJ	
1,1,1-Trichloroethane	< 2.5	2.5	< 13.7	13.7		5	3/19/2015	71-55-6
1,1,2,2-Tetrachloroethane	< 2.5	2.5	< 17.2	17.2		5	3/19/2015	79-34-5
1,1,2-Trichloroethane	< 2.5	2.5	< 13.7	13.7		5	3/19/2015	79-00-5
1,1-Dichloroethane	< 2.5	2.5	< 10.1	10.1		5	3/19/2015	75-34-3
1,1-Dichloroethene	< 2.5	2.5	< 9.93	9.93		5	3/19/2015	75-35-4
1,2,4-Trichlorobenzene	< 10	10	< 74.2	74.2	L5	5	3/19/2015	120-82-1
1,2,4-Trimethylbenzene	< 2.5	2.5	< 12.3	12.3		5	3/19/2015	95-63-6
1,2-Dibromoethane	< 2.5	2.5	< 19.2	19.2		5	3/19/2015	106-93-4
1,2-Dichlorobenzene	< 2.5	2.5	< 15.0	15.0		5	3/19/2015	95-50-1
1,2-Dichloroethane	< 2.5	2.5	< 10.1	10.1		5	3/19/2015	107-06-2
1,2-Dichloropropane	< 2.5	2.5	< 11.6	11.6		5	3/19/2015	78-87-5
1,3,5-Trimethylbenzene	< 2.5	2.5	< 12.3	12.3		5	3/19/2015	108-67-8
1,3-Butadiene	< 2.5	2.5	< 5.53	5.53	L5	5	3/19/2015	106-99-0
1,3-Dichlorobenzene	< 2.5	2.5	< 15.0	15.0		5	3/19/2015	541-73-1
1,4-Dichlorobenzene	< 2.5	2.5	< 15.0	15.0		5	3/19/2015	106-46-7
1,4-Dioxane	< 10	10	< 36.0	36.0		5	3/19/2015	123-91-1
2,2,4-Trimethylpentane	< 2.5	2.5	< 11.7	11.7	L5	5	3/19/2015	540-84-1
2-Butanone (MEK)	< 25	25	< 73.8	73.8		5	3/19/2015	78-93-3
2-Hexanone	< 25	25	< 103	103	L5	5	3/19/2015	591-78-6
2-Propanol (IPA)	< 25	25	< 61.3	61.3	L5	5	3/19/2015	67-63-0
4-Ethyltoluene	< 5.0	5.0	< 24.6	24.6		5	3/19/2015	622-96-8
4-Methyl-2-pentanone (MIK)	< 25	25	< 103	103	L5	5	3/19/2015	108-10-1
Acetone	< 25	25	< 59.5	59.5		5	3/19/2015	67-64-1
Allyl chloride	< 5.0	5.0	< 15.7	15.7		5	3/19/2015	107-05-1
Benzene	**9.9**	**2.5**	**31.6**	**7.98**		5	3/19/2015	71-43-2
Benzyl chloride	< 10	10	< 51.8	51.8		5	3/19/2015	100-44-7
Bromodichloromethane	< 2.5	2.5	< 16.8	16.8		5	3/19/2015	75-27-4
Bromoethene(Vinyl Bromide)	< 2.5	2.5	< 10.9	10.9		5	3/19/2015	593-60-2
Bromoform	< 2.5	2.5	< 25.9	25.9	L5	5	3/19/2015	75-25-2
Bromomethane	< 2.5	2.5	< 9.70	9.70		5	3/19/2015	74-83-9
Butyl benzene	< 5.0	5.0	< 27.5	27.5		5	3/19/2015	104-51-8
Carbon disulfide	< 10	10	< 31.1	31.1		5	3/19/2015	75-15-0
Carbon tetrachloride	< 2.5	2.5	< 15.7	15.7		5	3/19/2015	56-23-5
Chlorobenzene	< 2.5	2.5	< 11.5	11.5		5	3/19/2015	108-90-7
Chloroethane	< 2.5	2.5	< 6.60	6.60		5	3/19/2015	75-00-3
Chloroform	< 2.5	2.5	< 12.2	12.2		5	3/19/2015	67-66-3
Chloromethane	< 10	10	< 20.7	20.7		5	3/19/2015	74-87-3
cis-1,2-Dichloroethene	**7.3**	**2.5**	**28.9**	**9.90**		5	3/19/2015	156-59-2
cis-1,3-Dichloropropene	< 2.5	2.5	< 11.4	11.4		5	3/19/2015	542-75-6
Cyclohexane	**13**	**2.5**	**44.4**	**8.60**		5	3/19/2015	110-82-7
Dibromochloromethane	< 2.5	2.5	< 21.3	21.3		5	3/19/2015	124-48-1
Dichlorodifluoromethane(F-12)	**5.8**	**5.0**	**28.7**	**24.8**		5	3/19/2015	75-71-8
Dichlorotetrafluoroethane(F-114)	**33**	**2.5**	**232**	**17.5**		5	3/19/2015	76-14-2
Ethanol	< 25	25	< 47.0	47.0		5	3/19/2015	64-17-5
Ethyl Acetate	< 2.5	2.5	< 9.00	9.00	L5	5	3/19/2015	141-78-6
Ethylbenzene	**3.4**	**2.5**	**14.5**	**10.9**		5	3/19/2015	100-41-4

Airtech Environmental Laboratories (AEL) - AZ 0740

4620 E.Elwood St., Suite 13, Phoenix, AZ 85040 480-968-5888 Fax 480-966-1888

Client:	AMEC F/W	**Client Sample ID:**	MW-8-SG-031015-DUP
Project:	Broadway Pantana	**Project Number:**	14.2014-2029
Lab Order:	15C013	**Collection:**	3/10/2015
Lab ID:	10	**Matrix:**	Soil Vapor

	ppbv		ug/M^3				Date	
Analyses	**Result**	**Limit**	**Result**	**Limit**	**Qual**	**DF**	**Analyzed**	**CAS#**
VOLATILE ORGANICS IN AIR		**TO-15**					Analyst: JJ	
Heptane	**178**	**2.5**	**730**	**10.3**		5	3/19/2015	142-82-5
Hexachlorobutadiene	< 5.0	5.0	< 53.4	53.4	L5	5	3/19/2015	87-68-3
Hexane	**44**	**5.0**	**153**	**17.6**		5	3/19/2015	110-54-3
Isopropylbenzene	< 5.0	5.0	< 24.6	24.6		5	3/19/2015	98-82-8
m&p-Xylene	< 5.0	5.0	< 21.7	21.7		5	3/19/2015	179601-23-1
Methyl tert-butyl ether	< 10	10	< 36.1	36.1		5	3/19/2015	1634-04-4
Methylcyclohexane	**21**	**5.0**	**85.2**	**20.1**		5	3/19/2015	108-87-2
Methylene chloride	< 10	10	< 34.7	34.7		5	3/19/2015	75-09-2
Naphthalene	< 10	10	< 52.4	52.4		5	3/19/2015	91-20-3
Nonane	**80**	**5.0**	**418**	**26.2**		5	3/19/2015	111-84-2
Octane	**15**	**5.0**	**70.8**	**23.4**		5	3/19/2015	111-65-9
o-Xylene	< 2.5	2.5	< 10.9	10.9		5	3/19/2015	95-47-6
Propene (Propylene)	< 5.0	5.0	< 8.60	8.60		5	3/19/2015	115-07-1
Propylbenzene	< 5.0	5.0	< 24.6	24.6		5	3/19/2015	103-65-1
Sec-Butyl benzene	< 5.0	5.0	< 27.5	27.5		5	3/19/2015	135-98-8
Styrene	< 2.5	2.5	< 10.7	10.7		5	3/19/2015	100-42-5
Tert-Butyl benzene	< 5.0	5.0	< 27.5	27.5		5	3/19/2015	98-06-6
Tetrachloroethene	**9.5**	**2.5**	**64.4**	**17.0**		5	3/19/2015	127-18-4
Tetrahydrofuran	< 10	10	< 29.5	29.5	L5	5	3/19/2015	109-99-9
Toluene	**4.8**	**2.5**	**17.9**	**9.43**		5	3/19/2015	108-88-3
trans-1,2-Dichloroethene	< 2.5	2.5	< 9.90	9.90		5	3/19/2015	156-60-5
trans-1,3-Dichloropropene	< 2.5	2.5	< 11.4	11.4		5	3/19/2015	542-75-6
Trichloroethene	< 2.5	2.5	< 13.4	13.4		5	3/19/2015	79-01-6
Trichlorofluoromethane(F-11)	< 2.5	2.5	< 14.1	14.1		5	3/19/2015	75-69-4
Trichlorotrifluoroethane(F-113)	< 2.5	2.5	< 19.2	19.2		5	3/19/2015	76-13-1
Vinyl acetate	< 2.5	2.5	< 8.80	8.80	L5	5	3/19/2015	108-05-4
Vinyl chloride	**6.2**	**2.5**	**15.9**	**6.40**		5	3/19/2015	75-01-4
Surr: 4-Bromofluorobenzene	77.0	70-130	%REC					

Tentatively Identified Compounds (TIC's)

Difluoroethane	< 50	50	ppbv		T4	5	3/19/2015

Airtech Environmental Laboratories (AEL) - AZ 0740

4620 E.Elwood St., Suite 13, Phoenix, AZ 85040 480-968-5888 Fax 480-966-1888

Client:	AMEC F/W	**Client Sample ID:**	MW-7-SG-031015
Project:	Broadway Pantana	**Project Number:**	14.2014-2029
Lab Order:	15C013	**Collection:**	3/10/2015
Lab ID:	11	**Matrix:**	Soil Vapor

	ppbv		ug/M^3				Date	
Analyses	**Result**	**Limit**	**Result**	**Limit**	**Qual**	**DF**	**Analyzed**	**CAS#**
VOLATILE ORGANICS IN AIR		**TO-15**					Analyst: JJ	
1,1,1-Trichloroethane	< 1.0	1.0	< 5.46	5.46		2	3/19/2015	71-55-6
1,1,2,2-Tetrachloroethane	< 1.0	1.0	< 6.87	6.87		2	3/19/2015	79-34-5
1,1,2-Trichloroethane	< 1.0	1.0	< 5.46	5.46		2	3/19/2015	79-00-5
1,1-Dichloroethane	< 1.0	1.0	< 4.05	4.05		2	3/19/2015	75-34-3
1,1-Dichloroethene	< 1.0	1.0	< 3.97	3.97		2	3/19/2015	75-35-4
1,2,4-Trichlorobenzene	< 4.0	4.0	< 29.7	29.7	L5	2	3/19/2015	120-82-1
1,2,4-Trimethylbenzene	< 1.0	1.0	< 4.92	4.92		2	3/19/2015	95-63-6
1,2-Dibromoethane	< 1.0	1.0	< 7.68	7.68		2	3/19/2015	106-93-4
1,2-Dichlorobenzene	< 1.0	1.0	< 6.01	6.01		2	3/19/2015	95-50-1
1,2-Dichloroethane	< 1.0	1.0	< 4.05	4.05		2	3/19/2015	107-06-2
1,2-Dichloropropane	< 1.0	1.0	< 4.62	4.62		2	3/19/2015	78-87-5
1,3,5-Trimethylbenzene	< 1.0	1.0	< 4.92	4.92		2	3/19/2015	108-67-8
1,3-Butadiene	< 1.0	1.0	< 2.21	2.21	L5	2	3/19/2015	106-99-0
1,3-Dichlorobenzene	< 1.0	1.0	< 6.01	6.01		2	3/19/2015	541-73-1
1,4-Dichlorobenzene	< 1.0	1.0	< 6.01	6.01		2	3/19/2015	106-46-7
1,4-Dioxane	< 4.0	4.0	< 14.4	14.4		2	3/19/2015	123-91-1
2,2,4-Trimethylpentane	< 1.0	1.0	< 4.66	4.66	L5	2	3/19/2015	540-84-1
2-Butanone (MEK)	< 10	10	< 29.5	29.5		2	3/19/2015	78-93-3
2-Hexanone	< 10	10	< 41.0	41.0	L5	2	3/19/2015	591-78-6
2-Propanol (IPA)	< 10	10	< 24.5	24.5	L5	2	3/19/2015	67-63-0
4-Ethyltoluene	< 2.0	2.0	< 9.84	9.84		2	3/19/2015	622-96-8
4-Methyl-2-pentanone (MIK)	< 10	10	< 41.0	41.0	L5	2	3/19/2015	108-10-1
Acetone	< 10	10	< 23.8	23.8		2	3/19/2015	67-64-1
Allyl chloride	< 2.0	2.0	< 6.26	6.26		2	3/19/2015	107-05-1
Benzene	< 1.0	1.0	< 3.19	3.19		2	3/19/2015	71-43-2
Benzyl chloride	< 4.0	4.0	< 20.7	20.7		2	3/19/2015	100-44-7
Bromodichloromethane	< 1.0	1.0	< 6.70	6.70		2	3/19/2015	75-27-4
Bromoethene(Vinyl Bromide)	< 1.0	1.0	< 4.37	4.37		2	3/19/2015	593-60-2
Bromoform	< 1.0	1.0	< 10.3	10.3	L5	2	3/19/2015	75-25-2
Bromomethane	< 1.0	1.0	< 3.88	3.88		2	3/19/2015	74-83-9
Butyl benzene	< 2.0	2.0	< 11.0	11.0		2	3/19/2015	104-51-8
Carbon disulfide	**23**	**4.0**	**72.3**	**12.4**		2	3/19/2015	75-15-0
Carbon tetrachloride	< 1.0	1.0	< 6.29	6.29		2	3/19/2015	56-23-5
Chlorobenzene	< 1.0	1.0	< 4.60	4.60		2	3/19/2015	108-90-7
Chloroethane	< 1.0	1.0	< 2.64	2.64		2	3/19/2015	75-00-3
Chloroform	< 1.0	1.0	< 4.88	4.88		2	3/19/2015	67-66-3
Chloromethane	< 4.0	4.0	< 8.28	8.28		2	3/19/2015	74-87-3
cis-1,2-Dichloroethene	< 1.0	1.0	< 3.96	3.96		2	3/19/2015	156-59-2
cis-1,3-Dichloropropene	< 1.0	1.0	< 4.54	4.54		2	3/19/2015	542-75-6
Cyclohexane	< 1.0	1.0	< 3.44	3.44		2	3/19/2015	110-82-7
Dibromochloromethane	< 1.0	1.0	< 8.52	8.52		2	3/19/2015	124-48-1
Dichlorodifluoromethane(F-12)	**2.1**	**2.0**	**10.2**	**9.90**		2	3/19/2015	75-71-8
Dichlorotetrafluoroethane(F-114)	**7.9**	**1.0**	**55.1**	**6.99**		2	3/19/2015	76-14-2
Ethanol	< 10	10	< 18.8	18.8		2	3/19/2015	64-17-5
Ethyl Acetate	< 1.0	1.0	< 3.60	3.60	L5	2	3/19/2015	141-78-6
Ethylbenzene	< 1.0	1.0	< 4.34	4.34		2	3/19/2015	100-41-4

Airtech Environmental Laboratories (AEL) - AZ 0740

4620 E.Elwood St., Suite 13, Phoenix, AZ 85040 480-968-5888 Fax 480-966-1888

Client:	AMEC F/W	**Client Sample ID:**	MW-7-SG-031015
Project:	Broadway Pantana	**Project Number:**	14.2014-2029
Lab Order:	15C013	**Collection:**	3/10/2015
Lab ID:	11	**Matrix:**	Soil Vapor

	ppbv		ug/M^3				Date	
Analyses	**Result**	**Limit**	**Result**	**Limit**	**Qual**	**DF**	**Analyzed**	**CAS#**
VOLATILE ORGANICS IN AIR		**TO-15**					Analyst: JJ	
Heptane	< 1.0	1.0	< 4.10	4.10		2	3/19/2015	142-82-5
Hexachlorobutadiene	< 2.0	2.0	< 21.3	21.3	L5	2	3/19/2015	87-68-3
Hexane	< 2.0	2.0	< 7.04	7.04		2	3/19/2015	110-54-3
Isopropylbenzene	< 2.0	2.0	< 9.84	9.84		2	3/19/2015	98-82-8
m&p-Xylene	< 2.0	2.0	< 8.68	8.68		2	3/19/2015	179601-23-1
Methyl tert-butyl ether	< 4.0	4.0	< 14.4	14.4		2	3/19/2015	1634-04-4
Methylcyclohexane	< 2.0	2.0	< 8.04	8.04		2	3/19/2015	108-87-2
Methylene chloride	< 4.0	4.0	< 13.9	13.9		2	3/19/2015	75-09-2
Naphthalene	< 4.0	4.0	< 21.0	21.0		2	3/19/2015	91-20-3
Nonane	< 2.0	2.0	< 10.5	10.5		2	3/19/2015	111-84-2
Octane	< 2.0	2.0	< 9.34	9.34		2	3/19/2015	111-65-9
o-Xylene	< 1.0	1.0	< 4.34	4.34		2	3/19/2015	95-47-6
Propene (Propylene)	< 2.0	2.0	< 3.44	3.44		2	3/19/2015	115-07-1
Propylbenzene	< 2.0	2.0	< 9.84	9.84		2	3/19/2015	103-65-1
Sec-Butyl benzene	< 2.0	2.0	< 11.0	11.0		2	3/19/2015	135-98-8
Styrene	< 1.0	1.0	< 4.26	4.26		2	3/19/2015	100-42-5
Tert-Butyl benzene	< 2.0	2.0	< 11.0	11.0		2	3/19/2015	98-06-6
Tetrachloroethene	< 1.0	1.0	< 6.78	6.78		2	3/19/2015	127-18-4
Tetrahydrofuran	< 4.0	4.0	< 11.8	11.8	L5	2	3/19/2015	109-99-9
Toluene	< 1.0	1.0	< 3.77	3.77		2	3/19/2015	108-88-3
trans-1,2-Dichloroethene	< 1.0	1.0	< 3.96	3.96		2	3/19/2015	156-60-5
trans-1,3-Dichloropropene	< 1.0	1.0	< 4.54	4.54		2	3/19/2015	542-75-6
Trichloroethene	< 1.0	1.0	< 5.37	5.37		2	3/19/2015	79-01-6
Trichlorofluoromethane(F-11)	< 1.0	1.0	< 5.62	5.62		2	3/19/2015	75-69-4
Trichlorotrifluoroethane(F-113)	< 1.0	1.0	< 7.66	7.66		2	3/19/2015	76-13-1
Vinyl acetate	< 1.0	1.0	< 3.52	3.52	L5	2	3/19/2015	108-05-4
Vinyl chloride	< 1.0	1.0	< 2.56	2.56		2	3/19/2015	75-01-4
Surr: 4-Bromofluorobenzene	89.4	70-130	%REC					

Tentatively Identified Compounds (TIC's)

Difluoroethane	< 20	20	ppbv		T4	2	3/19/2015

Airtech Environmental Laboratories (AEL) - AZ 0740

4620 E.Elwood St., Suite 13, Phoenix, AZ 85040 480-968-5888 Fax 480-966-1888

Client:	AMEC F/W	**Client Sample ID:**	MW-6-SG-031015
Project:	Broadway Pantana	**Project Number:**	14.2014-2029
Lab Order:	15C013	**Collection:**	3/10/2015
Lab ID:	12	**Matrix:**	Soil Vapor

	ppbv		ug/M^3				Date	
Analyses	**Result**	**Limit**	**Result**	**Limit**	**Qual**	**DF**	**Analyzed**	**CAS#**
VOLATILE ORGANICS IN AIR		**TO-15**					Analyst: JJ	
1,1,1-Trichloroethane	< 1.0	1.0	< 5.46	5.46		2	3/19/2015	71-55-6
1,1,2,2-Tetrachloroethane	< 1.0	1.0	< 6.87	6.87		2	3/19/2015	79-34-5
1,1,2-Trichloroethane	< 1.0	1.0	< 5.46	5.46		2	3/19/2015	79-00-5
1,1-Dichloroethane	< 1.0	1.0	< 4.05	4.05		2	3/19/2015	75-34-3
1,1-Dichloroethene	< 1.0	1.0	< 3.97	3.97		2	3/19/2015	75-35-4
1,2,4-Trichlorobenzene	< 4.0	4.0	< 29.7	29.7	L5	2	3/19/2015	120-82-1
1,2,4-Trimethylbenzene	< 1.0	1.0	< 4.92	4.92		2	3/19/2015	95-63-6
1,2-Dibromoethane	< 1.0	1.0	< 7.68	7.68		2	3/19/2015	106-93-4
1,2-Dichlorobenzene	< 1.0	1.0	< 6.01	6.01		2	3/19/2015	95-50-1
1,2-Dichloroethane	< 1.0	1.0	< 4.05	4.05		2	3/19/2015	107-06-2
1,2-Dichloropropane	< 1.0	1.0	< 4.62	4.62		2	3/19/2015	78-87-5
1,3,5-Trimethylbenzene	< 1.0	1.0	< 4.92	4.92		2	3/19/2015	108-67-8
1,3-Butadiene	< 1.0	1.0	< 2.21	2.21	L5	2	3/19/2015	106-99-0
1,3-Dichlorobenzene	< 1.0	1.0	< 6.01	6.01		2	3/19/2015	541-73-1
1,4-Dichlorobenzene	< 1.0	1.0	< 6.01	6.01		2	3/19/2015	106-46-7
1,4-Dioxane	< 4.0	4.0	< 14.4	14.4		2	3/19/2015	123-91-1
2,2,4-Trimethylpentane	**14**	**1.0**	**65.9**	**4.66**	L5	2	3/19/2015	540-84-1
2-Butanone (MEK)	< 10	10	< 29.5	29.5		2	3/19/2015	78-93-3
2-Hexanone	< 10	10	< 41.0	41.0	L5	2	3/19/2015	591-78-6
2-Propanol (IPA)	< 10	10	< 24.5	24.5	L5	2	3/19/2015	67-63-0
4-Ethyltoluene	< 2.0	2.0	< 9.84	9.84		2	3/19/2015	622-96-8
4-Methyl-2-pentanone (MIK)	< 10	10	< 41.0	41.0	L5	2	3/19/2015	108-10-1
Acetone	< 10	10	< 23.8	23.8		2	3/19/2015	67-64-1
Allyl chloride	< 2.0	2.0	< 6.26	6.26		2	3/19/2015	107-05-1
Benzene	**2.1**	**1.0**	**6.76**	**3.19**		2	3/19/2015	71-43-2
Benzyl chloride	< 4.0	4.0	< 20.7	20.7		2	3/19/2015	100-44-7
Bromodichloromethane	< 1.0	1.0	< 6.70	6.70		2	3/19/2015	75-27-4
Bromoethene(Vinyl Bromide)	< 1.0	1.0	< 4.37	4.37		2	3/19/2015	593-60-2
Bromoform	< 1.0	1.0	< 10.3	10.3	L5	2	3/19/2015	75-25-2
Bromomethane	< 1.0	1.0	< 3.88	3.88		2	3/19/2015	74-83-9
Butyl benzene	< 2.0	2.0	< 11.0	11.0		2	3/19/2015	104-51-8
Carbon disulfide	< 4.0	4.0	< 12.4	12.4		2	3/19/2015	75-15-0
Carbon tetrachloride	< 1.0	1.0	< 6.29	6.29		2	3/19/2015	56-23-5
Chlorobenzene	< 1.0	1.0	< 4.60	4.60		2	3/19/2015	108-90-7
Chloroethane	< 1.0	1.0	< 2.64	2.64		2	3/19/2015	75-00-3
Chloroform	**1.6**	**1.0**	**8.00**	**4.88**		2	3/19/2015	67-66-3
Chloromethane	< 4.0	4.0	< 8.28	8.28		2	3/19/2015	74-87-3
cis-1,2-Dichloroethene	**2.4**	**1.0**	**9.50**	**3.96**		2	3/19/2015	156-59-2
cis-1,3-Dichloropropene	< 1.0	1.0	< 4.54	4.54		2	3/19/2015	542-75-6
Cyclohexane	**1.9**	**1.0**	**6.60**	**3.44**		2	3/19/2015	110-82-7
Dibromochloromethane	< 1.0	1.0	< 8.52	8.52		2	3/19/2015	124-48-1
Dichlorodifluoromethane(F-12)	< 2.0	2.0	< 9.90	9.90		2	3/19/2015	75-71-8
Dichlorotetrafluoroethane(F-114)	**2.3**	**1.0**	**16.2**	**6.99**		2	3/19/2015	76-14-2
Ethanol	< 10	10	< 18.8	18.8		2	3/19/2015	64-17-5
Ethyl Acetate	**4.5**	**1.0**	**16.1**	**3.60**	L5	2	3/19/2015	141-78-6
Ethylbenzene	< 1.0	1.0	< 4.34	4.34		2	3/19/2015	100-41-4

Airtech Environmental Laboratories (AEL) - AZ 0740

4620 E.Elwood St., Suite 13, Phoenix, AZ 85040 480-968-5888 Fax 480-966-1888

Client:	AMEC F/W	**Client Sample ID:**	MW-6-SG-031015
Project:	Broadway Pantana	**Project Number:**	14.2014-2029
Lab Order:	15C013	**Collection:**	3/10/2015
Lab ID:	12	**Matrix:**	Soil Vapor

	ppbv		ug/M^3				Date	
Analyses	**Result**	**Limit**	**Result**	**Limit**	**Qual**	**DF**	**Analyzed**	**CAS#**
VOLATILE ORGANICS IN AIR		**TO-15**					Analyst: JJ	
Heptane	**8.3**	**1.0**	**34.2**	**4.10**		2	3/19/2015	142-82-5
Hexachlorobutadiene	< 2.0	2.0	< 21.3	21.3	L5	2	3/19/2015	87-68-3
Hexane	**2.0**	**2.0**	**7.11**	**7.04**		2	3/19/2015	110-54-3
Isopropylbenzene	< 2.0	2.0	< 9.84	9.84		2	3/19/2015	98-82-8
m&p-Xylene	< 2.0	2.0	< 8.68	8.68		2	3/19/2015	179601-23-1
Methyl tert-butyl ether	< 4.0	4.0	< 14.4	14.4		2	3/19/2015	1634-04-4
Methylcyclohexane	**7.3**	**2.0**	**29.3**	**8.04**		2	3/19/2015	108-87-2
Methylene chloride	< 4.0	4.0	< 13.9	13.9		2	3/19/2015	75-09-2
Naphthalene	< 4.0	4.0	< 21.0	21.0		2	3/19/2015	91-20-3
Nonane	< 2.0	2.0	< 10.5	10.5		2	3/19/2015	111-84-2
Octane	< 2.0	2.0	< 9.34	9.34		2	3/19/2015	111-65-9
o-Xylene	< 1.0	1.0	< 4.34	4.34		2	3/19/2015	95-47-6
Propene (Propylene)	< 2.0	2.0	< 3.44	3.44		2	3/19/2015	115-07-1
Propylbenzene	< 2.0	2.0	< 9.84	9.84		2	3/19/2015	103-65-1
Sec-Butyl benzene	< 2.0	2.0	< 11.0	11.0		2	3/19/2015	135-98-8
Styrene	< 1.0	1.0	< 4.26	4.26		2	3/19/2015	100-42-5
Tert-Butyl benzene	< 2.0	2.0	< 11.0	11.0		2	3/19/2015	98-06-6
Tetrachloroethene	**3.9**	**1.0**	**26.3**	**6.78**		2	3/19/2015	127-18-4
Tetrahydrofuran	< 4.0	4.0	< 11.8	11.8	L5	2	3/19/2015	109-99-9
Toluene	< 1.0	1.0	< 3.77	3.77		2	3/19/2015	108-88-3
trans-1,2-Dichloroethene	< 1.0	1.0	< 3.96	3.96		2	3/19/2015	156-60-5
trans-1,3-Dichloropropene	< 1.0	1.0	< 4.54	4.54		2	3/19/2015	542-75-6
Trichloroethene	< 1.0	1.0	< 5.37	5.37		2	3/19/2015	79-01-6
Trichlorofluoromethane(F-11)	< 1.0	1.0	< 5.62	5.62		2	3/19/2015	75-69-4
Trichlorotrifluoroethane(F-113)	< 1.0	1.0	< 7.66	7.66		2	3/19/2015	76-13-1
Vinyl acetate	< 1.0	1.0	< 3.52	3.52	L5	2	3/19/2015	108-05-4
Vinyl chloride	< 1.0	1.0	< 2.56	2.56		2	3/19/2015	75-01-4
Surr: 4-Bromofluorobenzene	90.0	70-130	%REC					

Tentatively Identified Compounds (TIC's)

Difluoroethane	< 20	20	ppbv		T4	2	3/19/2015

Airtech Environmental Laboratories (AEL) - AZ 0740

4620 E.Elwood St., Suite 13, Phoenix, AZ 85040 480-968-5888 Fax 480-966-1888

Client:	AMEC F/W	**Client Sample ID:**	BSDP-3-50-SG-031015
Project:	Broadway Pantana	**Project Number:**	14.2014-2029
Lab Order:	15C013	**Collection:**	3/10/2015
Lab ID:	13	**Matrix:**	Soil Vapor

	ppbv		ug/M^3				Date	
Analyses	**Result**	**Limit**	**Result**	**Limit**	**Qual**	**DF**	**Analyzed**	**CAS#**
VOLATILE ORGANICS IN AIR		**TO-15**					Analyst: JJ	
1,1,1-Trichloroethane	< 10	10	< 54.6	54.6		20	3/17/2015	71-55-6
1,1-Dichloroethane	< 10	10	< 40.5	40.5		20	3/17/2015	75-34-3
1,1-Dichloroethene	< 10	10	< 39.7	39.7		20	3/17/2015	75-35-4
Benzene	**20**	**10**	**63.2**	**31.9**		20	3/17/2015	71-43-2
cis-1,2-Dichloroethene	**210**	**10**	**833**	**39.6**		20	3/17/2015	156-59-2
Dichlorodifluoromethane(F-12)	**303**	**20**	**1,500**	**99.0**		20	3/17/2015	75-71-8
Dichlorotetrafluoroethane(F-114)	**69**	**10**	**484**	**69.9**		20	3/17/2015	76-14-2
Ethylbenzene	< 10	10	< 43.4	43.4		20	3/17/2015	100-41-4
m&p-Xylene	< 20	20	< 86.8	86.8		20	3/17/2015	179601-23-1
o-Xylene	< 10	10	< 43.4	43.4		20	3/17/2015	95-47-6
Tetrachloroethene	**141**	**10**	**956**	**67.8**		20	3/17/2015	127-18-4
Toluene	< 10	10	< 37.7	37.7		20	3/17/2015	108-88-3
trans-1,2-Dichloroethene	**11**	**10**	**42.8**	**39.6**		20	3/17/2015	156-60-5
Trichloroethene	**194**	**10**	**1,040**	**53.7**		20	3/17/2015	79-01-6
Trichlorofluoromethane(F-11)	< 10	10	< 56.2	56.2		20	3/17/2015	75-69-4
Trichlorotrifluoroethane(F-113)	< 10	10	< 76.6	76.6		20	3/17/2015	76-13-1
Vinyl chloride	**12**	**10**	**30.7**	**25.6**		20	3/17/2015	75-01-4
Surr: 4-Bromofluorobenzene	96.3	70-130	%REC					

Tentatively Identified Compounds (TIC's)

Difluoroethane	< 200	200	ppbv		T4	20	3/17/2015

Airtech Environmental Laboratories (AEL) - AZ 0740

4620 E.Elwood St., Suite 13, Phoenix, AZ 85040 480-968-5888 Fax 480-966-1888

Client:	AMEC F/W	**Client Sample ID:**	BSDP-3-100-SG-031015
Project:	Broadway Pantana	**Project Number:**	14.2014-2029
Lab Order:	15C013	**Collection:**	3/10/2015
Lab ID:	14	**Matrix:**	Soil Vapor

	ppbv		ug/M^3				Date	
Analyses	**Result**	**Limit**	**Result**	**Limit**	**Qual**	**DF**	**Analyzed**	**CAS#**
VOLATILE ORGANICS IN AIR		**TO-15**					Analyst: JJ	
1,1,1-Trichloroethane	< 10	10	< 54.6	54.6		20	3/18/2015	71-55-6
1,1-Dichloroethane	< 10	10	< 40.5	40.5		20	3/18/2015	75-34-3
1,1-Dichloroethene	< 10	10	< 39.7	39.7		20	3/18/2015	75-35-4
Benzene	**14**	**10**	**43.4**	**31.9**		20	3/18/2015	71-43-2
cis-1,2-Dichloroethene	**220**	**10**	**870**	**39.6**		20	3/18/2015	156-59-2
Dichlorodifluoromethane(F-12)	**518**	**20**	**2,560**	**99.0**		20	3/18/2015	75-71-8
Dichlorotetrafluoroethane(F-114)	**90**	**10**	**628**	**69.9**		20	3/18/2015	76-14-2
Ethylbenzene	< 10	10	< 43.4	43.4		20	3/18/2015	100-41-4
m&p-Xylene	< 20	20	< 86.8	86.8		20	3/18/2015	179601-23-1
o-Xylene	< 10	10	< 43.4	43.4		20	3/18/2015	95-47-6
Tetrachloroethene	**359**	**10**	**2,440**	**67.8**		20	3/18/2015	127-18-4
Toluene	< 10	10	< 37.7	37.7		20	3/18/2015	108-88-3
trans-1,2-Dichloroethene	**13**	**10**	**49.9**	**39.6**		20	3/18/2015	156-60-5
Trichloroethene	**179**	**10**	**962**	**53.7**		20	3/18/2015	79-01-6
Trichlorofluoromethane(F-11)	< 10	10	< 56.2	56.2		20	3/18/2015	75-69-4
Trichlorotrifluoroethane(F-113)	< 10	10	< 76.6	76.6		20	3/18/2015	76-13-1
Vinyl chloride	**11**	**10**	**28.7**	**25.6**		20	3/18/2015	75-01-4
Surr: 4-Bromofluorobenzene	93.7	70-130	%REC					

Tentatively Identified Compounds (TIC's)

Difluoroethane	< 200	200	ppbv		T4	20	3/18/2015

Airtech Environmental Laboratories (AEL) - AZ 0740

4620 E.Elwood St., Suite 13, Phoenix, AZ 85040 480-968-5888 Fax 480-966-1888

Client:	AMEC F/W	**Client Sample ID:**	BSDP-3-150-SG-031015
Project:	Broadway Pantana	**Project Number:**	14.2014-2029
Lab Order:	15C013	**Collection:**	3/10/2015
Lab ID:	15	**Matrix:**	Soil Vapor

Analyses	ppbv Result	ppbv Limit	ug/M^3 Result	ug/M^3 Limit	Qual	DF	Date Analyzed	CAS#
VOLATILE ORGANICS IN AIR		**TO-15**					Analyst: JJ	
1,1,1-Trichloroethane	< 10	10	< 54.6	54.6		20	3/18/2015	71-55-6
1,1-Dichloroethane	< 10	10	< 40.5	40.5		20	3/18/2015	75-34-3
1,1-Dichloroethene	< 10	10	< 39.7	39.7		20	3/18/2015	75-35-4
Benzene	< 10	10	< 31.9	31.9		20	3/18/2015	71-43-2
cis-1,2-Dichloroethene	**52**	**10**	**206**	**39.6**		20	3/18/2015	156-59-2
Dichlorodifluoromethane(F-12)	**564**	**20**	**2,790**	**99.0**		20	3/18/2015	75-71-8
Dichlorotetrafluoroethane(F-114)	**71**	**10**	**493**	**69.9**		20	3/18/2015	76-14-2
Ethylbenzene	< 10	10	< 43.4	43.4		20	3/18/2015	100-41-4
m&p-Xylene	< 20	20	< 86.8	86.8		20	3/18/2015	179601-23-1
o-Xylene	< 10	10	< 43.4	43.4		20	3/18/2015	95-47-6
Tetrachloroethene	**437**	**10**	**2,960**	**67.8**		20	3/18/2015	127-18-4
Toluene	< 10	10	< 37.7	37.7		20	3/18/2015	108-88-3
trans-1,2-Dichloroethene	< 10	10	< 39.6	39.6		20	3/18/2015	156-60-5
Trichloroethene	**91**	**10**	**491**	**53.7**		20	3/18/2015	79-01-6
Trichlorofluoromethane(F-11)	**15**	**10**	**86.5**	**56.2**		20	3/18/2015	75-69-4
Trichlorotrifluoroethane(F-113)	< 10	10	< 76.6	76.6		20	3/18/2015	76-13-1
Vinyl chloride	< 10	10	< 25.6	25.6		20	3/18/2015	75-01-4
Surr: 4-Bromofluorobenzene	85.3	70-130	%REC					

Tentatively Identified Compounds (TIC's)

Difluoroethane	< 200	200	ppbv		T4	20	3/18/2015	

Airtech Environmental Laboratories (AEL) - AZ 0740

4620 E.Elwood St., Suite 13, Phoenix, AZ 85040 480-968-5888 Fax 480-966-1888

Client:	AMEC F/W	**Client Sample ID:**	BSDP-4-48-SG-031015
Project:	Broadway Pantana	**Project Number:**	14.2014-2029
Lab Order:	15C013	**Collection:**	3/10/2015
Lab ID:	16	**Matrix:**	Soil Vapor

	ppbv		ug/M^3				Date	
Analyses	**Result**	**Limit**	**Result**	**Limit**	**Qual**	**DF**	**Analyzed**	**CAS#**
VOLATILE ORGANICS IN AIR		**TO-15**					Analyst: JJ	
1,1,1-Trichloroethane	< 50	50	< 273	273		100	3/18/2015	71-55-6
1,1-Dichloroethane	< 50	50	< 203	203		100	3/18/2015	75-34-3
1,1-Dichloroethene	< 50	50	< 199	199		100	3/18/2015	75-35-4
Benzene	**111**	**50**	**354**	**160**		100	3/18/2015	71-43-2
cis-1,2-Dichloroethene	**670**	**50**	**2,650**	**198**		100	3/18/2015	156-59-2
Dichlorodifluoromethane(F-12)	**2,540**	**100**	**12,600**	**495**		100	3/18/2015	75-71-8
Dichlorotetrafluoroethane(F-114)	**247**	**50**	**1,730**	**350**		100	3/18/2015	76-14-2
Ethylbenzene	< 50	50	< 217	217		100	3/18/2015	100-41-4
m&p-Xylene	< 100	100	< 434	434		100	3/18/2015	179601-23-1
o-Xylene	< 50	50	< 217	217		100	3/18/2015	95-47-6
Tetrachloroethene	**3,180**	**50**	**21,600**	**339**		100	3/18/2015	127-18-4
Toluene	< 50	50	< 189	189		100	3/18/2015	108-88-3
trans-1,2-Dichloroethene	< 50	50	< 198	198		100	3/18/2015	156-60-5
Trichloroethene	**794**	**50**	**4,260**	**269**		100	3/18/2015	79-01-6
Trichlorofluoromethane(F-11)	**55**	**50**	**309**	**281**		100	3/18/2015	75-69-4
Trichlorotrifluoroethane(F-113)	< 50	50	< 383	383		100	3/18/2015	76-13-1
Vinyl chloride	< 50	50	< 128	128		100	3/18/2015	75-01-4
Surr: 4-Bromofluorobenzene	94.2	70-130	%REC					

Tentatively Identified Compounds (TIC's)

Difluoroethane	< 1,000	1,000	ppbv		T4	100	3/18/2015	

Airtech Environmental Laboratories (AEL) - AZ 0740

4620 E.Elwood St., Suite 13, Phoenix, AZ 85040 480-968-5888 Fax 480-966-1888

Client:	AMEC F/W	**Client Sample ID:**	BSDP-4-100-SG-031015
Project:	Broadway Pantana	**Project Number:**	14.2014-2029
Lab Order:	15C013	**Collection:**	3/10/2015
Lab ID:	17	**Matrix:**	Soil Vapor

	ppbv		ug/M^3				Date	
Analyses	**Result**	**Limit**	**Result**	**Limit**	**Qual**	**DF**	**Analyzed**	**CAS#**
VOLATILE ORGANICS IN AIR		**TO-15**					Analyst: JJ	
1,1,1-Trichloroethane	< 100	100	< 546	546		200	3/17/2015	71-55-6
1,1-Dichloroethane	< 100	100	< 405	405		200	3/17/2015	75-34-3
1,1-Dichloroethene	< 100	100	< 397	397		200	3/17/2015	75-35-4
Benzene	**128**	**100**	**408**	**319**		200	3/17/2015	71-43-2
cis-1,2-Dichloroethene	**568**	**100**	**2,250**	**396**		200	3/17/2015	156-59-2
Dichlorodifluoromethane(F-12)	**3,250**	**200**	**16,100**	**990**		200	3/17/2015	75-71-8
Dichlorotetrafluoroethane(F-114)	**274**	**100**	**1,920**	**699**		200	3/17/2015	76-14-2
Ethylbenzene	< 100	100	< 434	434		200	3/17/2015	100-41-4
m&p-Xylene	< 200	200	< 868	868		200	3/17/2015	179601-23-1
o-Xylene	< 100	100	< 434	434		200	3/17/2015	95-47-6
Tetrachloroethene	**3,020**	**100**	**20,500**	**678**		200	3/17/2015	127-18-4
Toluene	< 100	100	< 377	377		200	3/17/2015	108-88-3
trans-1,2-Dichloroethene	< 100	100	< 396	396		200	3/17/2015	156-60-5
Trichloroethene	**674**	**100**	**3,620**	**537**		200	3/17/2015	79-01-6
Trichlorofluoromethane(F-11)	< 100	100	< 562	562		200	3/17/2015	75-69-4
Trichlorotrifluoroethane(F-113)	< 100	100	< 766	766		200	3/17/2015	76-13-1
Vinyl chloride	< 100	100	< 256	256		200	3/17/2015	75-01-4
Surr: 4-Bromofluorobenzene	92.8	70-130	%REC					

Tentatively Identified Compounds (TIC's)

Difluoroethane	< 2,000	2,000	ppbv	T4	200	3/17/2015	

Airtech Environmental Laboratories (AEL) - AZ 0740

4620 E.Elwood St., Suite 13, Phoenix, AZ 85040 480-968-5888 Fax 480-966-1888

Client:	AMEC F/W	**Client Sample ID:**	BSDP-4-150-SG-031015
Project:	Broadway Pantana	**Project Number:**	14.2014-2029
Lab Order:	15C013	**Collection:**	3/10/2015
Lab ID:	18	**Matrix:**	Soil Vapor

Analyses	ppbv Result	ppbv Limit	ug/M^3 Result	ug/M^3 Limit	Qual	DF	Date Analyzed	CAS#
VOLATILE ORGANICS IN AIR		**TO-15**					Analyst: JJ	
1,1,1-Trichloroethane	< 100	100	< 546	546		200	3/25/2015	71-55-6
1,1-Dichloroethane	< 100	100	< 405	405		200	3/25/2015	75-34-3
1,1-Dichloroethene	< 100	100	< 397	397		200	3/25/2015	75-35-4
Benzene	**160**	**100**	**510**	**319**		200	3/25/2015	71-43-2
cis-1,2-Dichloroethene	**224**	**100**	**887**	**396**		200	3/25/2015	156-59-2
Dichlorodifluoromethane(F-12)	**5,320**	**200**	**26,300**	**990**		200	3/25/2015	75-71-8
Dichlorotetrafluoroethane(F-114)	**360**	**100**	**2,520**	**699**		200	3/25/2015	76-14-2
Ethylbenzene	< 100	100	< 434	434		200	3/25/2015	100-41-4
m&p-Xylene	< 200	200	< 868	868		200	3/25/2015	179601-23-1
o-Xylene	< 100	100	< 434	434		200	3/25/2015	95-47-6
Tetrachloroethene	**3,170**	**100**	**21,500**	**678**		200	3/25/2015	127-18-4
Toluene	< 100	100	< 377	377		200	3/25/2015	108-88-3
trans-1,2-Dichloroethene	< 100	100	< 396	396		200	3/25/2015	156-60-5
Trichloroethene	**568**	**100**	**3,050**	**537**		200	3/25/2015	79-01-6
Trichlorofluoromethane(F-11)	**116**	**100**	**652**	**562**		200	3/25/2015	75-69-4
Trichlorotrifluoroethane(F-113)	< 100	100	< 766	766		200	3/25/2015	76-13-1
Vinyl chloride	< 100	100	< 256	256		200	3/25/2015	75-01-4
Surr: 4-Bromofluorobenzene	97.6	70-130	%REC					

Tentatively Identified Compounds (TIC's)

Difluoroethane	< 2,000	2,000	ppbv		T4	200	3/25/2015	

Airtech Environmental Laboratories (AEL) - AZ 0740

4620 E.Elwood St., Suite 13, Phoenix, AZ 85040 480-968-5888 Fax 480-966-1888

Client:	AMEC F/W	**Client Sample ID:**	BP-23-200-SG-031115
Project:	Broadway Pantana	**Project Number:**	14.2014-2029
Lab Order:	15C013	**Collection:**	3/11/2015
Lab ID:	19	**Matrix:**	Soil Vapor

	ppbv		ug/M^3				Date	
Analyses	**Result**	**Limit**	**Result**	**Limit**	**Qual**	**DF**	**Analyzed**	**CAS#**
VOLATILE ORGANICS IN AIR		**TO-15**					Analyst: JJ	
1,1,1-Trichloroethane	< 1.0	1.0	< 5.46	5.46		2	3/18/2015	71-55-6
1,1-Dichloroethane	< 1.0	1.0	< 4.05	4.05		2	3/18/2015	75-34-3
1,1-Dichloroethene	< 1.0	1.0	< 3.97	3.97		2	3/18/2015	75-35-4
Benzene	< 1.0	1.0	< 3.19	3.19		2	3/18/2015	71-43-2
cis-1,2-Dichloroethene	< 1.0	1.0	< 3.96	3.96		2	3/18/2015	156-59-2
Dichlorodifluoromethane(F-12)	< 2.0	2.0	< 9.90	9.90		2	3/18/2015	75-71-8
Dichlorotetrafluoroethane(F-114)	< 1.0	1.0	< 6.99	6.99		2	3/18/2015	76-14-2
Ethylbenzene	< 1.0	1.0	< 4.34	4.34		2	3/18/2015	100-41-4
m&p-Xylene	< 2.0	2.0	< 8.68	8.68		2	3/18/2015	179601-23-1
o-Xylene	< 1.0	1.0	< 4.34	4.34		2	3/18/2015	95-47-6
Tetrachloroethene	**7.6**	**1.0**	**51.7**	**6.78**		2	3/18/2015	127-18-4
Toluene	**2.5**	**1.0**	**9.27**	**3.77**		2	3/18/2015	108-88-3
trans-1,2-Dichloroethene	< 1.0	1.0	< 3.96	3.96		2	3/18/2015	156-60-5
Trichloroethene	< 1.0	1.0	< 5.37	5.37		2	3/18/2015	79-01-6
Trichlorofluoromethane(F-11)	< 1.0	1.0	< 5.62	5.62		2	3/18/2015	75-69-4
Trichlorotrifluoroethane(F-113)	< 1.0	1.0	< 7.66	7.66		2	3/18/2015	76-13-1
Vinyl chloride	< 1.0	1.0	< 2.56	2.56		2	3/18/2015	75-01-4
Surr: 4-Bromofluorobenzene	91.1	70-130	%REC					

Tentatively Identified Compounds (TIC's)

Difluoroethane	< 20	20	ppbv		T4	2	3/18/2015

Airtech Environmental Laboratories (AEL) - AZ 0740

4620 E.Elwood St., Suite 13, Phoenix, AZ 85040 480-968-5888 Fax 480-966-1888

Client:	AMEC F/W	**Client Sample ID:**	BP-23-250-SG-031115
Project:	Broadway Pantana	**Project Number:**	14.2014-2029
Lab Order:	15C013	**Collection:**	3/11/2015
Lab ID:	20	**Matrix:**	Soil Vapor

	ppbv		ug/M^3				Date	
Analyses	**Result**	**Limit**	**Result**	**Limit**	**Qual**	**DF**	**Analyzed**	**CAS#**
VOLATILE ORGANICS IN AIR		**TO-15**					Analyst: JJ	
1,1,1-Trichloroethane	< 2.5	2.5	< 13.7	13.7		5	3/18/2015	71-55-6
1,1-Dichloroethane	< 2.5	2.5	< 10.1	10.1		5	3/18/2015	75-34-3
1,1-Dichloroethene	< 2.5	2.5	< 9.93	9.93		5	3/18/2015	75-35-4
Benzene	**3.4**	**2.5**	**10.8**	**7.98**		5	3/18/2015	71-43-2
cis-1,2-Dichloroethene	< 2.5	2.5	< 9.90	9.90		5	3/18/2015	156-59-2
Dichlorodifluoromethane(F-12)	< 5.0	5.0	< 24.8	24.8		5	3/18/2015	75-71-8
Dichlorotetrafluoroethane(F-114)	< 2.5	2.5	< 17.5	17.5		5	3/18/2015	76-14-2
Ethylbenzene	< 2.5	2.5	< 10.9	10.9		5	3/18/2015	100-41-4
m&p-Xylene	< 5.0	5.0	< 21.7	21.7		5	3/18/2015	179601-23-1
o-Xylene	< 2.5	2.5	< 10.9	10.9		5	3/18/2015	95-47-6
Tetrachloroethene	**122**	**2.5**	**827**	**17.0**		5	3/18/2015	127-18-4
Toluene	< 2.5	2.5	< 9.43	9.43		5	3/18/2015	108-88-3
trans-1,2-Dichloroethene	< 2.5	2.5	< 9.90	9.90		5	3/18/2015	156-60-5
Trichloroethene	**10**	**2.5**	**54.2**	**13.4**		5	3/18/2015	79-01-6
Trichlorofluoromethane(F-11)	< 2.5	2.5	< 14.1	14.1		5	3/18/2015	75-69-4
Trichlorotrifluoroethane(F-113)	< 2.5	2.5	< 19.2	19.2		5	3/18/2015	76-13-1
Vinyl chloride	< 2.5	2.5	< 6.40	6.40		5	3/18/2015	75-01-4
Surr: 4-Bromofluorobenzene	90.7	70-130	%REC					

Tentatively Identified Compounds (TIC's)

Difluoroethane	< 50	50	ppbv		T4	5	3/18/2015

Airtech Environmental Laboratories (AEL) - AZ 0740

4620 E.Elwood St., Suite 13, Phoenix, AZ 85040 480-968-5888 Fax 480-966-1888

Client:	AMEC F/W	**Client Sample ID:**	BP-23-300-SG-031115
Project:	Broadway Pantana	**Project Number:**	14.2014-2029
Lab Order:	15C013	**Collection:**	3/11/2015
Lab ID:	21	**Matrix:**	Soil Vapor

	ppbv		ug/M^3				Date	
Analyses	**Result**	**Limit**	**Result**	**Limit**	**Qual**	**DF**	**Analyzed**	**CAS#**
VOLATILE ORGANICS IN AIR		**TO-15**					Analyst: JJ	
1,1,1-Trichloroethane	< 2.5	2.5	< 13.7	13.7		5	3/20/2015	71-55-6
1,1-Dichloroethane	< 2.5	2.5	< 10.1	10.1		5	3/20/2015	75-34-3
1,1-Dichloroethene	< 2.5	2.5	< 9.93	9.93		5	3/20/2015	75-35-4
Benzene	**3.4**	**2.5**	**10.8**	**7.98**		5	3/20/2015	71-43-2
cis-1,2-Dichloroethene	< 2.5	2.5	< 9.90	9.90		5	3/20/2015	156-59-2
Dichlorodifluoromethane(F-12)	**6.0**	**5.0**	**29.5**	**24.8**		5	3/20/2015	75-71-8
Dichlorotetrafluoroethane(F-114)	< 2.5	2.5	< 17.5	17.5		5	3/20/2015	76-14-2
Ethylbenzene	**2.9**	**2.5**	**12.4**	**10.9**		5	3/20/2015	100-41-4
m&p-Xylene	**7.5**	**5.0**	**32.6**	**21.7**		5	3/20/2015	179601-23-1
o-Xylene	< 2.5	2.5	< 10.9	10.9		5	3/20/2015	95-47-6
Tetrachloroethene	**176**	**2.5**	**1,190**	**17.0**		5	3/20/2015	127-18-4
Toluene	**3.1**	**2.5**	**11.5**	**9.43**		5	3/20/2015	108-88-3
trans-1,2-Dichloroethene	< 2.5	2.5	< 9.90	9.90		5	3/20/2015	156-60-5
Trichloroethene	**14**	**2.5**	**74.6**	**13.4**		5	3/20/2015	79-01-6
Trichlorofluoromethane(F-11)	< 2.5	2.5	< 14.1	14.1		5	3/20/2015	75-69-4
Trichlorotrifluoroethane(F-113)	< 2.5	2.5	< 19.2	19.2		5	3/20/2015	76-13-1
Vinyl chloride	< 2.5	2.5	< 6.40	6.40		5	3/20/2015	75-01-4
Surr: 4-Bromofluorobenzene	83.6	70-130	%REC					

Tentatively Identified Compounds (TIC's)

Difluoroethane	< 50	50	ppbv		T4	5	3/20/2015

Airtech Environmental Laboratories (AEL) - AZ 0740

4620 E.Elwood St., Suite 13, Phoenix, AZ 85040 480-968-5888 Fax 480-966-1888

Client:	AMEC F/W	**Client Sample ID:**	BP-23-440-SG-031115
Project:	Broadway Pantana	**Project Number:**	14.2014-2029
Lab Order:	15C013	**Collection:**	3/11/2015
Lab ID:	22	**Matrix:**	Soil Vapor

	ppbv		ug/M^3				Date	
Analyses	**Result**	**Limit**	**Result**	**Limit**	**Qual**	**DF**	**Analyzed**	**CAS#**
VOLATILE ORGANICS IN AIR		**TO-15**					Analyst: JJ	
1,1,1-Trichloroethane	< 2.5	2.5	< 13.7	13.7		5	3/18/2015	71-55-6
1,1-Dichloroethane	< 2.5	2.5	< 10.1	10.1		5	3/18/2015	75-34-3
1,1-Dichloroethene	< 2.5	2.5	< 9.93	9.93		5	3/18/2015	75-35-4
Benzene	< 2.5	2.5	< 7.98	7.98		5	3/18/2015	71-43-2
cis-1,2-Dichloroethene	**3.2**	**2.5**	**12.7**	**9.90**		5	3/18/2015	156-59-2
Dichlorodifluoromethane(F-12)	**12**	**5.0**	**57.7**	**24.8**		5	3/18/2015	75-71-8
Dichlorotetrafluoroethane(F-114)	< 2.5	2.5	< 17.5	17.5		5	3/18/2015	76-14-2
Ethylbenzene	< 2.5	2.5	< 10.9	10.9		5	3/18/2015	100-41-4
m&p-Xylene	< 5.0	5.0	< 21.7	21.7		5	3/18/2015	179601-23-1
o-Xylene	< 2.5	2.5	< 10.9	10.9		5	3/18/2015	95-47-6
Tetrachloroethene	**89**	**2.5**	**604**	**17.0**		5	3/18/2015	127-18-4
Toluene	**4.2**	**2.5**	**15.8**	**9.43**		5	3/18/2015	108-88-3
trans-1,2-Dichloroethene	< 2.5	2.5	< 9.90	9.90		5	3/18/2015	156-60-5
Trichloroethene	**9.5**	**2.5**	**51.0**	**13.4**		5	3/18/2015	79-01-6
Trichlorofluoromethane(F-11)	< 2.5	2.5	< 14.1	14.1		5	3/18/2015	75-69-4
Trichlorotrifluoroethane(F-113)	< 2.5	2.5	< 19.2	19.2		5	3/18/2015	76-13-1
Vinyl chloride	< 2.5	2.5	< 6.40	6.40		5	3/18/2015	75-01-4
Surr: 4-Bromofluorobenzene	92.2	70-130	%REC					

Tentatively Identified Compounds (TIC's)

Difluoroethane	< 50	50	ppbv		T4	5	3/18/2015

Airtech Environmental Laboratories (AEL) - AZ 0740

4620 E.Elwood St., Suite 13, Phoenix, AZ 85040 480-968-5888 Fax 480-966-1888

Client:	AMEC F/W	**Client Sample ID:**	BP-23-440-SG-031115-DUP
Project:	Broadway Pantana	**Project Number:**	14.2014-2029
Lab Order:	15C013	**Collection:**	3/11/2015
Lab ID:	23	**Matrix:**	Soil Vapor

	ppbv		ug/M^3				Date	
Analyses	**Result**	**Limit**	**Result**	**Limit**	**Qual**	**DF**	**Analyzed**	**CAS#**
VOLATILE ORGANICS IN AIR		**TO-15**					Analyst: JJ	
1,1,1-Trichloroethane	< 2.5	2.5	< 13.7	13.7		5	3/18/2015	71-55-6
1,1-Dichloroethane	< 2.5	2.5	< 10.1	10.1		5	3/18/2015	75-34-3
1,1-Dichloroethene	< 2.5	2.5	< 9.93	9.93		5	3/18/2015	75-35-4
Benzene	< 2.5	2.5	< 7.98	7.98		5	3/18/2015	71-43-2
cis-1,2-Dichloroethene	**4.0**	**2.5**	**15.6**	**9.90**		5	3/18/2015	156-59-2
Dichlorodifluoromethane(F-12)	**13**	**5.0**	**64.8**	**24.8**		5	3/18/2015	75-71-8
Dichlorotetrafluoroethane(F-114)	< 2.5	2.5	< 17.5	17.5		5	3/18/2015	76-14-2
Ethylbenzene	< 2.5	2.5	< 10.9	10.9		5	3/18/2015	100-41-4
m&p-Xylene	< 5.0	5.0	< 21.7	21.7		5	3/18/2015	179601-23-1
o-Xylene	< 2.5	2.5	< 10.9	10.9		5	3/18/2015	95-47-6
Tetrachloroethene	**107**	**2.5**	**724**	**17.0**		5	3/18/2015	127-18-4
Toluene	**5.2**	**2.5**	**19.4**	**9.43**		5	3/18/2015	108-88-3
trans-1,2-Dichloroethene	< 2.5	2.5	< 9.90	9.90		5	3/18/2015	156-60-5
Trichloroethene	**12**	**2.5**	**62.8**	**13.4**		5	3/18/2015	79-01-6
Trichlorofluoromethane(F-11)	< 2.5	2.5	< 14.1	14.1		5	3/18/2015	75-69-4
Trichlorotrifluoroethane(F-113)	< 2.5	2.5	< 19.2	19.2		5	3/18/2015	76-13-1
Vinyl chloride	< 2.5	2.5	< 6.40	6.40		5	3/18/2015	75-01-4
Surr: 4-Bromofluorobenzene	93.4	70-130	%REC					

Tentatively Identified Compounds (TIC's)

Difluoroethane	< 50	50	ppbv		T4	5	3/18/2015

Airtech Environmental Laboratories (AEL) - AZ 0740

4620 E.Elwood St., Suite 13, Phoenix, AZ 85040 480-968-5888 Fax 480-966-1888

Client:	AMEC F/W	**Client Sample ID:**	BP-22-200-SG-031115
Project:	Broadway Pantana	**Project Number:**	14.2014-2029
Lab Order:	15C013	**Collection:**	3/11/2015
Lab ID:	24	**Matrix:**	Soil Vapor

	ppbv		ug/M^3				Date	
Analyses	**Result**	**Limit**	**Result**	**Limit**	**Qual**	**DF**	**Analyzed**	**CAS#**
VOLATILE ORGANICS IN AIR		**TO-15**					Analyst: JJ	
1,1,1-Trichloroethane	< 1.0	1.0	< 5.46	5.46		2	3/25/2015	71-55-6
1,1-Dichloroethane	< 1.0	1.0	< 4.05	4.05		2	3/25/2015	75-34-3
1,1-Dichloroethene	< 1.0	1.0	< 3.97	3.97		2	3/25/2015	75-35-4
Benzene	< 1.0	1.0	< 3.19	3.19		2	3/25/2015	71-43-2
cis-1,2-Dichloroethene	< 1.0	1.0	< 3.96	3.96		2	3/25/2015	156-59-2
Dichlorodifluoromethane(F-12)	< 2.0	2.0	< 9.90	9.90		2	3/25/2015	75-71-8
Dichlorotetrafluoroethane(F-114)	< 1.0	1.0	< 6.99	6.99		2	3/25/2015	76-14-2
Ethylbenzene	< 1.0	1.0	< 4.34	4.34		2	3/25/2015	100-41-4
m&p-Xylene	< 2.0	2.0	< 8.68	8.68		2	3/25/2015	179601-23-1
o-Xylene	< 1.0	1.0	< 4.34	4.34		2	3/25/2015	95-47-6
Tetrachloroethene	**17**	**1.0**	**118**	**6.78**		2	3/25/2015	127-18-4
Toluene	**1.3**	**1.0**	**4.98**	**3.77**		2	3/25/2015	108-88-3
trans-1,2-Dichloroethene	< 1.0	1.0	< 3.96	3.96		2	3/25/2015	156-60-5
Trichloroethene	< 1.0	1.0	< 5.37	5.37		2	3/25/2015	79-01-6
Trichlorofluoromethane(F-11)	< 1.0	1.0	< 5.62	5.62		2	3/25/2015	75-69-4
Trichlorotrifluoroethane(F-113)	< 1.0	1.0	< 7.66	7.66		2	3/25/2015	76-13-1
Vinyl chloride	< 1.0	1.0	< 2.56	2.56		2	3/25/2015	75-01-4
Surr: 4-Bromofluorobenzene	89.7	70-130	%REC					

Tentatively Identified Compounds (TIC's)

Difluoroethane	< 20	20	ppbv		T4	2	3/25/2015	

Airtech Environmental Laboratories (AEL) - AZ 0740

4620 E.Elwood St., Suite 13, Phoenix, AZ 85040 480-968-5888 Fax 480-966-1888

Client:	AMEC F/W	**Client Sample ID:**	BP-22-250-SG-031115
Project:	Broadway Pantana	**Project Number:**	14.2014-2029
Lab Order:	15C013	**Collection:**	3/11/2015
Lab ID:	25	**Matrix:**	Soil Vapor

	ppbv		ug/M^3				Date	
Analyses	**Result**	**Limit**	**Result**	**Limit**	**Qual**	**DF**	**Analyzed**	**CAS#**
VOLATILE ORGANICS IN AIR		**TO-15**					Analyst: JJ	
1,1,1-Trichloroethane	< 1.0	1.0	< 5.46	5.46		2	3/25/2015	71-55-6
1,1-Dichloroethane	< 1.0	1.0	< 4.05	4.05		2	3/25/2015	75-34-3
1,1-Dichloroethene	< 1.0	1.0	< 3.97	3.97		2	3/25/2015	75-35-4
Benzene	< 1.0	1.0	< 3.19	3.19		2	3/25/2015	71-43-2
cis-1,2-Dichloroethene	< 1.0	1.0	< 3.96	3.96		2	3/25/2015	156-59-2
Dichlorodifluoromethane(F-12)	< 2.0	2.0	< 9.90	9.90		2	3/25/2015	75-71-8
Dichlorotetrafluoroethane(F-114)	< 1.0	1.0	< 6.99	6.99		2	3/25/2015	76-14-2
Ethylbenzene	< 1.0	1.0	< 4.34	4.34		2	3/25/2015	100-41-4
m&p-Xylene	< 2.0	2.0	< 8.68	8.68		2	3/25/2015	179601-23-1
o-Xylene	< 1.0	1.0	< 4.34	4.34		2	3/25/2015	95-47-6
Tetrachloroethene	**9.1**	**1.0**	**62.0**	**6.78**		2	3/25/2015	127-18-4
Toluene	< 1.0	1.0	< 3.77	3.77		2	3/25/2015	108-88-3
trans-1,2-Dichloroethene	< 1.0	1.0	< 3.96	3.96		2	3/25/2015	156-60-5
Trichloroethene	< 1.0	1.0	< 5.37	5.37		2	3/25/2015	79-01-6
Trichlorofluoromethane(F-11)	< 1.0	1.0	< 5.62	5.62		2	3/25/2015	75-69-4
Trichlorotrifluoroethane(F-113)	< 1.0	1.0	< 7.66	7.66		2	3/25/2015	76-13-1
Vinyl chloride	< 1.0	1.0	< 2.56	2.56		2	3/25/2015	75-01-4
Surr: 4-Bromofluorobenzene	90.1	70-130	%REC					

Tentatively Identified Compounds (TIC's)

Difluoroethane	< 20	20	ppbv		T4	2	3/25/2015	

Airtech Environmental Laboratories (AEL) - AZ 0740

4620 E.Elwood St., Suite 13, Phoenix, AZ 85040 480-968-5888 Fax 480-966-1888

Client:	AMEC F/W	**Client Sample ID:**	BP-22-300-SG-031115
Project:	Broadway Pantana	**Project Number:**	14.2014-2029
Lab Order:	15C013	**Collection:**	3/11/2015
Lab ID:	26	**Matrix:**	Soil Vapor

	ppbv		ug/M^3				Date	
Analyses	**Result**	**Limit**	**Result**	**Limit**	**Qual**	**DF**	**Analyzed**	**CAS#**
VOLATILE ORGANICS IN AIR		**TO-15**					Analyst: JJ	
1,1,1-Trichloroethane	< 1.0	1.0	< 5.46	5.46		2	3/25/2015	71-55-6
1,1-Dichloroethane	< 1.0	1.0	< 4.05	4.05		2	3/25/2015	75-34-3
1,1-Dichloroethene	< 1.0	1.0	< 3.97	3.97		2	3/25/2015	75-35-4
Benzene	< 1.0	1.0	< 3.19	3.19		2	3/25/2015	71-43-2
cis-1,2-Dichloroethene	< 1.0	1.0	< 3.96	3.96		2	3/25/2015	156-59-2
Dichlorodifluoromethane(F-12)	**4.8**	**2.0**	**23.8**	**9.90**		2	3/25/2015	75-71-8
Dichlorotetrafluoroethane(F-114)	< 1.0	1.0	< 6.99	6.99		2	3/25/2015	76-14-2
Ethylbenzene	< 1.0	1.0	< 4.34	4.34		2	3/25/2015	100-41-4
m&p-Xylene	< 2.0	2.0	< 8.68	8.68		2	3/25/2015	179601-23-1
o-Xylene	< 1.0	1.0	< 4.34	4.34		2	3/25/2015	95-47-6
Tetrachloroethene	**66**	**1.0**	**450**	**6.78**		2	3/25/2015	127-18-4
Toluene	< 1.0	1.0	< 3.77	3.77		2	3/25/2015	108-88-3
trans-1,2-Dichloroethene	< 1.0	1.0	< 3.96	3.96		2	3/25/2015	156-60-5
Trichloroethene	**1.9**	**1.0**	**10.2**	**5.37**		2	3/25/2015	79-01-6
Trichlorofluoromethane(F-11)	< 1.0	1.0	< 5.62	5.62		2	3/25/2015	75-69-4
Trichlorotrifluoroethane(F-113)	< 1.0	1.0	< 7.66	7.66		2	3/25/2015	76-13-1
Vinyl chloride	< 1.0	1.0	< 2.56	2.56		2	3/25/2015	75-01-4
Surr: 4-Bromofluorobenzene	93.2	70-130	%REC					

Tentatively Identified Compounds (TIC's)

Difluoroethane	< 20	20	ppbv		T4	2	3/25/2015	

Airtech Environmental Laboratories (AEL) - AZ 0740

4620 E.Elwood St., Suite 13, Phoenix, AZ 85040 480-968-5888 Fax 480-966-1888

Client:	AMEC F/W	**Client Sample ID:**	BP-22-438-SG-031115
Project:	Broadway Pantana	**Project Number:**	14.2014-2029
Lab Order:	15C013	**Collection:**	3/11/2015
Lab ID:	27	**Matrix:**	Soil Vapor

	ppbv		ug/M^3				Date	
Analyses	**Result**	**Limit**	**Result**	**Limit**	**Qual**	**DF**	**Analyzed**	**CAS#**
VOLATILE ORGANICS IN AIR		**TO-15**					Analyst: JJ	
1,1,1-Trichloroethane	< 1.0	1.0	< 5.46	5.46		2	3/25/2015	71-55-6
1,1-Dichloroethane	< 1.0	1.0	< 4.05	4.05		2	3/25/2015	75-34-3
1,1-Dichloroethene	< 1.0	1.0	< 3.97	3.97		2	3/25/2015	75-35-4
Benzene	**1.0**	**1.0**	**3.25**	**3.19**		2	3/25/2015	71-43-2
cis-1,2-Dichloroethene	< 1.0	1.0	< 3.96	3.96		2	3/25/2015	156-59-2
Dichlorodifluoromethane(F-12)	< 2.0	2.0	< 9.90	9.90		2	3/25/2015	75-71-8
Dichlorotetrafluoroethane(F-114)	< 1.0	1.0	< 6.99	6.99		2	3/25/2015	76-14-2
Ethylbenzene	< 1.0	1.0	< 4.34	4.34		2	3/25/2015	100-41-4
m&p-Xylene	**3.6**	**2.0**	**15.6**	**8.68**		2	3/25/2015	179601-23-1
o-Xylene	**1.3**	**1.0**	**5.47**	**4.34**		2	3/25/2015	95-47-6
Tetrachloroethene	**18**	**1.0**	**123**	**6.78**		2	3/25/2015	127-18-4
Toluene	**4.9**	**1.0**	**18.5**	**3.77**		2	3/25/2015	108-88-3
trans-1,2-Dichloroethene	< 1.0	1.0	< 3.96	3.96		2	3/25/2015	156-60-5
Trichloroethene	**4.9**	**1.0**	**26.5**	**5.37**		2	3/25/2015	79-01-6
Trichlorofluoromethane(F-11)	< 1.0	1.0	< 5.62	5.62		2	3/25/2015	75-69-4
Trichlorotrifluoroethane(F-113)	< 1.0	1.0	< 7.66	7.66		2	3/25/2015	76-13-1
Vinyl chloride	< 1.0	1.0	< 2.56	2.56		2	3/25/2015	75-01-4
Surr: 4-Bromofluorobenzene	93.3	70-130	%REC					

Tentatively Identified Compounds (TIC's)

Difluoroethane	< 20	20	ppbv		T4	2	3/25/2015	

Airtech Environmental Laboratories (AEL) - AZ 0740

4620 E.Elwood St., Suite 13, Phoenix, AZ 85040 480-968-5888 Fax 480-966-1888

Client:	AMEC F/W	**Client Sample ID:**	MW-5-SG-031115
Project:	Broadway Pantana	**Project Number:**	14.2014-2029
Lab Order:	15C013	**Collection:**	3/11/2015
Lab ID:	28	**Matrix:**	Soil Vapor

	ppbv		ug/M^3				Date	
Analyses	**Result**	**Limit**	**Result**	**Limit**	**Qual**	**DF**	**Analyzed**	**CAS#**
VOLATILE ORGANICS IN AIR		**TO-15**					Analyst: JJ	
1,1,1-Trichloroethane	< 1.0	1.0	< 5.46	5.46		2	3/20/2015	71-55-6
1,1,2,2-Tetrachloroethane	< 1.0	1.0	< 6.87	6.87		2	3/20/2015	79-34-5
1,1,2-Trichloroethane	< 1.0	1.0	< 5.46	5.46		2	3/20/2015	79-00-5
1,1-Dichloroethane	< 1.0	1.0	< 4.05	4.05		2	3/20/2015	75-34-3
1,1-Dichloroethene	< 1.0	1.0	< 3.97	3.97		2	3/20/2015	75-35-4
1,2,4-Trichlorobenzene	< 4.0	4.0	< 29.7	29.7	L5	2	3/20/2015	120-82-1
1,2,4-Trimethylbenzene	< 1.0	1.0	< 4.92	4.92		2	3/20/2015	95-63-6
1,2-Dibromoethane	< 1.0	1.0	< 7.68	7.68		2	3/20/2015	106-93-4
1,2-Dichlorobenzene	< 1.0	1.0	< 6.01	6.01		2	3/20/2015	95-50-1
1,2-Dichloroethane	**4.9**	**1.0**	**19.7**	**4.05**		2	3/20/2015	107-06-2
1,2-Dichloropropane	< 1.0	1.0	< 4.62	4.62		2	3/20/2015	78-87-5
1,3,5-Trimethylbenzene	< 1.0	1.0	< 4.92	4.92		2	3/20/2015	108-67-8
1,3-Butadiene	< 1.0	1.0	< 2.21	2.21	L5	2	3/20/2015	106-99-0
1,3-Dichlorobenzene	< 1.0	1.0	< 6.01	6.01		2	3/20/2015	541-73-1
1,4-Dichlorobenzene	**5.4**	**1.0**	**32.2**	**6.01**		2	3/20/2015	106-46-7
1,4-Dioxane	< 4.0	4.0	< 14.4	14.4		2	3/20/2015	123-91-1
2,2,4-Trimethylpentane	< 1.0	1.0	< 4.66	4.66	L5	2	3/20/2015	540-84-1
2-Butanone (MEK)	< 10	10	< 29.5	29.5		2	3/20/2015	78-93-3
2-Hexanone	< 10	10	< 41.0	41.0	L5	2	3/20/2015	591-78-6
2-Propanol (IPA)	< 10	10	< 24.5	24.5	L5	2	3/20/2015	67-63-0
4-Ethyltoluene	< 2.0	2.0	< 9.84	9.84		2	3/20/2015	622-96-8
4-Methyl-2-pentanone (MIK)	< 10	10	< 41.0	41.0	L5	2	3/20/2015	108-10-1
Acetone	< 10	10	< 23.8	23.8		2	3/20/2015	67-64-1
Allyl chloride	< 2.0	2.0	< 6.26	6.26		2	3/20/2015	107-05-1
Benzene	**10**	**1.0**	**33.0**	**3.19**		2	3/20/2015	71-43-2
Benzyl chloride	< 4.0	4.0	< 20.7	20.7		2	3/20/2015	100-44-7
Bromodichloromethane	< 1.0	1.0	< 6.70	6.70		2	3/20/2015	75-27-4
Bromoethene(Vinyl Bromide)	< 1.0	1.0	< 4.37	4.37		2	3/20/2015	593-60-2
Bromoform	< 1.0	1.0	< 10.3	10.3	L5	2	3/20/2015	75-25-2
Bromomethane	< 1.0	1.0	< 3.88	3.88		2	3/20/2015	74-83-9
Butyl benzene	< 2.0	2.0	< 11.0	11.0		2	3/20/2015	104-51-8
Carbon disulfide	< 4.0	4.0	< 12.4	12.4		2	3/20/2015	75-15-0
Carbon tetrachloride	< 1.0	1.0	< 6.29	6.29		2	3/20/2015	56-23-5
Chlorobenzene	**2.3**	**1.0**	**10.7**	**4.60**		2	3/20/2015	108-90-7
Chloroethane	< 1.0	1.0	< 2.64	2.64		2	3/20/2015	75-00-3
Chloroform	< 1.0	1.0	< 4.88	4.88		2	3/20/2015	67-66-3
Chloromethane	< 4.0	4.0	< 8.28	8.28		2	3/20/2015	74-87-3
cis-1,2-Dichloroethene	**4.3**	**1.0**	**17.2**	**3.96**		2	3/20/2015	156-59-2
cis-1,3-Dichloropropene	< 1.0	1.0	< 4.54	4.54		2	3/20/2015	542-75-6
Cyclohexane	**6.2**	**1.0**	**21.4**	**3.44**		2	3/20/2015	110-82-7
Dibromochloromethane	< 1.0	1.0	< 8.52	8.52		2	3/20/2015	124-48-1
Dichlorodifluoromethane(F-12)	**5.7**	**2.0**	**28.4**	**9.90**		2	3/20/2015	75-71-8
Dichlorotetrafluoroethane(F-114)	**8.8**	**1.0**	**61.4**	**6.99**		2	3/20/2015	76-14-2
Ethanol	< 10	10	< 18.8	18.8		2	3/20/2015	64-17-5
Ethyl Acetate	< 1.0	1.0	< 3.60	3.60	L5	2	3/20/2015	141-78-6
Ethylbenzene	**9.5**	**1.0**	**41.2**	**4.34**		2	3/20/2015	100-41-4

Airtech Environmental Laboratories (AEL) - AZ 0740

4620 E.Elwood St., Suite 13, Phoenix, AZ 85040 480-968-5888 Fax 480-966-1888

Client:	AMEC F/W	**Client Sample ID:**	MW-5-SG-031115
Project:	Broadway Pantana	**Project Number:**	14.2014-2029
Lab Order:	15C013	**Collection:**	3/11/2015
Lab ID:	28	**Matrix:**	Soil Vapor

	ppbv		ug/M^3				Date	
Analyses	**Result**	**Limit**	**Result**	**Limit**	**Qual**	**DF**	**Analyzed**	**CAS#**
VOLATILE ORGANICS IN AIR	**TO-15**						Analyst: JJ	
Heptane	**89**	**1.0**	**365**	**4.10**		2	3/20/2015	142-82-5
Hexachlorobutadiene	< 2.0	2.0	< 21.3	21.3	L5	2	3/20/2015	87-68-3
Hexane	< 2.0	2.0	< 7.04	7.04		2	3/20/2015	110-54-3
Isopropylbenzene	< 2.0	2.0	< 9.84	9.84		2	3/20/2015	98-82-8
m&p-Xylene	< 2.0	2.0	< 8.68	8.68		2	3/20/2015	179601-23-1
Methyl tert-butyl ether	< 4.0	4.0	< 14.4	14.4		2	3/20/2015	1634-04-4
Methylcyclohexane	**13**	**2.0**	**51.0**	**8.04**		2	3/20/2015	108-87-2
Methylene chloride	< 4.0	4.0	< 13.9	13.9		2	3/20/2015	75-09-2
Naphthalene	< 4.0	4.0	< 21.0	21.0		2	3/20/2015	91-20-3
Nonane	**23**	**2.0**	**118**	**10.5**		2	3/20/2015	111-84-2
Octane	**13**	**2.0**	**60.0**	**9.34**		2	3/20/2015	111-65-9
o-Xylene	< 1.0	1.0	< 4.34	4.34		2	3/20/2015	95-47-6
Propene (Propylene)	< 2.0	2.0	< 3.44	3.44		2	3/20/2015	115-07-1
Propylbenzene	< 2.0	2.0	< 9.84	9.84		2	3/20/2015	103-65-1
Sec-Butyl benzene	< 2.0	2.0	< 11.0	11.0		2	3/20/2015	135-98-8
Styrene	< 1.0	1.0	< 4.26	4.26		2	3/20/2015	100-42-5
Tert-Butyl benzene	< 2.0	2.0	< 11.0	11.0		2	3/20/2015	98-06-6
Tetrachloroethene	**3.3**	**1.0**	**22.5**	**6.78**		2	3/20/2015	127-18-4
Tetrahydrofuran	< 4.0	4.0	< 11.8	11.8	L5	2	3/20/2015	109-99-9
Toluene	**2.2**	**1.0**	**8.22**	**3.77**		2	3/20/2015	108-88-3
trans-1,2-Dichloroethene	< 1.0	1.0	< 3.96	3.96		2	3/20/2015	156-60-5
trans-1,3-Dichloropropene	< 1.0	1.0	< 4.54	4.54		2	3/20/2015	542-75-6
Trichloroethene	< 1.0	1.0	< 5.37	5.37		2	3/20/2015	79-01-6
Trichlorofluoromethane(F-11)	< 1.0	1.0	< 5.62	5.62		2	3/20/2015	75-69-4
Trichlorotrifluoroethane(F-113)	< 1.0	1.0	< 7.66	7.66		2	3/20/2015	76-13-1
Vinyl acetate	< 1.0	1.0	< 3.52	3.52	L5	2	3/20/2015	108-05-4
Vinyl chloride	**2.4**	**1.0**	**6.04**	**2.56**		2	3/20/2015	75-01-4
Surr: 4-Bromofluorobenzene	75.9	70-130	%REC					

Tentatively Identified Compounds (TIC's)

Difluoroethane	< 20	20	ppbv		T4	2	3/20/2015

Airtech Environmental Laboratories (AEL) - AZ 0740

4620 E.Elwood St., Suite 13, Phoenix, AZ 85040 480-968-5888 Fax 480-966-1888

Client:	AMEC F/W	**Client Sample ID:**	N/A
Project:	Broadway Pantana	**Project Number:**	14.2014-2029
Lab Order:	15C013	**Collection:**	N/A
Lab ID:	Blank	**Matrix:**	Air

Method QC Data

Batch: MS010317 Analyst: JJ

Analyses	ppbv Result	ppbv Limit	ug/M^3 Result	ug/M^3 Limit	Qual	DF	Date Analyzed	CAS#
VOLATILE ORGANICS IN AIR		**TO-15**					Analyst: JJ	
1,1,1-Trichloroethane	< 0.5	0.5	< 2.73	2.73		1	3/17/2015	71-55-6
1,1-Dichloroethane	< 0.5	0.5	< 2.03	2.03		1	3/17/2015	75-34-3
1,1-Dichloroethene	< 0.5	0.5	< 1.99	1.99		1	3/17/2015	75-35-4
Benzene	< 0.5	0.5	< 1.60	1.60		1	3/17/2015	71-43-2
cis-1,2-Dichloroethene	< 0.5	0.5	< 1.98	1.98		1	3/17/2015	156-59-2
Dichlorodifluoromethane(F-12)	< 1.0	1.0	< 4.95	4.95		1	3/17/2015	75-71-8
Dichlorotetrafluoroethane(F-114)	< 0.5	0.5	< 3.50	3.50		1	3/17/2015	76-14-2
Ethylbenzene	< 0.5	0.5	< 2.17	2.17		1	3/17/2015	100-41-4
m&p-Xylene	< 1.0	1.0	< 4.34	4.34		1	3/17/2015	179601-23-1
o-Xylene	< 0.5	0.5	< 2.17	2.17		1	3/17/2015	95-47-6
Tetrachloroethene	< 0.5	0.5	< 3.39	3.39		1	3/17/2015	127-18-4
Toluene	< 0.5	0.5	< 1.89	1.89		1	3/17/2015	108-88-3
trans-1,2-Dichloroethene	< 0.5	0.5	< 1.98	1.98		1	3/17/2015	156-60-5
Trichloroethene	< 0.5	0.5	< 2.69	2.69		1	3/17/2015	79-01-6
Trichlorofluoromethane(F-11)	< 0.5	0.5	< 2.81	2.81		1	3/17/2015	75-69-4
Trichlorotrifluoroethane(F-113)	< 0.5	0.5	< 3.83	3.83		1	3/17/2015	76-13-1
Vinyl chloride	< 0.5	0.5	< 1.28	1.28		1	3/17/2015	75-01-4
Surr: 4-Bromofluorobenzene	91.7	70-130	%REC					

Airtech Environmental Laboratories (AEL) - AZ 0740

4620 E.Elwood St., Suite 13, Phoenix, AZ 85040 480-968-5888 Fax 480-966-1888

Client:	AMEC F/W	**Client Sample ID:**	N/A
Project:	Broadway Pantana	**Project Number:**	14.2014-2029
Lab Order:	15C013	**Collection:**	N/A
Lab ID:	LCS/LCSD	**Matrix:**	Nitrogen

Method QC Data

Date Analyzed: 3/17/2015 Batch: MS010317 Analyst: JJ

Analyses	LCS Result	LCS %REC	LCSD Result	LCSD %REC	T.V.	%RPD	Unit	Qualifier LCS	Qualifier LCSD	Qualifier RPD
VOLATILE ORGANICS IN AIR	**TO-15**							70-130%		<25%
Dichlorodifluoromethane(F-12)	9.3	93.4	8.8	88.3	10.0	5.6	ppbv			
Dichlorotetrafluoroethane(F-114)	10.2	102	9.3	92.8	10.0	9.2	ppbv			
Vinyl Chloride	9.4	94.4	9.7	96.8	10.0	2.5	ppbv			
Trichlorofluoromethane (F-11)	9.7	97.0	9.2	91.9	10.0	5.4	ppbv			
1,1-Dichloroethene	9.5	95.4	9.7	97.2	10.0	1.9	ppbv			
Trichlorotrifluoroethane (F-113)	9.6	95.8	9.2	91.7	10.0	4.4	ppbv			
trans-1,2-Dichloroethene	9.9	99.0	9.8	97.9	10.0	1.1	ppbv			
1,1-Dichloroethane	9.5	95.4	9.5	95.1	10.0	0.3	ppbv			
cis-1,2-Dichloroethene	10.0	99.5	9.5	94.6	10.0	5.0	ppbv			
1,1,1-Trichloroethane	10.3	103	9.6	95.7	10.0	7.5	ppbv			
Benzene	10.2	102	9.6	95.9	10.0	6.6	ppbv			
Trichloroethene	9.5	94.7	9.2	92.4	10.0	2.5	ppbv			
Toluene	10.2	102	9.5	94.8	10.0	7.6	ppbv			
Tetrachloroethene	9.8	97.7	9.3	92.6	10.0	5.4	ppbv			
Ethylbenzene	10.4	104	10.1	101	10.0	2.9	ppbv			
m&p-Xylene	19.8	99.2	20.0	99.8	20.0	0.7	ppbv			
o-Xylene	9.8	97.8	9.5	94.8	10.0	3.1	ppbv			
Surr: 4-Bromofluorobenzene	9.9	99.3	10.1	101		1.3	%REC			
		70-130%		70-130%						

Airtech Environmental Laboratories (AEL) - AZ 0740

4620 E.Elwood St., Suite 13, Phoenix, AZ 85040 480-968-5888 Fax 480-966-1888

Client:	AMEC F/W	**Client Sample ID:**	N/A
Project:	Broadway Pantana	**Project Number:**	14.2014-2029
Lab Order:	15C013	**Collection:**	N/A
Lab ID:	Blank	**Matrix:**	Air

Method QC Data

Batch: MS010319 Analyst: JJ

Analyses	ppbv Result	ppbv Limit	ug/M^3 Result	ug/M^3 Limit	Qual	DF	Date Analyzed	CAS#
VOLATILE ORGANICS IN AIR		**TO-15**					Analyst: JJ	
1,1,1-Trichloroethane	< 0.5	0.5	< 2.73	2.73		1	3/19/2015	71-55-6
1,1,2,2-Tetrachloroethane	< 0.5	0.5	< 3.44	3.44		1	3/19/2015	79-34-5
1,1,2-Trichloroethane	< 0.5	0.5	< 2.73	2.73		1	3/19/2015	79-00-5
1,1-Dichloroethane	< 0.5	0.5	< 2.03	2.03		1	3/19/2015	75-34-3
1,1-Dichloroethene	< 0.5	0.5	< 1.99	1.99		1	3/19/2015	75-35-4
1,2,4-Trichlorobenzene	< 2.0	2.0	< 14.8	14.8		1	3/19/2015	120-82-1
1,2,4-Trimethylbenzene	< 0.5	0.5	< 2.46	2.46		1	3/19/2015	95-63-6
1,2-Dibromoethane	< 0.5	0.5	< 3.84	3.84		1	3/19/2015	106-93-4
1,2-Dichlorobenzene	< 0.5	0.5	< 3.01	3.01		1	3/19/2015	95-50-1
1,2-Dichloroethane	< 0.5	0.5	< 2.03	2.03		1	3/19/2015	107-06-2
1,2-Dichloropropane	< 0.5	0.5	< 2.31	2.31		1	3/19/2015	78-87-5
1,3,5-Trimethylbenzene	< 0.5	0.5	< 2.46	2.46		1	3/19/2015	108-67-8
1,3-Butadiene	< 0.5	0.5	< 1.11	1.11		1	3/19/2015	106-99-0
1,3-Dichlorobenzene	< 0.5	0.5	< 3.01	3.01		1	3/19/2015	541-73-1
1,4-Dichlorobenzene	< 0.5	0.5	< 3.01	3.01		1	3/19/2015	106-46-7
1,4-Dioxane	< 2.0	2.0	< 7.20	7.20		1	3/19/2015	123-91-1
2,2,4-Trimethylpentane	< 0.5	0.5	< 2.33	2.33		1	3/19/2015	540-84-1
2-Butanone (MEK)	< 5.0	5.0	< 14.8	14.8		1	3/19/2015	78-93-3
2-Hexanone	< 5.0	5.0	< 20.5	20.5		1	3/19/2015	591-78-6
2-Propanol (IPA)	< 5.0	5.0	< 12.3	12.3		1	3/19/2015	67-63-0
4-Ethyltoluene	< 1.0	1.0	< 4.92	4.92		1	3/19/2015	622-96-8
4-Methyl-2-pentanone (MIK)	< 5.0	5.0	< 20.5	20.5		1	3/19/2015	108-10-1
Acetone	< 5.0	5.0	< 11.9	11.9		1	3/19/2015	67-64-1
Allyl chloride	< 1.0	1.0	< 3.13	3.13		1	3/19/2015	107-05-1
Benzene	< 0.5	0.5	< 1.60	1.60		1	3/19/2015	71-43-2
Benzyl chloride	< 2.0	2.0	< 10.4	10.4		1	3/19/2015	100-44-7
Bromodichloromethane	< 0.5	0.5	< 3.35	3.35		1	3/19/2015	75-27-4
Bromoethene(Vinyl Bromide)	< 0.5	0.5	< 2.19	2.19		1	3/19/2015	593-60-2
Bromoform	< 0.5	0.5	< 5.17	5.17		1	3/19/2015	75-25-2
Bromomethane	< 0.5	0.5	< 1.94	1.94		1	3/19/2015	74-83-9
Butyl benzene	< 1.0	1.0	< 5.49	5.49		1	3/19/2015	104-51-8
Carbon disulfide	< 2.0	2.0	< 6.22	6.22		1	3/19/2015	75-15-0
Carbon tetrachloride	< 0.5	0.5	< 3.15	3.15		1	3/19/2015	56-23-5
Chlorobenzene	< 0.5	0.5	< 2.30	2.30		1	3/19/2015	108-90-7
Chloroethane	< 0.5	0.5	< 1.32	1.32		1	3/19/2015	75-00-3
Chloroform	< 0.5	0.5	< 2.44	2.44		1	3/19/2015	67-66-3
Chloromethane	< 2.0	2.0	< 4.14	4.14		1	3/19/2015	74-87-3
cis-1,2-Dichloroethene	< 0.5	0.5	< 1.98	1.98		1	3/19/2015	156-59-2
cis-1,3-Dichloropropene	< 0.5	0.5	< 2.27	2.27		1	3/19/2015	542-75-6
Cyclohexane	< 0.5	0.5	< 1.72	1.72		1	3/19/2015	110-82-7
Dibromochloromethane	< 0.5	0.5	< 4.26	4.26		1	3/19/2015	124-48-1
Dichlorodifluoromethane(F-12)	< 1.0	1.0	< 4.95	4.95		1	3/19/2015	75-71-8
Dichlorotetrafluoroethane(F-114)	< 0.5	0.5	< 3.50	3.50		1	3/19/2015	76-14-2
Ethanol	< 5.0	5.0	< 9.40	9.40		1	3/19/2015	64-17-5
Ethyl Acetate	< 0.5	0.5	< 1.80	1.80		1	3/19/2015	141-78-6
Ethylbenzene	< 0.5	0.5	< 2.17	2.17		1	3/19/2015	100-41-4

Airtech Environmental Laboratories (AEL) - AZ 0740

4620 E.Elwood St., Suite 13, Phoenix, AZ 85040 480-968-5888 Fax 480-966-1888

Client:	AMEC F/W	**Client Sample ID:**	N/A
Project:	Broadway Pantana	**Project Number:**	14.2014-2029
Lab Order:	15C013	**Collection:**	N/A
Lab ID:	Blank	**Matrix:**	Air

Method QC Data

Batch: MS010319 Analyst: JJ

Analyses	ppbv Result	ppbv Limit	ug/M^3 Result	ug/M^3 Limit	Qual	DF	Date Analyzed	
VOLATILE ORGANICS IN AIR		**TO-15**					Analyst: JJ	
Heptane	< 0.5	0.5	< 2.05	2.05		1	3/19/2015	142-82-5
Hexachlorobutadiene	< 1.0	1.0	< 10.7	10.7		1	3/19/2015	87-68-3
Hexane	< 1.0	1.0	< 3.52	3.52		1	3/19/2015	110-54-3
Isopropylbenzene	< 1.0	1.0	< 4.92	4.92		1	3/19/2015	98-82-8
m&p-Xylene	< 1.0	1.0	< 4.34	4.34		1	3/19/2015	179601-23-1
Methyl tert-butyl ether	< 2.0	2.0	< 7.22	7.22		1	3/19/2015	1634-04-4
Methylcyclohexane	< 1.0	1.0	< 4.02	4.02		1	3/19/2015	108-87-2
Methylene chloride	< 2.0	2.0	< 6.94	6.94		1	3/19/2015	75-09-2
Naphthalene	< 2.0	2.0	< 10.5	10.5		1	3/19/2015	91-20-3
Nonane	< 1.0	1.0	< 5.24	5.24		1	3/19/2015	111-84-2
Octane	< 1.0	1.0	< 4.67	4.67		1	3/19/2015	111-65-9
o-Xylene	< 0.5	0.5	< 2.17	2.17		1	3/19/2015	95-47-6
Propene (Propylene)	< 1.0	1.0	< 1.72	1.72		1	3/19/2015	115-07-1
Propylbenzene	< 1.0	1.0	< 4.92	4.92		1	3/19/2015	103-65-1
Sec-Butyl benzene	< 1.0	1.0	< 5.49	5.49		1	3/19/2015	135-98-8
Styrene	< 0.5	0.5	< 2.13	2.13		1	3/19/2015	100-42-5
Tert-Butyl benzene	< 1.0	1.0	< 5.49	5.49		1	3/19/2015	98-06-6
Tetrachloroethene	< 0.5	0.5	< 3.39	3.39		1	3/19/2015	127-18-4
Tetrahydrofuran	< 2.0	2.0	< 5.90	5.90		1	3/19/2015	109-99-9
Toluene	< 0.5	0.5	< 1.89	1.89		1	3/19/2015	108-88-3
trans-1,2-Dichloroethene	< 0.5	0.5	< 1.98	1.98		1	3/19/2015	156-60-5
trans-1,3-Dichloropropene	< 0.5	0.5	< 2.27	2.27		1	3/19/2015	542-75-6
Trichloroethene	< 0.5	0.5	< 2.69	2.69		1	3/19/2015	79-01-6
Trichlorofluoromethane(F-11)	< 0.5	0.5	< 2.81	2.81		1	3/19/2015	75-69-4
Trichlorotrifluoroethane(F-113)	< 0.5	0.5	< 3.83	3.83		1	3/19/2015	76-13-1
Vinyl acetate	< 0.5	0.5	< 1.76	1.76		1	3/19/2015	108-05-4
Vinyl chloride	< 0.5	0.5	< 1.28	1.28		1	3/19/2015	75-01-4
Surr: 4-Bromofluorobenzene	85.1	70-130	%REC					

Airtech Environmental Laboratories (AEL) - AZ 0740

4620 E.Elwood St., Suite 13, Phoenix, AZ 85040 480-968-5888 Fax 480-966-1888

Client:	AMEC F/W	**Client Sample ID:**	N/A
Project:	Broadway Pantana	**Project Number:**	14.2014-2029
Lab Order:	15C013	**Collection:**	N/A
Lab ID:	LCS/LCSD	**Matrix:**	Air

Method QC Data

Date Analyzed: 3/19/2015 Batch: MS010319 Analyst: JJ

Analyses	LCS Result	LCS %REC	LCSD Result	LCSD %REC	T.V.	%RPD	Unit	Qualifier LCS	Qualifier LCSD	Qualifier RPD
VOLATILE ORGANICS IN AIR	**TO-15**							70-130%		<25%
Propene (Propylene)	9.2	91.6	11.6	116	10.0	23.8	ppbv			
Dichlorodifluoromethane(F-12)	8.1	80.9	8.7	87.4	10.0	7.7	ppbv			
Chloromethane	10.2	102	12.5	125	10.0	19.9	ppbv			
Dichlorotetrafluoroethane(F-114)	9.0	89.8	8.9	88.9	10.0	1.0	ppbv			
Vinyl Chloride	9.7	96.8	10.1	101	10.0	3.8	ppbv			
1,3-Butadiene	13.3	133	15.1	151	10.0	13.0	ppbv	L5	L5	
Bromomethane	8.5	85.4	10.5	105	10.0	20.1	ppbv			
Ethanol	11.2	112	12.2	122	10.0	8.0	ppbv			
Chloroethane	7.7	77.1	8.5	84.5	10.0	9.2	ppbv			
Bromoethene(Vinyl Bromide)	8.8	87.7	9.0	89.8	10.0	2.4	ppbv			
Trichlorofluoromethane (F-11)	8.8	87.5	9.4	93.8	10.0	6.9	ppbv			
Acetone	9.6	95.5	10.7	107	10.0	11.5	ppbv			
Isopropyl Alcohol (2-Propanol)	11.2	112	13.8	138	10.0	21.0	ppbv		L5	
1,1-Dichloroethene	9.0	90.4	10.4	104	10.0	13.9	ppbv			
Trichlorotrifluoroethane (F-113)	8.3	83.3	8.6	86.4	10.0	3.7	ppbv			
Methylene Chloride	9.5	95.4	10.9	109	10.0	13.6	ppbv			
Allyl Chloride	9.0	90.2	9.7	96.6	10.0	6.9	ppbv			
Carbon disulfide	8.0	80.3	8.4	83.8	10.0	4.3	ppbv			
trans-1,2-Dichloroethene	8.7	87.1	9.0	89.7	10.0	2.9	ppbv			
Methyl tert-butyl ether	9.8	97.8	11.3	113	10.0	14.6	ppbv			
1,1-Dichloroethane	8.6	86.1	9.6	95.9	10.0	10.8	ppbv			
Vinyl acetate	13.8	138	17.0	170	10.0	20.7	ppbv	L5	L5	
2-Butanone (MEK)	9.7	97.0	10.8	108	10.0	10.9	ppbv			
Hexane	9.6	95.5	10.9	109	10.0	13.3	ppbv			
cis-1,2-Dichloroethene	9.1	91.1	9.4	94.1	10.0	3.2	ppbv			
Ethyl Acetate	13.9	139	16.8	168	10.0	18.6	ppbv	L5	L5	
Chloroform	8.6	85.5	9.0	89.8	10.0	4.9	ppbv			
Tetrahydrofuran	13.0	130	15.8	158	10.0	19.6	ppbv		L5	
1,1,1-Trichloroethane	9.4	94.3	9.9	99.2	10.0	5.1	ppbv			
1,2-Dichloroethane	10.7	107	11.7	117	10.0	8.1	ppbv			
Benzene	9.0	90.3	9.4	93.9	10.0	3.9	ppbv			
Carbon tetrachloride	10.1	101.1	10.6	106	10.0	4.6	ppbv			
Cyclohexane	9.6	96.1	10.8	108	10.0	11.7	ppbv			
2,2,4-Trimethylpentane	9.6	95.6	10.4	104	10.0	8.2	ppbv			
Heptane	12.2	122	14.1	141	10.0	14.2	ppbv		L5	
1,2-Dichloropropane	9.5	94.5	9.9	98.5	10.0	4.1	ppbv			
Trichloroethene	10.8	108	10.7	107	10.0	1.3	ppbv			
Bromodichloromethane	10.1	101	9.9	99.4	10.0	1.7	ppbv			
1,4-Dioxane	11.7	117	11.7	117	10.0	0.4	ppbv			
Methylcyclohexane	9.8	97.9	9.6	96.2	10.0	1.8	ppbv			
cis-1,3-Dichloropropene	9.9	99.1	9.8	98.2	10.0	0.9	ppbv			
4-methyl-2-pentanone	14.9	149	16.5	165	10.0	9.9	ppbv	L5	L5	
trans-1,3-Dichloropropene	11.5	115	11.4	114	10.0	0.5	ppbv			
Toluene	10.5	105	10.1	101	10.0	3.7	ppbv			

Airtech Environmental Laboratories (AEL) - AZ 0740

Client:	AMEC F/W	**Client Sample ID:**	N/A
Project:	Broadway Pantana	**Project Number:**	14.2014-2029
Lab Order:	15C013	**Collection:**	N/A
Lab ID:	LCS/LCSD	**Matrix:**	Air

Method QC Data

Date Analyzed: 3/19/2015 Batch: MS010319 Analyst: JJ

Analyses	LCS Result	LCS %REC	LCSD Result	LCSD %REC	T.V.	%RPD	Unit	Qualifier LCS	Qualifier LCSD	Qualifier RPD
VOLATILE ORGANICS IN AIR	**TO-15**							70-130%		<25%
1,1,2-Trichloroethane	10.0	100	9.6	95.9	10.0	3.9	ppbv			
2-Hexanone	16.5	165	18.0	180	10.0	8.3	ppbv	L5	L5	
n-Octane	10.7	107	11.7	117	10.0	8.2	ppbv			
Dibromochloromethane	12.6	126	12.3	123	10.0	2.9	ppbv			
1,2-Dibromoethane	11.0	110	10.6	106	10.0	3.9	ppbv			
Tetrachloroethene	12.1	121	11.6	116	10.0	3.5	ppbv			
Chlorobenzene	10.3	103	10.3	103	10.0	0.1	ppbv			
Ethylbenzene	11.1	111	11.0	110	10.0	0.8	ppbv			
m&p-Xylene	21.2	106	21.2	106	20.0	0.2	ppbv			
Bromoform	13.3	133	13.8	138	10.0	3.8	ppbv	L5	L5	
Styrene	9.8	98.2	9.7	97.3	10.0	0.9	ppbv			
Nonane	10.5	105	12.0	120	10.0	12.6	ppbv			
o-Xylene	9.8	98.4	9.7	96.8	10.0	1.6	ppbv			
1,1,2,2-Tetrachloroethane	9.3	92.6	9.2	91.6	10.0	1.1	ppbv			
Isopropylbenzene	10.7	107	10.7	107	10.0	0.1	ppbv			
n-Propylbenzene	10.2	102	10.2	102	10.0	0.2	ppbv			
4-Ethyltoluene	11.5	115	11.7	117	10.0	1.7	ppbv			
1,3,5-Trimethylbenzene	11.0	110	11.1	111	10.0	0.8	ppbv			
Tert-Butyl Benzene	10.5	105	10.6	106	10.0	1.0	ppbv			
1,2,4-Trimethylbenzene	10.9	109	10.9	109	10.0	0.0	ppbv			
Sec-Butyl Benzene	10.3	103	10.1	101	10.0	2.1	ppbv			
1,3-Dichlorobenzene	11.4	114	11.5	115	10.0	0.3	ppbv			
Benzyl chloride	11.9	119	12.2	122	10.0	2.4	ppbv			
1,4-Dichlorobenzene	12.1	121	12.1	121	10.0	0.1	ppbv			
1,2-Dichlorobenzene	12.4	124	12.2	122	10.0	2.3	ppbv			
n-Butyl Benzene	10.0	100	10.0	99.6	10.0	0.8	ppbv			
1,2,4-Trichlorobenzene	13.3	133	13.3	133	10.0	0.4	ppbv	L5	L5	
Naphthalene	11.9	119	11.7	117	10.0	1.4	ppbv			
Hexachlorobutadiene	13.5	135	13.6	136	10.0	0.6	ppbv	L5	L5	
Surr: 4-Bromofluorobenzene	9.0	89.8	9.1	91.0		1.3	%REC			
		70-130%		70-130%						

Airtech Environmental Laboratories (AEL) - AZ 0740

4620 E.Elwood St., Suite 13, Phoenix, AZ 85040 480-968-5888 Fax 480-966-1888

Client:	AMEC F/W	**Client Sample ID:**	N/A
Project:	Broadway Pantana	**Project Number:**	14.2014-2029
Lab Order:	15C013	**Collection:**	N/A
Lab ID:	Blank	**Matrix:**	Air

Method QC Data

Batch: MS010325 Analyst: JJ

Analyses	ppbv Result	ppbv Limit	ug/M^3 Result	ug/M^3 Limit	Qual	DF	Date Analyzed	CAS#
VOLATILE ORGANICS IN AIR		**TO-15**					Analyst: JJ	
1,1,1-Trichloroethane	< 0.5	0.5	< 2.73	2.73		1	3/25/2015	71-55-6
1,1-Dichloroethane	< 0.5	0.5	< 2.03	2.03		1	3/25/2015	75-34-3
1,1-Dichloroethene	< 0.5	0.5	< 1.99	1.99		1	3/25/2015	75-35-4
Benzene	< 0.5	0.5	< 1.60	1.60		1	3/25/2015	71-43-2
cis-1,2-Dichloroethene	< 0.5	0.5	< 1.98	1.98		1	3/25/2015	156-59-2
Dichlorodifluoromethane(F-12)	< 1.0	1.0	< 4.95	4.95		1	3/25/2015	75-71-8
Dichlorotetrafluoroethane(F-114)	< 0.5	0.5	< 3.50	3.50		1	3/25/2015	76-14-2
Ethylbenzene	< 0.5	0.5	< 2.17	2.17		1	3/25/2015	100-41-4
m&p-Xylene	< 1.0	1.0	< 4.34	4.34		1	3/25/2015	179601-23-1
o-Xylene	< 0.5	0.5	< 2.17	2.17		1	3/25/2015	95-47-6
Tetrachloroethene	< 0.5	0.5	< 3.39	3.39		1	3/25/2015	127-18-4
Toluene	< 0.5	0.5	< 1.89	1.89		1	3/25/2015	108-88-3
trans-1,2-Dichloroethene	< 0.5	0.5	< 1.98	1.98		1	3/25/2015	156-60-5
Trichloroethene	< 0.5	0.5	< 2.69	2.69		1	3/25/2015	79-01-6
Trichlorofluoromethane(F-11)	< 0.5	0.5	< 2.81	2.81		1	3/25/2015	75-69-4
Trichlorotrifluoroethane(F-113)	< 0.5	0.5	< 3.83	3.83		1	3/25/2015	76-13-1
Vinyl chloride	< 0.5	0.5	< 1.28	1.28		1	3/25/2015	75-01-4
Surr: 4-Bromofluorobenzene	91.7	70-130	%REC					

Airtech Environmental Laboratories (AEL) - AZ 0740

4620 E.Elwood St., Suite 13, Phoenix, AZ 85040 480-968-5888 Fax 480-966-1888

Client:	AMEC F/W	**Client Sample ID:**	N/A
Project:	Broadway Pantana	**Project Number:**	14.2014-2029
Lab Order:	15C013	**Collection:**	N/A
Lab ID:	LCS/LCSD	**Matrix:**	Air

Method QC Data

Date Analyzed: 3/25/2015 Batch: MS010325 Analyst: JJ

Analyses	LCS Result	LCS %REC	LCSD Result	LCSD %REC	T.V.	%RPD	Unit	Qualifier LCS	Qualifier LCSD	Qualifier RPD
VOLATILE ORGANICS IN AIR	**TO-15**							70-130%		<25%
Dichlorodifluoromethane(F-12)	10.1	101	10.1	101	10.0	0.3	ppbv			
Dichlorotetrafluoroethane(F-114)	10.3	103	10.0	99.9	10.0	3.3	ppbv			
Vinyl Chloride	9.5	95.0	9.8	97.7	10.0	2.8	ppbv			
Trichlorofluoromethane (F-11)	10.7	107	10.2	102	10.0	4.5	ppbv			
1,1-Dichloroethene	10.5	105	10.1	101	10.0	4.3	ppbv			
Trichlorotrifluoroethane (F-113)	10.6	106	9.7	97.3	10.0	8.1	ppbv			
trans-1,2-Dichloroethene	10.9	109	10.3	103	10.0	5.8	ppbv			
1,1-Dichloroethane	10.4	104	9.8	98.3	10.0	5.5	ppbv			
cis-1,2-Dichloroethene	10.9	109	10.0	100	10.0	8.7	ppbv			
1,1,1-Trichloroethane	10.8	108	9.7	97.2	10.0	10.6	ppbv			
Benzene	9.8	97.5	9.0	90.2	10.0	7.8	ppbv			
Trichloroethene	10.8	108	9.9	99.4	10.0	7.9	ppbv			
Toluene	10.4	104	9.3	93.2	10.0	11.2	ppbv			
Tetrachloroethene	10.7	107	9.9	98.7	10.0	7.6	ppbv			
Ethylbenzene	10.5	105	9.3	92.8	10.0	12.4	ppbv			
m&p-Xylene	21.0	105	18.8	94.0	20.0	11.2	ppbv			
o-Xylene	9.7	96.7	8.8	88.0	10.0	9.4	ppbv			
Surr: 4-Bromofluorobenzene	10.0	99.8	10.0	100		0.0	%REC			
		70-130%		70-130%						

Airtech Environmental Laboratories (AEL) - AZ 0740

4620 E.Elwood St., Suite 13, Phoenix, AZ 85040 480-968-5888 Fax 480-966-1888

Client:	AMEC F/W	**Client Sample ID:**	NA
Project:	Broadway Pantana	**Project Number:**	14.2014-2029
Lab Order:	15C013	**Collection:**	NA
Lab ID:	Standards	**Matrix:**	Nitrogen

AEL ID#	STD Name	Vendor	SGI Order#	Description	CONC.	Accuracy	Exp.Date
S-140820-01	Stock	Scott Gas	T9Z90001-110	TO-14 39 Analytes	1.0 ppmv	± 5%	8/20/2015
S-140820-02	Stock	Scott Gas	TO900015-110	TO-15 25 Analytes	1.0 ppmv	± 5%	8/20/2015
S-140624-01	Stock	Spectra Gases	111672570	14 Additional Compounds	1.0 ppmv	± 5%	6/23/2015
S-141201-01	Stock	Spectra Gases	TB500009-110	TO-15 IS 4 Compounds	1.0 ppmv	± 5%	12/1/2015
A-150223-02	Working Std	AEL Dilution		TO-15 74 Analytes	10 ppbv	± 5%	5/23/2015
A-150323-02	Working Std	AEL Dilution		TO-15 74 Analytes	10 ppbv	± 5%	6/23/2015
A-150223-01	Working IS	AEL Dilution		TO-15 IS 4 Compounds	50 ppbv	± 5%	5/23/2015
A-150310-01	Working IS	AEL Dilution		TO-15 IS 4 Compounds	50 ppbv	± 5%	6/10/2015
A-150323-01	Working IS	AEL Dilution		TO-15 IS 4 Compounds	50 ppbv	± 5%	6/23/2015

Airtech Environmental Laboratories (AEL)

Chain of Custody

4620 E.Elwood Street, Suite 13, Phoenix, AZ 85040 480-968-5888 (phone) 480-966-1888 (fax)

Customer : AMEC	Page 1 of _____		AEL Lab #
Address: 4600 E WASHINGTON ST #600	Sampler: ERIC MILLER	Phone: 602.300.8313	15C013
	Project Name: BROADWAY PANTANA	Project Number: 14-2014-2029	
City, State, Zip: PHOENIX, AZ	Project location: TUCSON, AZ		
Contact: Alex Y.	P.O. Number:		
Phone: / Fax:	Fax Results: Y N		
E-Mail Address: Alex.Yiannakakis@amec.com	E-Mail Results: (Y) N		

Sample Receipt

Temperature_____ °C

Custody Seals: Yes_____ No_____

Custody Seals Intact: Yes_____ No_____

Total # of Containers:_____

Turn Around Request

_____ 24 Hours _____ 48 Hours

_____ 72 Hours

_____ 5 working Day

(X) Standard 10 Working Days

Sample Type

SVE: soil vapor extraction GW: ground water

A: ambient air WW: waste water

I: indoor air

(S) soil vapor

W: water

Sample Information

AEL Lab #	Serial # Canister	Serial # Grab	Canister (L) or bag	Grab (Min)	Client's Sample Identification	Sampled Date	Sampled Time	Sample Type	Number of Containers	TO-15 full list	TO-15 TPH(GRO)	TO-15 Selet List	8260B AZ Vapor full list	8260B Vapor select list	8015 GRO	8260B Water			
01	E2407	082	6 (1) bag	1 2 (5)	PROD-2-SG-030915	3.9.15	1443	S	1	X									
02	E2094	136	6 (1) bag	1 2 (5)	PROD-4-SG-030915	↓	1525	↓	↓	X									
03	E2393	050	6 (1) bag	1 2 (5)	PROD-3-SG-030915	↓	1553	↓	↓	X									
04	E2412	037	6 (1) bag	1 2 (5)	PROD-19-SG-030915	↓	1630	↓	↓	X									
05	1817	073	6 (1) bag	1 2 (5)	PROD-18-SG-030915	↓	1705	↓	↓	X									
06	E2294	074	6 (1) bag	1 2 (5)	PROD-17-SG-030915	↓	1733	↓	↓	X									
07	1886	137	6 (1) bag	1 2 (5)	PROD-16-SG-030915	↓	1800	↓	↓	X									
08	E2103	116	6 (1) bag	1 2 (5)	MW-9-SG-031015	3.10.15	915	↓	↓	X									
09	1881	140	6 (1) bag	1 2 (5)	MW-8-SG-031015	↓	945	↓	↓	X									
10	E2350	126	6 (1) bag	1 2 (5)	MW-8-SG-031015-DUP	↓	945	↓	↓	X									

Instructions / Special Requirements:

Date:	Time:	Samples Relinquished By:	Received By:
3.12.15	820	E. Miller	[signature]

Airtech Environmental Laboratories (AEL)

Chain of Custody

4620 E.Elwood Street, Suite 13, Phoenix, AZ 85040 480-968-5888 (phone) 480-966-1888 (fax)

Customer :	AMEC F/W	Page 2 of 3	AEL Lab #
Address:	4600 E WASHINGTON ST #600	Sampler: ERIC MILLER Phone: 602.300.8313	15-C013
		Project Name: BROADWAY PANTANA Project Number: 14-2014-2029	
City, State, Zip:	PHOENIX, AZ	Project location: TUCSON, AZ	
Contact:	Alex Y.	P.O. Number:	
Phone:	Fax:	Fax Results: Y N	
E-Mail Address:	Alex.Yiannakakis@amec.com	E-Mail Results: Y N	

Sample Receipt

Temperature_____ °C

Custody Seals: Yes_____ No_____

Custody Seals Intact: Yes_____ No_____

Total # of Containers:_____

Turn Around Request

_____ 24 Hours _____ 48 Hours

_____ 72 Hours

_____ 5 working Day

X Standard 10 Working Days

Sample Type

SVE: soil vapor extraction GW: ground water

A: ambient air WW: waste water

I: indoor air

S: soil vapor

W: water

Analyses Requested

Sample Information

AEL Lab #	Serial # Canister	Serial # Grab	Canister (L) or bag	Grab (Min)	Client's Sample Identification	Sampled Date	Sampled Time	Sample Type	Number of Containers	TO-15 full list	TO-15 TPH(GRO)	TO-15 Selet List	8260B AZ Vapor full list	8260B Vapor select list	8015 GRO	8260B Water	TO-15 (SHORT LIST)		
11	E2387	070	6 1 bag	1 2 5	MW-7-SG-031015	3-10-15	1023	S	1	X									
12	E2087	106	6 1 bag	1 2 5	MW-6-SG-031015	↓	1057	↓	↓	X									
13	E2391	055	6 1 bag	1 2 5	BSDP-3-50 SG-031015	↓	1235	↓	↓								X		
14	E2397	132	6 1 bag	1 2 5	BSDP-3-100 SG-031015	↓	1300	↓	↓								X		
15	1809	145	6 1 bag	1 2 5	BSDP-3-150 SG-031015	↓	1327	↓	↓								X		
16	1793	047	6 1 bag	1 2 5	BSDP-4-48 SG-031015	↓	1400	↓	↓								X		
17	1865	127	6 1 bag	1 2 5	BSDP-4-100 SG-031015	↓	1433	↓	↓								X		
18	E2352	078	6 1 bag	1 2 5	BSDP-4-150 SG-031015	↓	1503	↓	↓								X		
19	1839	107	6 1 bag	1 2 5	BP-23-200-SG-031115	3-11-15	750	↓	↓								X		
20	016	1794	6 1 bag	1 2 5	BP-23-250-SG-031115	↓	820	↓	↓								X		

Instructions / Special Requirements:

Date:	Time:	Samples Relinquished By:	Received By:
3-12-15	820	E. Miller	[illegible]

Airtech Environmental Laboratories (AEL)

Chain of Custody

4620 E.Elwood Street, Suite 13, Phoenix, AZ 85040 480-968-5888 (phone) 480-966-1888 (fax)

Customer : AMEC FWI	Page 3 of 3		AEL Lab #
Address: 4600 E WASHINGTON ST #600	Sampler: Eric Miller	Phone: 6023008313	15C013
	Project Name: BROADWAY PANTANA	Project Number: 14-2014-2029	
City, State, Zip: PHOENIX, AZ	Project location: TUCSON, AZ		
Contact: Alex Y.	P.O. Number:		
Phone: / Fax:	Fax Results: Y N		
E-Mail Address: Alex.Yiannakakis@amec.com	E-Mail Results: Y N		

Sample Receipt	Turn Around Request	Sample Type
Temperature_____ °C	____ 24 Hours ____ 48 Hours	SVE: soil vapor extraction GW: ground water
Custody Seals: Yes_____ No_____	____ 72 Hours	A: ambient air WW: waste water
Custody Seals Intact: Yes_____ No_____	____ 5 working Day	I: indoor air
Total # of Containers:_____	X Standard 10 Working Days	S: soil vapor
		W: water

Sample Information

AEL Lab #	Serial # Canister	Serial # Grab	Canister (L) or bag	Grab (Min)	Client's Sample Identification	Sampled Date	Sampled Time	Sample Type	Number of Containers	TO-15 full list	TO-15 TPH(GRO)	TO-15 Selet List	8260B AZ Vapor full list	8260B Vapor select list	8015 GRO	8260B Water	TO-15 (SHORT LIST)		
21	E2370	018	6 1 bag	1 2 5	BP-23-300-SG-031115	3.11.15	850	S	1								X		
22	1858	091	6 1 bag	1 2 5	BP-23-~~350~~ 440-SG-031115	↓	955	↓	↓								X		
23	1864	081	6 1 bag	1 2 5	BP-23-440-SG-031115-DUP		955										X		
24	E2089	024	6 1 bag	1 2 5	BP-22-200-SG-031115		1049										X		
25	E2406	045	6 1 bag	1 2 5	BP-22-250-SG-031115		1110										X		
26	1816	142	6 1 bag	1 2 5	BP-22-300-SG-031115		1145										X		
27	~~E2406~~ 1897 EM	~~1444~~ 128 EM	6 1 bag	1 2 5	BP-22-438-SG-031115		1243			EM X							X		
28	E2371	115	6 1 bag	1 2 5	MW-5-SG-031115	↓	1513	↓	↓	X									
			6 1 bag	1 2 5															
			6 1 bag	1 2 5															

Instructions / Special Requirements:

Date:	Time:	Samples Relinquished By:	Received By:
3.12.15	820	E. Miller	[signature]

APPENDIX E

DATA VALIDATION AND QA/QC CHECKLIST

LABORATORY REPORT GOAL: JANUARY 2015 GROUNDWATER SAMPLES
DATA VERIFICATION

Data verification precedes data validation and is a systematic process for evaluating whether data have been generated with acceptable quality control (QC), as defined in the Project Quality Assurance Project Plan (QAPP).

The items listed below were evaluated, along with completeness of supporting documentation. This is a cursory review of the laboratory's QC and may suggest that a more thorough validation is needed.

Completed	Review Item
X	**1. Case Narrative** Have any anomalies, deficiencies, and QC problems been identified in the case narrative? **Yes** If yes, what corrective action, if any, was taken? **None needed.** *Tentatively identified compound. Concentration is estimated and based on the closest internal standard.*
X	**2. Chain-of-Custody Documentation** Are the original chain-of-custody forms with identification numbers and laboratory receipt signatures present? **Yes**
X	**3. Sample Analytical Results** Are sample analysis results included for environmental samples, with Quantitation limits (include dilutions and re-analysis)? **Yes**
X	**4. QC Summary** Is the following information included:
X	a. Method blanks, continuing calibration blanks, and preparation blanks. **Yes**
X	b. Surrogate percent recoveries. **Yes**
X	c. Internal standard percent recoveries. **Yes**
X	d. Matrix spike percent recoveries. **Yes**
X	e. Laboratory duplicate sample relative percent recoveries. **Yes**
X	f. Laboratory QC check sample, laboratory control sample recoveries. **Yes**
X	g. Field duplicates, if identified, reproducibility will be evaluated. **Yes**
X	h. Acceptance criteria, if not already established by the method/data quality objective (DQ). **Yes**
X	i. Definitions for any laboratory data qualifiers used. **Yes**
X	**5. Specifically review the following:**
X	a. Was check for timeliness and errors conducted, including requested deliverables, preservation, holding times, and chain-of-custody? **Yes**
X	b. Was a duplicate sample/matrix spike/matrix spike duplicate/post digest spike reviewed against precision and accuracy criteria specified by the method or by project data quality objectives (DQOs)? **Yes**

X	c. Were compound quantitation and reported detection limits reviewed, checking reporting limits against contract required limits? **Yes**
X	**6. Does the Verification Report include the following information:**
NA	a. Case narrative including, but not limited to, an overall summary of data acceptability and comparison to DQOs and data quality initiatives, a list of recommended changes, a summary of all laboratory contracts, in which communications with the laboratory, if any, would be identified, and any other problems associated with the actual analysis which might impact the sample integrity or data quality? **NA**
X	b. Tabulated summary of all data results supplied electronically by e-mail or on CD in a commonly used software format? **Yes**

Data Verification for:
Broadway-Pantano WQARF

Airtech Environmental Laboratories ID: 15C006
Sample IDs: PRUD-1-SG-030515
WR-434A-50-SG-030515
WR-434A-150-SG-030515
WR-434A-250-SG-030515
WR-434A-350-SG-030515
BSDP-1-100-SG-030615
BSDP-1-150-SG-030615
BSDP-1-200-SG-030615
BSDP-1-248-SG-030615
BSDP-1-300-SG-030615
BSDP-1-350-SG-030615
BSDP-2-100-SG-030615
BSDP-2-150-SG-030615
BSDP-2-200-SG-030615
BSDP-2-250-SG-030615
BSDP-2-300-SG-030615
BSDP-2-350-SG-030615
BSDP-2-350-SG-030615-DUP

Completed by:
Matthew Camba
Environmental Scientist
Amec Foster Wheeler Environment & Infrastructure
April 24, 2015

LABORATORY REPORT GOAL: JANUARY 2015 GROUNDWATER SAMPLES
DATA VERIFICATION

Data verification precedes data validation and is a systematic process for evaluating whether data have been generated with acceptable quality control (QC), as defined in the Project Quality Assurance Project Plan (QAPP).

The items listed below were evaluated, along with completeness of supporting documentation. This is a cursory review of the laboratory's QC and may suggest that a more thorough validation is needed.

Completed	Review Item
X	**1. Case Narrative** Have any anomalies, deficiencies, and QC problems been identified in the case narrative? **Yes** If yes, what corrective action, if any, was taken? **None needed.** *The associated blankblank spike recovery was above the laboratory/method acceptance limits. Analyte not detected in sample.* *Tentatively identified compound. Concentration is estimated and based on the closest internal standard.*
X	**2. Chain-of-Custody Documentation** Are the original chain-of-custody forms with identification numbers and laboratory receipt signatures present? **Yes**
X	**3. Sample Analytical Results** Are sample analysis results included for environmental samples, with Quantitation limits (include dilutions and re-analysis)? **Yes**
X	**4. QC Summary** Is the following information included:
X	a. Method blanks, continuing calibration blanks, and preparation blanks. **Yes**
X	b. Surrogate percent recoveries. **Yes**
X	c. Internal standard percent recoveries. **Yes**
X	d. Matrix spike percent recoveries. **Yes**
X	e. Laboratory duplicate sample relative percent recoveries. **Yes**
X	f. Laboratory QC check sample, laboratory control sample recoveries. **Yes**
X	g. Field duplicates, if identified, reproducibility will be evaluated. **Yes**
X	h. Acceptance criteria, if not already established by the method/data quality objective (DQ). **Yes**
X	i. Definitions for any laboratory data qualifiers used. **Yes**
X	**5. Specifically review the following:**
X	a. Was check for timeliness and errors conducted, including requested deliverables, preservation, holding times, and chain-of-custody? **Yes**

X	b. Was a duplicate sample/matrix spike/matrix spike duplicate/post digest spike reviewed against precision and accuracy criteria specified by the method or by project data quality objectives (DQOs)? **Yes**
X	c. Were compound quantitation and reported detection limits reviewed, checking reporting limits against contract required limits? **Yes**
X	**6. Does the Verification Report include the following information:**
NA	a. Case narrative including, but not limited to, an overall summary of data acceptability and comparison to DQOs and data quality initiatives, a list of recommended changes, a summary of all laboratory contracts, in which communications with the laboratory, if any, would be identified, and any other problems associated with the actual analysis which might impact the sample integrity or data quality? **NA**
X	b. Tabulated summary of all data results supplied electronically by e-mail or on CD in a commonly used software format? **Yes**

Data Verification for:
Broadway-Pantano WQARF

Airtech Environmental Laboratories ID: 15C013
Sample IDs: PRUD-2-SG-030915
PRUD-4-SG-030915
PRUD-3-SG-030915
PRUD-19-SG-030915
PRUD-18-SG-030915
PRUD-17-SG-030915
PRUD-16-SG-030915
MW-9-SG-031015
MW-8-SG-031015
MW-8-SG-031015-DUP
MW-7-SG-031015
MW-6-SG-031015
BSDP-3-50-SG-031015
BSDP-3-100-SG-031015
BSDP-3-150-SG-031015
BSDP-4-50-SG-031115
BSDP-4-100-SG-031115
BSDP-4-150-SG-031115
BP-23-200-SG-031115
BP-23-300-SG-031115
BP-23-350-SG-031115
BP-23-350-SG-031115-DUP
BP-22-200-SG-031115
BP-22-250-SG-031115
BP-22-300-SG-031115
BP-22-350-SG-031115
MW-5-SG-031115

Completed by:
Matthew Camba
Environmental Scientist
Amec Foster Wheeler Environment & Infrastructure
April 24, 2015

Arizona Department of Environmental Quality QA/QC checklist for Soil Vapor Sampling

Sampling Company

1 Date: 3.5.15 Start time: 1000 1150 ☐ ☐

2 Company Name: AMEC F/W Sampler's Name: ERIC MILLER

Consulting Firm:

3 Company Name: AMEC F/W Project Name: BROADWAY PANTANO

4 Project Manager: ALEX YIANNAKAKIS Project Number: 14-2014-2029

Well's Information

5 Location: BROADWAY PANTANO Client ID: PRUD-1 Permanent ☒ Temporary ☐

6 Address: TUCSON, AZ

7 ADEQ File Identification #(s) —

8 Describe the probe location: YMCA PARK

9 Probe Depth: 18 ~~inch~~ FT Probe ID: .5 inch **Probe volume: 0 inch^3 (0) mls**

10 Probe type: Tygon ☐ Teflon ☐ Vinyl ☐ PVC ☐ Metal ☐ Other: PVC

11 Is probe tested in the lab before installed? Y ☐ N ☐ NA ☒ Don't know ☐

12 Comments:

Weather Conditions

13 Temperature: 70 C^0 ☐ F^0 ☒

14 Has there been significant rain or snow recent to the sampling event? Y ☐ N ☒

15 If Yes to Question 14 Date _____ Amount of Precipitate _____ inches

Soil Conditions Information

16 Was a soil sample collected and analyzed for volumetric moisture content? Y ☐ N ☒ attach results if yes

If yes, attach results

If no, is the apparent moisture content dry ☐ moist ☒ saturated ☐

17 What is soil type encountered at sample location? NA

18 Was sample collected beneath a surface cover (e.g. parking lot, sidewalk, road, building, other)? Y ☐ N ☐

19 Describe the surface cover , if any GRASS

20 Was the sample collected near a subsurface conduit? Y ☐ N ☒

Describe subsurface conduit, if any

Sampling Train

21 Sample container: Canister : 1.0 L ☒ 6.0 L ☐ Silanized: Y ☐ N ☒

Other:

Tedlar bag: Y ☐ N ☒ Gas tight syringe Y ☐ N ☒

22 Flow restrictor: On 1000 mL/min ☐ 500 mL/min ☐ 200 mL/min ☒ Other:

One min = Taking one minute to fill one liter canister.

23 Tubing type: Tygon ☐ Teflon ☐ Vinyl ☐ PVC ☐ Other: NA

24 Tubing used from probe top to canister: Length: 0 inch ID 0 inch

25 **Tubing volume: 0 inch^3 (0) mls**

26 Are all parts of Sampling Train tested in the lab before sampling? Y ☒ N ☐

Probe Purging Before Sampling

27 Total volume: probe(v) + tubing(v) = Probe volume **0** + Tubing volume **0** = **0** mls

28 Total volume to be purged (mls): 1x **0** ☐ 1.5x **0** ☐ 2x **0** ☐ 3x **0** ☐

29 Purging pump #: — | Purging flow rate: ml/min Purging time: mins seconds

30 Gauge reading: < 5 inHg ☒ Other: _____ Comments: _____

31 Syringe Purging: NA ☒ Dedicated Syringe ☐ Re-used Suringe ☐ Volume _____

32 Is there condensation evident in the sampling train? Y ☐ N ☒

33 Post sample collection - Is there condensation evident in the sampling container? Y ☐ N ☒

34 **Leak Test** Y ☒ N ☐ If Yes, fill in the blanks blow:

35 Tracer compound: _____ Trade name: _____ Tested before use: Y ☒ N ☐

36 Locations applied: Probe top ☐ Sampling train: ☒ Other: _____

37 **Field Duplicate** Y ☐ N ☒ If Yes, fill in the blanks blow:

38 Used the Duplicate Splitter? Y ☐ N ☒ If no, describe the procedure: _____

Other Information

39 Identify the equipment and method used to install probe and collect sample SHOP VACUUM

40 What was the equilibration time between probe installation and withdrawal of any soil vapor? —

41 Sample storage /shipping temperature 70 F

42 Sample storage /shipping container Plastic Tote

43 Sample transportation mode(s) COMPANY VEHICLE

44 Was an equipment blank taken? Y ☐ N ☒ Was Tank air or Nitrogen used? _____

Note: Ambient air should not be used

45 Was a field blank taken? Y ☐ N ☒

46 Was a background (upwind ambient) san Y ☐ N ☒

47 Are there any potential VOC sources other than the identified release nearby?

Groundwater/active fueling station/ dry cleaners/ dry wells/ other - please describe —

48 **Well (Probe) Inspection Note:**

Arizona Department of Environmental Quality QA/QC checklist for Soil Vapor Sampling

Sampling Company

1 Date: 3.9.15 Start time: 1430 1443 ☐ ☐

2 Company Name: AMEC F/W Sampler's Name: ERIC MILLER

Consulting Firm:

3 Company Name: AMEC F/W Project Name: BROADWAY PANTANO

4 Project Manager: ALEX YIANNAKAKIS Project Number: 14-2014-2029

Well's Information

5 Location: BROADWAY PANTANO Client ID: PRUD-2 Permanent ☒ Temporary ☐

6 Address: TUCSON, AZ

7 ADEQ File Identification #(s) —

8 Describe the probe location: YMCA PARKING

9 Probe Depth: 10 ~~inch~~ FT Probe ID: .5 inch **Probe volume: 0 inch^3 (0) mls**

10 Probe type: Tygon ☐ Teflon ☐ Vinyl ☐ PVC ☐ Metal ☐ Other: PVC

11 Is probe tested in the lab before installed? Y ☐ N ☐ NA ☒ Don't know ☐

12 Comments:

Weather Conditions

13 Temperature: 70 C^0 ☐ F^0 ☒

14 Has there been significant rain or snow recent to the sampling event? Y ☐ N ☒

15 If Yes to Question 14 Date _____ Amount of Precipitate _____ inches

Soil Conditions Information

16 Was a soil sample collected and analyzed for volumetric moisture content? Y ☐ N ☒ attach results if yes

If yes, attach results

If no, is the apparent moisture content dry ☐ moist ☒ saturated ☐

17 What is soil type encountered at sample location? NA

18 Was sample collected beneath a surface cover (e.g. parking lot, sidewalk, road, building, other)? Y ☐ N ☐

19 Describe the surface cover , if any CONCRETE PAD

20 Was the sample collected near a subsurface conduit? Y ☐ N ☒

Describe subsurface conduit, if any

Sampling Train

21 Sample container: Canister : 1.0 L ☒ 6.0 L ☐ Silanized: Y ☐ N ☒

Other:

Tedlar bag: Y ☐ N ☒ Gas tight syringe Y ☐ N ☒

22 Flow restrictor: On 1000 mL/min ☐ 500 mL/min ☐ 200 mL/min ☒ Other:

One min = Taking one minute to fill one liter canister.

23 Tubing type: Tygon ☐ Teflon ☐ Vinyl ☐ PVC ☐ Other: NA

24 Tubing used from probe top to canister: Length: 0 inch ID 0 inch

25 **Tubing volume: 0 inch^3 (0) mls**

26 Are all parts of Sampling Train tested in the lab before sampling? Y ☒ N ☐

Probe Purging Before Sampling

27 Total volume: probe(v) + tubing(v) = Probe volume 0 + Tubing volume 0 = 0 mls

28 Total volume to be purged (mls): 1x 0 ☐ 1.5x 0 ☐ 2x 0 ☐ 3x 0 ☐

29 Purging pump #: — Purging flow rate: ml/min Purging time: mins seconds

30 Gauge reading: < 5 inHg ☒ Other: _____ Comments: _____

31 Syringe Purging: NA ☒ Dedicated Syringe ☐ Re-used Suringe ☐ Volume _____

32 Is there condensation evident in the sampling train? Y ☐ N ☒

33 Post sample collection - Is there condensation evident in the sampling container? Y ☐ N ☒

34 **Leak Test** Y ☒ N ☐ If Yes, fill in the blanks blow:

35 Tracer compound: _____ Trade name: _____ Tested before use: Y ☒ N ☐

36 Locations applied: Probe top ☐ Sampling train: ☒ Other: _____

37 **Field Duplicate** Y ☐ N ☒ If Yes, fill in the blanks blow:

38 Used the Duplicate Splitter? Y ☐ N ☒ If no, describe the procedure: _____

Other Information

39 Identify the equipment and method used to install probe and collect sample SHOP VACUUM

40 What was the equilibration time between probe installation and withdrawal of any soil vapor? —

41 Sample storage /shipping temperature 70 F

42 Sample storage /shipping container Plastic Tote

43 Sample transportation mode(s) COMPANY VEHICLE

44 Was an equipment blank taken? Y ☐ N ☒ Was Tank air or Nitrogen used? _____

Note: Ambient air should not be used

45 Was a field blank taken? Y ☐ N ☒

46 Was a background (upwind ambient) san Y ☐ N ☒

47 Are there any potential VOC sources other than the identified release nearby?

Groundwater/active fueling station/ dry cleaners/ dry wells/ other - please describe —

48 **Well (Probe) Inspection Note:**

Arizona Department of Environmental Quality QA/QC checklist for Soil Vapor Sampling

Sampling Company

1 Date: 3.9.15 Start time: 1511 1522 ☐ ☐

2 Company Name: AMEC F/W Sampler's Name: ERIC MILLER

Consulting Firm:

3 Company Name: AMEC F/W Project Name: BROADWAY PANTANO

4 Project Manager: ALEX YIANNAKAKIS Project Number: 14-2014-2029

Well's Information

5 Location: BROADWAY PANTANO Client ID: ARUS-4 Permanent ☒ Temporary ☐

6 Address: TUCSON, AZ

7 ADEQ File Identification #(s) —

8 Describe the probe location: SOUTH OF YMCA LOT

9 Probe Depth: 10 ~~inch~~ FT Probe ID: .5 inch **Probe volume: 0 inch^3 (0) mls**

10 Probe type: Tygon ☐ Teflon ☐ Vinyl ☐ PVC ☐ Metal ☐ Other: PVC

11 Is probe tested in the lab before installed? Y ☐ N ☐ NA ☒ Don't know ☐

12 Comments:

Weather Conditions

13 Temperature: 70 C^0 ☐ F^0 ☒

14 Has there been significant rain or snow recent to the sampling event? Y ☐ N ☒

15 If Yes to Question 14 Date _____ Amount of Precipitate _____ inches

Soil Conditions Information

16 Was a soil sample collected and analyzed for volumetric moisture content? Y ☐ N ☒ attach results if yes

If yes, attach results

If no, is the apparent moisture content dry ☐ moist ☒ saturated ☐

17 What is soil type encountered at sample location? NA

18 Was sample collected beneath a surface cover (e.g. parking lot, sidewalk, road, building, other)? Y ☐ N ☐

19 Describe the surface cover , if any DEVELOPED LOT

20 Was the sample collected near a subsurface conduit? Y ☐ N ☒

Describe subsurface conduit, if any

Sampling Train

21 Sample container: Canister : 1.0 L ☒ 6.0 L ☐ Silanized: Y ☐ N ☒

Other:

Tedlar bag: Y ☐ N ☒ Gas tight syringe Y ☐ N ☒

22 Flow restrictor: On 1000 mL/min ☐ 500 mL/min ☐ 200 mL/min ☒ Other:

One min = Taking one minute to fill one liter canister.

23 Tubing type: Tygon ☐ Teflon ☐ Vinyl ☐ PVC ☐ Other: NA

24 Tubing used from probe top to canister: Length: 0 inch ID 0 inch

25 **Tubing volume: 0 inch^3 (0) mls**

26 Are all parts of Sampling Train tested in the lab before sampling? Y ☒ N ☐

Probe Purging Before Sampling

27 Total volume: probe(v) + tubing(v) = Probe volume 0 + Tubing volume 0 = 0 mls

28 Total volume to be purged (mls): 1x 0 ☐ 1.5x 0 ☐ 2x 0 ☐ 3x 0 ☐

29 Purging pump #: — Purging flow rate: ml/min Purging time: mins seconds

30 Gauge reading: < 5 inHg ☒ Other: _____ Comments: _____

31 Syringe Purging: NA ☒ Dedicated Syringe ☐ Re-used Suringe ☐ Volume _____

32 Is there condensation evident in the sampling train? Y ☐ N ☒

33 Post sample collection - Is there condensation evident in the sampling container? Y ☐ N ☒

34 **Leak Test** Y ☒ N ☐ If Yes, fill in the blanks blow:

35 Tracer compound: _____ Trade name: _____ Tested before use: Y ☒ N ☐

36 Locations applied: Probe top ☐ Sampling train: ☒ Other: _____

37 **Field Duplicate** Y ☐ N ☒ If Yes, fill in the blanks blow:

38 Used the Duplicate Splitter? Y ☐ N ☒ If no, describe the procedure: _____

Other Information

39 Identify the equipment and method used to install probe and collect sample SHOP VACUUM

40 What was the equilibration time between probe installation and withdrawal of any soil vapor? —

41 Sample storage /shipping temperature 70 F

42 Sample storage /shipping container Plastic Tote

43 Sample transportation mode(s) COMPANY VEHICLE

44 Was an equipment blank taken? Y ☐ N ☒ Was Tank air or Nitrogen used? _____

Note: Ambient air should not be used

45 Was a field blank taken? Y ☐ N ☒

46 Was a background (upwind ambient) san Y ☐ N ☒

47 Are there any potential VOC sources other than the identified release nearby?

Groundwater/active fueling station/ dry cleaners/ dry wells/ other - please describe —

48 **Well (Probe) Inspection Note:**

Arizona Department of Environmental Quality QA/QC checklist for Soil Vapor Sampling

Sampling Company

1 Date: 3-9-15 Start time: 1540 1553 ☐ ☐

2 Company Name: AMEC F/W Sampler's Name: ERIC MILLER

Consulting Firm:

3 Company Name: AMEC F/W Project Name: BROADWAY PANTANO

4 Project Manager: ALEX YIANNAKAKIS Project Number: 14-2014-2029

Well's Information

5 Location: BROADWAY PANTANO Client ID: PRUA-3 Permanent ☒ Temporary ☐

6 Address: TUCSON, AZ

7 ADEQ File Identification #(s) —

8 Describe the probe location: South of Yuca lot

9 Probe Depth: 10 ~~inch~~ FT Probe ID: .5 inch **Probe volume: 0 inch^3 (0) mls**

10 Probe type: Tygon ☐ Teflon ☐ Vinyl ☐ PVC ☐ Metal ☐ Other: PVC

11 Is probe tested in the lab before installed? Y ☐ N ☐ NA ☒ Don't know ☐

12 Comments:

Weather Conditions

13 Temperature: 70 C^0 ☐ F^0 ☒

14 Has there been significant rain or snow recent to the sampling event? Y ☐ N ☒

15 If Yes to Question 14 Date _____ Amount of Precipitate _____ inches

Soil Conditions Information

16 Was a soil sample collected and analyzed for volumetric moisture content? Y ☐ N ☒ attach results if yes

If yes, attach results

If no, is the apparent moisture content dry ☐ moist ☒ saturated ☐

17 What is soil type encountered at sample location? NA

18 Was sample collected beneath a surface cover (e.g. parking lot, sidewalk, road, building, other)? Y ☐ N ☐

19 Describe the surface cover , if any UNDEVELOPED LOT

20 Was the sample collected near a subsurface conduit? Y ☐ N ☒

Describe subsurface conduit, if any

Sampling Train

21 Sample container: Canister : 1.0 L ☒ 6.0 L ☐ Silanized: Y ☐ N ☒

Other:

Tedlar bag: Y ☐ N ☒ Gas tight syringe Y ☐ N ☒

22 Flow restrictor: On 1000 mL/min ☐ 500 mL/min ☐ 200 mL/min ☒ Other:

One min = Taking one minute to fill one liter canister.

23 Tubing type: Tygon ☐ Teflon ☐ Vinyl ☐ PVC ☐ Other: NA

24 Tubing used from probe top to canister: Length: 0 inch ID 0 inch

25 **Tubing volume: 0 inch^3 (0) mls**

26 Are all parts of Sampling Train tested in the lab before sampling? Y ☒ N ☐

Probe Purging Before Sampling

27 Total volume: probe(v) + tubing(v) = Probe volume 0 + Tubing volume 0 = 0 mls

28 Total volume to be purged (mls): 1x 0 ☐ 1.5x 0 ☐ 2x 0 ☐ 3x 0 ☐

29 Purging pump #: — Purging flow rate: ml/min Purging time: mins seconds

30 Gauge reading: < 5 inHg ☒ Other: _____ Comments: _____

31 Syringe Purging: NA ☒ Dedicated Syringe ☐ Re-used Suringe ☐ Volume _____

32 Is there condensation evident in the sampling train? Y ☐ N ☒

33 Post sample collection - Is there condensation evident in the sampling container? Y ☐ N ☒

34 **Leak Test** Y ☒ N ☐ If Yes, fill in the blanks blow:

35 Tracer compound: _____ Trade name: _____ Tested before use: Y ☒ N ☐

36 Locations applied: Probe top ☐ Sampling train: ☒ Other: _____

37 **Field Duplicate** Y ☐ N ☒ If Yes, fill in the blanks blow:

38 Used the Duplicate Splitter? Y ☐ N ☒ If no, describe the procedure: _____

Other Information

39 Identify the equipment and method used to install probe and collect sample SHOP VACUUM

40 What was the equilibration time between probe installation and withdrawal of any soil vapor? —

41 Sample storage /shipping temperature 70 F

42 Sample storage /shipping container Plastic Tote

43 Sample transportation mode(s) COMPANY VEHICLE

44 Was an equipment blank taken? Y ☐ N ☒ Was Tank air or Nitrogen used? _____

Note: Ambient air should not be used

45 Was a field blank taken? Y ☐ N ☒

46 Was a background (upwind ambient) san Y ☐ N ☒

47 Are there any potential VOC sources other than the identified release nearby?

Groundwater/active fueling station/ dry cleaners/ dry wells/ other - please describe —

48 **Well (Probe) Inspection Note:**

Arizona Department of Environmental Quality QA/QC checklist for Soil Vapor Sampling

Sampling Company

1 Date: 3.9.15 Start time: 1616 1635 ☐ ☐

2 Company Name: AMEC F/W Sampler's Name: ERIC MILLER

Consulting Firm:

3 Company Name: AMEC F/W Project Name: BROADWAY PANTANO

4 Project Manager: ALEX YIANNAKAKIS Project Number: 14-2014-2029

Well's Information

5 Location: BROADWAY PANTANO Client ID: PRUD-19 Permanent ☒ Temporary ☐

6 Address: TUCSON, AZ

7 ADEQ File Identification #(s) —

8 Describe the probe location: YMCA / Park

9 Probe Depth: 10 FT ~~inch~~ Probe ID: .5 inch **Probe volume: 0 inch^3 (0) mls**

10 Probe type: Tygon ☐ Teflon ☐ Vinyl ☐ PVC ☐ Metal ☐ Other: PVC

11 Is probe tested in the lab before installed? Y ☐ N ☐ NA ☒ Don't know ☐

12 Comments:

Weather Conditions

13 Temperature: 70 C^0 ☐ F^0 ☒

14 Has there been significant rain or snow recent to the sampling event? Y ☐ N ☒

15 If Yes to Question 14 Date _____ Amount of Precipitate _____ inches

Soil Conditions Information

16 Was a soil sample collected and analyzed for volumetric moisture content? Y ☐ N ☒ attach results if yes

If yes, attach results

If no, is the apparent moisture content dry ☐ moist ☒ saturated ☐

17 What is soil type encountered at sample location? NA

18 Was sample collected beneath a surface cover (e.g. parking lot, sidewalk, road, building, other)? Y ☐ N ☐

19 Describe the surface cover , if any GRASS

20 Was the sample collected near a subsurface conduit? Y ☐ N ☒

Describe subsurface conduit, if any

Sampling Train

21 Sample container: Canister : 1.0 L ☒ 6.0 L ☐ Silanized: Y ☐ N ☒

Other:

Tedlar bag: Y ☐ N ☒ Gas tight syringe Y ☐ N ☒

22 Flow restrictor: One 1000 mL/min ☐ 500 mL/min ☐ 200 mL/min ☒ Other:

One min = Taking one minute to fill one liter canister.

23 Tubing type: Tygon ☐ Teflon ☐ Vinyl ☐ PVC ☐ Other: NA

24 Tubing used from probe top to canister: Length: 0 inch ID 0 inch

25 **Tubing volume: 0 inch^3 (0) mls**

26 Are all parts of Sampling Train tested in the lab before sampling? Y ☒ N ☐

Probe Purging Before Sampling

27 Total volume: probe(v) + tubing(v) = Probe volume 0 + Tubing volume 0 = 0 mls

28 Total volume to be purged (mls): 1x 0 ☐ 1.5x 0 ☐ 2x 0 ☐ 3x 0 ☐

29 Purging pump #: — Purging flow rate: ml/min Purging time: mins seconds

30 Gauge reading: < 5 inHg ☒ Other: _____ Comments: _____

31 Syringe Purging: NA ☒ Dedicated Syringe ☐ Re-used Suringe ☐ Volume _____

32 Is there condensation evident in the sampling train? Y ☐ N ☒

33 Post sample collection - Is there condensation evident in the sampling container? Y ☐ N ☒

34 **Leak Test** Y ☒ N ☐ If Yes, fill in the blanks blow:

35 Tracer compound: _____ Trade name: _____ Tested before use: Y ☒ N ☐

36 Locations applied: Probe top ☐ Sampling train: ☒ Other: _____

37 **Field Duplicate** Y ☐ N ☒ If Yes, fill in the blanks blow:

38 Used the Duplicate Splitter? Y ☐ N ☒ If no, describe the procedure: _____

Other Information

39 Identify the equipment and method used to install probe and collect sample SHOP VACUUM

40 What was the equilibration time between probe installation and withdrawal of any soil vapor? —

41 Sample storage /shipping temperature 70 F

42 Sample storage /shipping container Plastic Tote

43 Sample transportation mode(s) COMPANY VEHICLE

44 Was an equipment blank taken? Y ☐ N ☒ Was Tank air or Nitrogen used? _____

Note: Ambient air should not be used

45 Was a field blank taken? Y ☐ N ☒

46 Was a background (upwind ambient) san Y ☐ N ☒

47 Are there any potential VOC sources other than the identified release nearby?

Groundwater/active fueling station/ dry cleaners/ dry wells/ other - please describe —

48 **Well (Probe) Inspection Note:**

Arizona Department of Environmental Quality QA/QC checklist for Soil Vapor Sampling

Sampling Company

1 Date: 3.9.15 Start time: 1652 1703 ☐ ☐

2 Company Name: AMEC F/W Sampler's Name: ERIC MILLER

Consulting Firm:

3 Company Name: AMEC F/W Project Name: BROADWAY PANTANO

4 Project Manager: ALEX YIANNAKAKIS Project Number: 14-2014-2029

Well's Information

5 Location: BROADWAY PANTANO Client ID: PRUD-18 Permanent ☒ Temporary ☐

6 Address: TUCSON, AZ

7 ADEQ File Identification #(s) —

8 Describe the probe location: YMCA - Park

9 Probe Depth: 10 ~~inch~~ FT Probe ID: .5 inch **Probe volume: 0 inch^3 (0) mls**

10 Probe type: Tygon ☐ Teflon ☐ Vinyl ☐ PVC ☐ Metal ☐ Other: PVC

11 Is probe tested in the lab before installed? Y ☐ N ☐ NA ☒ Don't know ☐

12 Comments:

Weather Conditions

13 Temperature: 70 C^0 ☐ F^0 ☒

14 Has there been significant rain or snow recent to the sampling event? Y ☐ N ☒

15 If Yes to Question 14 Date _____ Amount of Precipitate _____ inches

Soil Conditions Information

16 Was a soil sample collected and analyzed for volumetric moisture content? Y ☐ N ☒ attach results if yes

If yes, attach results

If no, is the apparent moisture content dry ☐ moist ☒ saturated ☐

17 What is soil type encountered at sample location? NA

18 Was sample collected beneath a surface cover (e.g. parking lot, sidewalk, road, building, other)? Y ☐ N ☐

19 Describe the surface cover , if any GRASS

20 Was the sample collected near a subsurface conduit? Y ☐ N ☒

Describe subsurface conduit, if any

Sampling Train

21 Sample container: Canister : 1.0 L ☒ 6.0 L ☐ Silanized: Y ☐ N ☒

Other:

Tedlar bag: Y ☐ N ☒ Gas tight syringe Y ☐ N ☒

22 Flow restrictor: On 1000 mL/min ☐ 500 mL/min ☐ 200 mL/min ☒ Other:

One min = Taking one minute to fill one liter canister.

23 Tubing type: Tygon ☐ Teflon ☐ Vinyl ☐ PVC ☐ Other: NA

24 Tubing used from probe top to canister: Length: 0 inch ID 0 inch

25 **Tubing volume: 0 inch^3 (0) mls**

26 Are all parts of Sampling Train tested in the lab before sampling? Y ☒ N ☐

Probe Purging Before Sampling

27 Total volume: probe(v) + tubing(v) = Probe volume 0 + Tubing volume 0 = 0 mls

28 Total volume to be purged (mls): 1x 0 ☐ 1.5x 0 ☐ 2x 0 ☐ 3x 0 ☐

29 Purging pump #: — Purging flow rate: ml/min Purging time: mins seconds

30 Gauge reading: < 5 inHg ☒ Other: _____ Comments: _____

31 Syringe Purging: NA ☒ Dedicated Syringe ☐ Re-used Suringe ☐ Volume _____

32 Is there condensation evident in the sampling train? Y ☐ N ☒

33 Post sample collection - Is there condensation evident in the sampling container? Y ☐ N ☒

34 **Leak Test** Y ☒ N ☐ If Yes, fill in the blanks blow:

35 Tracer compound: _____ Trade name: _____ Tested before use: Y ☒ N ☐

36 Locations applied: Probe top ☐ Sampling train: ☒ Other: _____

37 **Field Duplicate** Y ☐ N ☒ If Yes, fill in the blanks blow:

38 Used the Duplicate Splitter? Y ☐ N ☒ If no, describe the procedure: _____

Other Information

39 Identify the equipment and method used to install probe and collect sample SHOP VACUUM

40 What was the equilibration time between probe installation and withdrawal of any soil vapor? —

41 Sample storage /shipping temperature 70 F

42 Sample storage /shipping container Plastic Tote

43 Sample transportation mode(s) COMPANY VEHICLE

44 Was an equipment blank taken? Y ☐ N ☒ Was Tank air or Nitrogen used? _____

Note: Ambient air should not be used

45 Was a field blank taken? Y ☐ N ☒

46 Was a background (upwind ambient) san Y ☐ N ☒

47 Are there any potential VOC sources other than the identified release nearby?

Groundwater/active fueling station/ dry cleaners/ dry wells/ other - please describe —

48 **Well (Probe) Inspection Note:**

Arizona Department of Environmental Quality QA/QC checklist for Soil Vapor Sampling

Sampling Company

1 Date: 3.9.15 Start time: 1719 1730 ☐ ☐

2 Company Name: AMEC F/W Sampler's Name: ERIC MILLER

Consulting Firm:

3 Company Name: AMEC F/W Project Name: BROADWAY PANTANO

4 Project Manager: ALEX YIANNAKAKIS Project Number: 14-2014-2029

Well's Information

5 Location: BROADWAY PANTANO Client ID: PRVA-17 Permanent ☒ Temporary ☐

6 Address: TUCSON, AZ

7 ADEQ File Identification #(s) —

8 Describe the probe location: YMCA/PARK

9 Probe Depth: 10 FT ~~inch~~ Probe ID: .5 inch **Probe volume: 0 inch^3 (0) mls**

10 Probe type: Tygon ☐ Teflon ☐ Vinyl ☐ PVC ☐ Metal ☐ Other: PVC

11 Is probe tested in the lab before installed? Y ☐ N ☐ NA ☒ Don't know ☐

12 Comments:

Weather Conditions

13 Temperature: 70 C^0 ☐ F^0 ☒

14 Has there been significant rain or snow recent to the sampling event? Y ☐ N ☒

15 If Yes to Question 14 Date _____ Amount of Precipitate _____ inches

Soil Conditions Information

16 Was a soil sample collected and analyzed for volumetric moisture content? Y ☐ N ☒ attach results if yes

If yes, attach results

If no, is the apparent moisture content dry ☐ moist ☒ saturated ☐

17 What is soil type encountered at sample location? NA

18 Was sample collected beneath a surface cover (e.g. parking lot, sidewalk, road, building, other)? Y ☐ N ☐

19 Describe the surface cover , if any GRASS

20 Was the sample collected near a subsurface conduit? Y ☐ N ☒

Describe subsurface conduit, if any

Sampling Train

21 Sample container: Canister : 1.0 L ☒ 6.0 L ☐ Silanized: Y ☐ N ☒

Other:

Tedlar bag: Y ☐ N ☒ Gas tight syringe Y ☐ N ☒

22 Flow restrictor: On 1000 mL/min ☐ 500 mL/min ☐ 200 mL/min ☒ Other:

One min = Taking one minute to fill one liter canister.

23 Tubing type: Tygon ☐ Teflon ☐ Vinyl ☐ PVC ☐ Other: NA

24 Tubing used from probe top to canister: Length: 0 inch ID 0 inch

25 **Tubing volume: 0 inch^3 (0) mls**

26 Are all parts of Sampling Train tested in the lab before sampling? Y ☒ N ☐

Probe Purging Before Sampling

27 Total volume: probe(v) + tubing(v) = Probe volume 0 + Tubing volume 0 = 0 mls

28 Total volume to be purged (mls): 1x 0 ☐ 1.5x 0 ☐ 2x 0 ☐ 3x 0 ☐

29 Purging pump #: — | Purging flow rate: ml/min Purging time: mins seconds

30 Gauge reading: < 5 inHg ☒ Other: _____ Comments: _____

31 Syringe Purging: NA ☒ Dedicated Syringe ☐ Re-used Suringe ☐ Volume _____

32 Is there condensation evident in the sampling train? Y ☐ N ☒

33 Post sample collection - Is there condensation evident in the sampling container? Y ☐ N ☒

34 **Leak Test** Y ☒ N ☐ If Yes, fill in the blanks blow:

35 Tracer compound: _____ Trade name: _____ Tested before use: Y ☒ N ☐

36 Locations applied: Probe top ☐ Sampling train: ☒ Other: _____

37 **Field Duplicate** Y ☐ N ☒ If Yes, fill in the blanks blow:

38 Used the Duplicate Splitter? Y ☐ N ☒ If no, describe the procedure: _____

Other Information

39 Identify the equipment and method used to install probe and collect sample SHOP VACUUM

40 What was the equilibration time between probe installation and withdrawal of any soil vapor? —

41 Sample storage /shipping temperature 70 F

42 Sample storage /shipping container Plastic Tote

43 Sample transportation mode(s) COMPANY VEHICLE

44 Was an equipment blank taken? Y ☐ N ☒ Was Tank air or Nitrogen used? _____

Note: Ambient air should not be used

45 Was a field blank taken? Y ☐ N ☒

46 Was a background (upwind ambient) san Y ☐ N ☒

47 Are there any potential VOC sources other than the identified release nearby?

Groundwater/active fueling station/ dry cleaners/ dry wells/ other - please describe —

48 **Well (Probe) Inspection Note:**

Arizona Department of Environmental Quality QA/QC checklist for Soil Vapor Sampling

Sampling Company

1 Date: 3.9.15 Start time: 1745 1756 ☐ ☐

2 Company Name: AMEC F/W Sampler's Name: ERIC MILLER

Consulting Firm:

3 Company Name: AMEC F/W Project Name: BROADWAY PANTANO

4 Project Manager: ALEX YIANNAKAKIS Project Number: 14-2014-2029

Well's Information

5 Location: BROADWAY PANTANO Client ID: ARUD-16 Permanent ☒ Temporary ☐

6 Address: TUCSON, AZ

7 ADEQ File Identification #(s) —

8 Describe the probe location: YMCA/Park

9 Probe Depth: 15 ~~inch~~ FT Probe ID: .5 inch **Probe volume: 0 inch^3 (0) mls**

10 Probe type: Tygon ☐ Teflon ☐ Vinyl ☐ PVC ☐ Metal ☐ Other: PVC

11 Is probe tested in the lab before installed? Y ☐ N ☐ NA ☒ Don't know ☐

12 Comments:

Weather Conditions

13 Temperature: 70 C^0 ☐ F^0 ☒

14 Has there been significant rain or snow recent to the sampling event? Y ☐ N ☒

15 If Yes to Question 14 Date _____ Amount of Precipitate _____ inches

Soil Conditions Information

16 Was a soil sample collected and analyzed for volumetric moisture content? Y ☐ N ☒ attach results if yes

If yes, attach results

If no, is the apparent moisture content dry ☐ moist ☒ saturated ☐

17 What is soil type encountered at sample location? NA

18 Was sample collected beneath a surface cover (e.g. parking lot, sidewalk, road, building, other)? Y ☐ N ☐

19 Describe the surface cover , if any GRASS

20 Was the sample collected near a subsurface conduit? Y ☐ N ☒

Describe subsurface conduit, if any

Sampling Train

21 Sample container: Canister : 1.0 L ☒ 6.0 L ☐ Silanized: Y ☐ N ☒

Other:

Tedlar bag: Y ☐ N ☒ Gas tight syringe Y ☐ N ☒

22 Flow restrictor: On 1000 mL/min ☐ 500 mL/min ☐ 200 mL/min ☒ Other:

One min = Taking one minute to fill one liter canister.

23 Tubing type: Tygon ☐ Teflon ☐ Vinyl ☐ PVC ☐ Other: NA

24 Tubing used from probe top to canister: Length: 0 inch ID 0 inch

25 **Tubing volume: 0 inch^3 (0) mls**

26 Are all parts of Sampling Train tested in the lab before sampling? Y ☒ N ☐

Probe Purging Before Sampling

27 Total volume: probe(v) + tubing(v) = Probe volume 0 + Tubing volume 0 = 0 mls

28 Total volume to be purged (mls): 1x 0 ☐ 1.5x 0 ☐ 2x 0 ☐ 3x 0 ☐

29 Purging pump #: — Purging flow rate: ml/min Purging time: mins seconds

30 Gauge reading: < 5 inHg ☒ Other: _____ Comments: _____

31 Syringe Purging: NA ☒ Dedicated Syringe ☐ Re-used Suringe ☐ Volume _____

32 Is there condensation evident in the sampling train? Y ☐ N ☒

33 Post sample collection - Is there condensation evident in the sampling container? Y ☐ N ☒

34 **Leak Test** Y ☒ N ☐ If Yes, fill in the blanks blow:

35 Tracer compound: _____ Trade name: _____ Tested before use: Y ☒ N ☐

36 Locations applied: Probe top ☐ Sampling train: ☒ Other: _____

37 **Field Duplicate** Y ☐ N ☒ If Yes, fill in the blanks blow:

38 Used the Duplicate Splitter? Y ☐ N ☒ If no, describe the procedure: _____

Other Information

39 Identify the equipment and method used to install probe and collect sample SHOP VACUUM

40 What was the equilibration time between probe installation and withdrawal of any soil vapor? —

41 Sample storage /shipping temperature 70 F

42 Sample storage /shipping container Plastic Tote

43 Sample transportation mode(s) COMPANY VEHICLE

44 Was an equipment blank taken? Y ☐ N ☒ Was Tank air or Nitrogen used? _____

Note: Ambient air should not be used

45 Was a field blank taken? Y ☐ N ☒

46 Was a background (upwind ambient) san Y ☐ N ☒

47 Are there any potential VOC sources other than the identified release nearby?

Groundwater/active fueling station/ dry cleaners/ dry wells/ other - please describe —

48 **Well (Probe) Inspection Note:**

Arizona Department of Environmental Quality QA/QC checklist for Soil Vapor Sampling

Sampling Company

1 Date: 3.10.15 Start time: 900 920 ☐ ☐

2 Company Name: AMEC F/W Sampler's Name: ERIC MILLER

Consulting Firm:

3 Company Name: AMEC F/W Project Name: BROADWAY PANTANO

4 Project Manager: ALEX YIANNAKAKIS Project Number: 14-2014-2029

Well's Information

5 Location: BROADWAY PANTANO Client ID: MW-9 Permanent ☒ Temporary ☐

6 Address: TUCSON, AZ

7 ADEQ File Identification #(s) —

8 Describe the probe location: B.P.

9 Probe Depth: 20 ~~inch~~ FT Probe ID: 4 inch **Probe volume: 0 inch^3 (0) mls**

10 Probe type: Tygon ☐ Teflon ☐ Vinyl ☐ PVC ☐ Metal ☐ Other: PVC

11 Is probe tested in the lab before installed? Y ☐ N ☐ NA ☒ Don't know ☐

12 Comments:

Weather Conditions

13 Temperature: 70 C^0 ☐ F^0 ☒

14 Has there been significant rain or snow recent to the sampling event? Y ☐ N ☒

15 If Yes to Question 14 Date _____ Amount of Precipitate _____ inches

Soil Conditions Information

16 Was a soil sample collected and analyzed for volumetric moisture content? Y ☐ N ☒ attach results if yes

If yes, attach results

If no, is the apparent moisture content dry ☐ moist ☒ saturated ☐

17 What is soil type encountered at sample location? NA

18 Was sample collected beneath a surface cover (e.g. parking lot, sidewalk, road, building, other)? Y ☐ N ☐

19 Describe the surface cover , if any CONCRETE PAD ON UNDEVELOPED LOT

20 Was the sample collected near a subsurface conduit? Y ☐ N ☒

Describe subsurface conduit, if any

Sampling Train

21 Sample container: Canister : 1.0 L ☒ 6.0 L ☐ Silanized: Y ☐ N ☒

Other:

Tedlar bag: Y ☐ N ☒ Gas tight syringe Y ☐ N ☒

22 Flow restrictor: On 1000 mL/min ☐ 500 mL/min ☐ 200 mL/min ☒ Other:

One min = Taking one minute to fill one liter canister.

23 Tubing type: Tygon ☐ Teflon ☐ Vinyl ☐ PVC ☐ Other: NA

24 Tubing used from probe top to canister: Length: 0 inch ID 0 inch

25 **Tubing volume: 0 inch^3 (0) mls**

26 Are all parts of Sampling Train tested in the lab before sampling? Y ☒ N ☐

Probe Purging Before Sampling

27 Total volume: probe(v) + tubing(v) = Probe volume 0 + Tubing volume 0 = 0 mls

28 Total volume to be purged (mls): 1x 0 ☐ 1.5x 0 ☐ 2x 0 ☐ 3x 0 ☐

29 Purging pump #: — Purging flow rate: ml/min Purging time: mins seconds

30 Gauge reading: < 5 inHg ☒ Other: _____ Comments: _____

31 Syringe Purging: NA ☒ Dedicated Syringe ☐ Re-used Suringe ☐ Volume _____

32 Is there condensation evident in the sampling train? Y ☐ N ☒

33 Post sample collection - Is there condensation evident in the sampling container? Y ☐ N ☒

34 **Leak Test** Y ☒ N ☐ If Yes, fill in the blanks blow:

35 Tracer compound: _____ Trade name: _____ Tested before use: Y ☒ N ☐

36 Locations applied: Probe top ☐ Sampling train: ☒ Other: _____

37 **Field Duplicate** Y ☐ N ☒ If Yes, fill in the blanks blow:

38 Used the Duplicate Splitter? Y ☐ N ☒ If no, describe the procedure: _____

Other Information

39 Identify the equipment and method used to install probe and collect sample SHOP VACUUM

40 What was the equilibration time between probe installation and withdrawal of any soil vapor? —

41 Sample storage /shipping temperature 70 F

42 Sample storage /shipping container Plastic Tote

43 Sample transportation mode(s) COMPANY VEHICLE

44 Was an equipment blank taken? Y ☐ N ☒ Was Tank air or Nitrogen used? _____

Note: Ambient air should not be used

45 Was a field blank taken? Y ☐ N ☒

46 Was a background (upwind ambient) san Y ☐ N ☒

47 Are there any potential VOC sources other than the identified release nearby?

Groundwater/active fueling station/ dry cleaners/ dry wells/ other - please describe —

48 **Well (Probe) Inspection Note:**

Arizona Department of Environmental Quality QA/QC checklist for Soil Vapor Sampling

Sampling Company

1 Date: 3.10.15 Start time: 930 950 ☐ ☐

2 Company Name: AMEC F/W Sampler's Name: ERIC MILLER

Consulting Firm:

3 Company Name: AMEC F/W Project Name: BROADWAY PANTANO

4 Project Manager: ALEX YIANNAKAKIS Project Number: 14-2014-2029

Well's Information

5 Location: BROADWAY PANTANO Client ID: MW-8 Permanent ☒ Temporary ☐

6 Address: TUCSON, AZ

7 ADEQ File Identification #(s) —

8 Describe the probe location: B.P

9 Probe Depth: 20 FT ~~inch~~ Probe ID: 4 inch **Probe volume: 0 inch^3 (0) mls**

10 Probe type: Tygon ☐ Teflon ☐ Vinyl ☐ PVC ☐ Metal ☐ Other: PVC

11 Is probe tested in the lab before installed? Y ☐ N ☐ NA ☒ Don't know ☐

12 Comments:

Weather Conditions

13 Temperature: 70 C^0 ☐ F^0 ☒

14 Has there been significant rain or snow recent to the sampling event? Y ☐ N ☒

15 If Yes to Question 14 Date _____ Amount of Precipitate _____ inches

Soil Conditions Information

16 Was a soil sample collected and analyzed for volumetric moisture content? Y ☐ N ☒ attach results if yes

If yes, attach results

If no, is the apparent moisture content dry ☐ moist ☒ saturated ☐

17 What is soil type encountered at sample location? NA

18 Was sample collected beneath a surface cover (e.g. parking lot, sidewalk, road, building, other)? Y ☐ N ☐

19 Describe the surface cover , if any CONCRETE PAD ON UNDEVELOPED LOT

20 Was the sample collected near a subsurface conduit? Y ☐ N ☒

Describe subsurface conduit, if any

Sampling Train

21 Sample container: Canister : 1.0 L ☒ 6.0 L ☐ Silanized: Y ☐ N ☒

Other:

Tedlar bag: Y ☐ N ☒ Gas tight syringe Y ☐ N ☒

22 Flow restrictor: On 1000 mL/min ☐ 500 mL/min ☐ 200 mL/min ☒ Other:

One min = Taking one minute to fill one liter canister.

23 Tubing type: Tygon ☐ Teflon ☐ Vinyl ☐ PVC ☐ Other: NA

24 Tubing used from probe top to canister: Length: 0 inch ID 0 inch

25 **Tubing volume: 0 inch^3 (0) mls**

26 Are all parts of Sampling Train tested in the lab before sampling? Y ☒ N ☐

Probe Purging Before Sampling

27 Total volume: probe(v) + tubing(v) = Probe volume 0 + Tubing volume 0 = 0 mls

28 Total volume to be purged (mls): 1x 0 ☐ 1.5x 0 ☐ 2x 0 ☐ 3x 0 ☐

29 Purging pump #: — Purging flow rate: ml/min Purging time: mins seconds

30 Gauge reading: < 5 inHg ☒ Other: _____ Comments: _____

31 Syringe Purging: NA ☒ Dedicated Syringe ☐ Re-used Suringe ☐ Volume _____

32 Is there condensation evident in the sampling train? Y ☐ N ☒

33 Post sample collection - Is there condensation evident in the sampling container? Y ☐ N ☒

34 **Leak Test** Y ☒ N ☐ If Yes, fill in the blanks blow:

35 Tracer compound: _____ Trade name: _____ Tested before use: Y ☒ N ☐

36 Locations applied: Probe top ☐ Sampling train: ☒ Other: _____

37 **Field Duplicate** Y ☐ N ☒ If Yes, fill in the blanks blow:

38 Used the Duplicate Splitter? Y ☐ N ☒ If no, describe the procedure: _____

Other Information

39 Identify the equipment and method used to install probe and collect sample SHOP VACUUM

40 What was the equilibration time between probe installation and withdrawal of any soil vapor? —

41 Sample storage /shipping temperature 70 F

42 Sample storage /shipping container Plastic Tote

43 Sample transportation mode(s) COMPANY VEHICLE

44 Was an equipment blank taken? Y ☐ N ☒ Was Tank air or Nitrogen used? _____

Note: Ambient air should not be used

45 Was a field blank taken? Y ☐ N ☒

46 Was a background (upwind ambient) san Y ☐ N ☒

47 Are there any potential VOC sources other than the identified release nearby?

Groundwater/active fueling station/ dry cleaners/ dry wells/ other - please describe —

48 **Well (Probe) Inspection Note:**

Arizona Department of Environmental Quality QA/QC checklist for Soil Vapor Sampling

Sampling Company

1 Date: 3.10.15 Start time: 1007 1028 ☐ ☐

2 Company Name: AMEC F/W Sampler's Name: ERIC MILLER

Consulting Firm:

3 Company Name: AMEC F/W Project Name: BROADWAY PANTANO

4 Project Manager: ALEX YIANNAKAKIS Project Number: 14-2014-2029

Well's Information

5 Location: BROADWAY PANTANO Client ID: MW-7 Permanent ☒ Temporary ☐

6 Address: TUCSON, AZ

7 ADEQ File Identification #(s) —

8 Describe the probe location: B.P.

9 Probe Depth: 20 FT inch Probe ID: 4 inch **Probe volume: 0 inch^3 (0) mls**

10 Probe type: Tygon ☐ Teflon ☐ Vinyl ☐ PVC ☐ Metal ☐ Other: PVC

11 Is probe tested in the lab before installed? Y ☐ N ☐ NA ☒ Don't know ☐

12 Comments:

Weather Conditions

13 Temperature: 70 C^0 ☐ F^0 ☒

14 Has there been significant rain or snow recent to the sampling event? Y ☐ N ☒

15 If Yes to Question 14 Date _____ Amount of Precipitate _____ inches

Soil Conditions Information

16 Was a soil sample collected and analyzed for volumetric moisture content? Y ☐ N ☒ attach results if yes

If yes, attach results

If no, is the apparent moisture content dry ☐ moist ☒ saturated ☐

17 What is soil type encountered at sample location? NA

18 Was sample collected beneath a surface cover (e.g. parking lot, sidewalk, road, building, other)? Y ☐ N ☐

19 Describe the surface cover , if any GRASS

20 Was the sample collected near a subsurface conduit? Y ☐ N ☒

Describe subsurface conduit, if any

Sampling Train

21 Sample container: Canister : 1.0 L ☒ 6.0 L ☐ Silanized: Y ☐ N ☒

Other:

Tedlar bag: Y ☐ N ☒ Gas tight syringe Y ☐ N ☒

22 Flow restrictor: On 1000 mL/min ☐ 500 mL/min ☐ 200 mL/min ☒ Other:

One min = Taking one minute to fill one liter canister.

23 Tubing type: Tygon ☐ Teflon ☐ Vinyl ☐ PVC ☐ Other: NA

24 Tubing used from probe top to canister: Length: 0 inch ID 0 inch

25 **Tubing volume: 0 inch^3 (0) mls**

26 Are all parts of Sampling Train tested in the lab before sampling? Y ☒ N ☐

Probe Purging Before Sampling

27 Total volume: probe(v) + tubing(v) = Probe volume 0 + Tubing volume 0 = 0 mls

28 Total volume to be purged (mls): 1x 0 ☐ 1.5x 0 ☐ 2x 0 ☐ 3x 0 ☐

29 Purging pump #: — | Purging flow rate: ml/min Purging time: mins seconds

30 Gauge reading: < 5 inHg ☒ Other: _____ Comments: _____

31 Syringe Purging: NA ☒ Dedicated Syringe ☐ Re-used Suringe ☐ Volume _____

32 Is there condensation evident in the sampling train? Y ☐ N ☒

33 Post sample collection - Is there condensation evident in the sampling container? Y ☐ N ☒

34 **Leak Test** Y ☒ N ☐ If Yes, fill in the blanks blow:

35 Tracer compound: _____ Trade name: _____ Tested before use: Y ☒ N ☐

36 Locations applied: Probe top ☐ Sampling train: ☒ Other: _____

37 **Field Duplicate** Y ☐ N ☒ If Yes, fill in the blanks blow:

38 Used the Duplicate Splitter? Y ☐ N ☒ If no, describe the procedure: _____

Other Information

39 Identify the equipment and method used to install probe and collect sample SHOP VACUUM

40 What was the equilibration time between probe installation and withdrawal of any soil vapor? —

41 Sample storage /shipping temperature 70 F

42 Sample storage /shipping container Plastic Tote

43 Sample transportation mode(s) COMPANY VEHICLE

44 Was an equipment blank taken? Y ☐ N ☒ Was Tank air or Nitrogen used? _____

Note: Ambient air should not be used

45 Was a field blank taken? Y ☐ N ☒

46 Was a background (upwind ambient) san Y ☐ N ☒

47 Are there any potential VOC sources other than the identified release nearby?

Groundwater/active fueling station/ dry cleaners/ dry wells/ other - please describe —

48 **Well (Probe) Inspection Note:**

Arizona Department of Environmental Quality QA/QC checklist for Soil Vapor Sampling

Sampling Company

1 Date: 3.10.15 Start time: 1041 1102 ☐ ☐

2 Company Name: AMEC F/W Sampler's Name: ERIC MILLER

Consulting Firm:

3 Company Name: AMEC F/W Project Name: BROADWAY PANTANO

4 Project Manager: ALEX YIANNAKAKIS Project Number: 14-2014-2029

Well's Information

5 Location: BROADWAY PANTANO Client ID: MW-6 Permanent ☒ Temporary ☐

6 Address: TUCSON, AZ

7 ADEQ File Identification #(s) —

8 Describe the probe location: B.P

9 Probe Depth: 20 ~~inch~~ FT Probe ID: 4 inch **Probe volume: 0 inch^3 (0) mls**

10 Probe type: Tygon ☐ Teflon ☐ Vinyl ☐ PVC ☐ Metal ☐ Other: PVC

11 Is probe tested in the lab before installed? Y ☐ N ☐ NA ☒ Don't know ☐

12 Comments:

Weather Conditions

13 Temperature: 70 C^0 ☐ F^0 ☒

14 Has there been significant rain or snow recent to the sampling event? Y ☐ N ☒

15 If Yes to Question 14 Date _____ Amount of Precipitate _____ inches

Soil Conditions Information

16 Was a soil sample collected and analyzed for volumetric moisture content? Y ☐ N ☒ attach results if yes

If yes, attach results

If no, is the apparent moisture content dry ☐ moist ☒ saturated ☐

17 What is soil type encountered at sample location? NA

18 Was sample collected beneath a surface cover (e.g. parking lot, sidewalk, road, building, other)? Y ☐ N ☐

19 Describe the surface cover , if any CONCRETE PAD ON UNDEVELOPED LOT

20 Was the sample collected near a subsurface conduit? Y ☐ N ☒

Describe subsurface conduit, if any

Sampling Train

21 Sample container: Canister : 1.0 L ☒ 6.0 L ☐ Silanized: Y ☐ N ☒

Other:

Tedlar bag: Y ☐ N ☒ Gas tight syringe Y ☐ N ☒

22 Flow restrictor: On 1000 mL/min ☐ 500 mL/min ☐ 200 mL/min ☒ Other:

One min = Taking one minute to fill one liter canister.

23 Tubing type: Tygon ☐ Teflon ☐ Vinyl ☐ PVC ☐ Other: NA

24 Tubing used from probe top to canister: Length: 0 inch ID 0 inch

25 **Tubing volume: 0 inch^3 (0) mls**

26 Are all parts of Sampling Train tested in the lab before sampling? Y ☒ N ☐

Probe Purging Before Sampling

27 Total volume: probe(v) + tubing(v) = Probe volume 0 + Tubing volume 0 = 0 mls

28 Total volume to be purged (mls): 1x 0 ☐ 1.5x 0 ☐ 2x 0 ☐ 3x 0 ☐

29 Purging pump #: — | Purging flow rate: ml/min Purging time: mins seconds

30 Gauge reading: < 5 inHg ☒ Other: _____ Comments: _____

31 Syringe Purging: NA ☒ Dedicated Syringe ☐ Re-used Suringe ☐ Volume _____

32 Is there condensation evident in the sampling train? Y ☐ N ☒

33 Post sample collection - Is there condensation evident in the sampling container? Y ☐ N ☒

34 **Leak Test** Y ☒ N ☐ If Yes, fill in the blanks blow:

35 Tracer compound: _____ Trade name: _____ Tested before use: Y ☒ N ☐

36 Locations applied: Probe top ☐ Sampling train: ☒ Other: _____

37 **Field Duplicate** Y ☐ N ☒ If Yes, fill in the blanks blow:

38 Used the Duplicate Splitter? Y ☐ N ☒ If no, describe the procedure: _____

Other Information

39 Identify the equipment and method used to install probe and collect sample SHOP VACUUM

40 What was the equilibration time between probe installation and withdrawal of any soil vapor? —

41 Sample storage /shipping temperature 70 F

42 Sample storage /shipping container Plastic Tote

43 Sample transportation mode(s) COMPANY VEHICLE

44 Was an equipment blank taken? Y ☐ N ☒ Was Tank air or Nitrogen used? _____

Note: Ambient air should not be used

45 Was a field blank taken? Y ☐ N ☒

46 Was a background (upwind ambient) san Y ☐ N ☒

47 Are there any potential VOC sources other than the identified release nearby?

Groundwater/active fueling station/ dry cleaners/ dry wells/ other - please describe —

48 **Well (Probe) Inspection Note:**

Arizona Department of Environmental Quality QA/QC checklist for Soil Vapor Sampling

Sampling Company

1 Date: 3.11.15 Start time: 1457 1518 ☐ ☐

2 Company Name: AMEC F/W Sampler's Name: ERIC MILLER

Consulting Firm:

3 Company Name: AMEC F/W Project Name: BROADWAY PANTANO

4 Project Manager: ALEX YIANNAKAKIS Project Number: 14-2014-2029

Well's Information

5 Location: BROADWAY PANTANO Client ID: MW-5 Permanent ☒ Temporary ☐

6 Address: TUCSON, AZ

7 ADEQ File Identification #(s) —

8 Describe the probe location: [illegible]

9 Probe Depth: 20 ~~inch~~ FT Probe ID: 4 inch **Probe volume: 0 inch^3 (0) mls**

10 Probe type: Tygon ☐ Teflon ☐ Vinyl ☐ PVC ☐ Metal ☐ Other: PVC

11 Is probe tested in the lab before installed? Y ☐ N ☐ NA ☒ Don't know ☐

12 Comments:

Weather Conditions

13 Temperature: 70 C^0 ☐ F^0 ☒

14 Has there been significant rain or snow recent to the sampling event? Y ☐ N ☒

15 If Yes to Question 14 Date _____ Amount of Precipitate _____ inches

Soil Conditions Information

16 Was a soil sample collected and analyzed for volumetric moisture content? Y ☐ N ☒ attach results if yes

If yes, attach results

If no, is the apparent moisture content dry ☐ moist ☒ saturated ☐

17 What is soil type encountered at sample location? NA

18 Was sample collected beneath a surface cover (e.g. parking lot, sidewalk, road, building, other)? Y ☐ N ☐

19 Describe the surface cover , if any GRASS

20 Was the sample collected near a subsurface conduit? Y ☐ N ☒

Describe subsurface conduit, if any

Sampling Train

21 Sample container: Canister : 1.0 L ☒ 6.0 L ☐ Silanized: Y ☐ N ☒

Other:

Tedlar bag: Y ☐ N ☒ Gas tight syringe Y ☐ N ☒

22 Flow restrictor: On 1000 mL/min ☐ 500 mL/min ☐ 200 mL/min ☒ Other:

One min = Taking one minute to fill one liter canister.

23 Tubing type: Tygon ☐ Teflon ☐ Vinyl ☐ PVC ☐ Other: NA

24 Tubing used from probe top to canister: Length: 0 inch ID 0 inch

25 **Tubing volume: 0 inch^3 (0) mls**

26 Are all parts of Sampling Train tested in the lab before sampling? Y ☒ N ☐

Probe Purging Before Sampling

27 Total volume: probe(v) + tubing(v) = Probe volume 0 + Tubing volume 0 = 0 mls

28 Total volume to be purged (mls): 1x 0 ☐ 1.5x 0 ☐ 2x 0 ☐ 3x 0 ☐

29 Purging pump #: — | Purging flow rate: ml/min Purging time: mins seconds

30 Gauge reading: < 5 inHg ☒ Other: _____ Comments: _____

31 Syringe Purging: NA ☒ Dedicated Syringe ☐ Re-used Suringe ☐ Volume _____

32 Is there condensation evident in the sampling train? Y ☐ N ☒

33 Post sample collection - Is there condensation evident in the sampling container? Y ☐ N ☒

34 **Leak Test** Y ☒ N ☐ If Yes, fill in the blanks blow:

35 Tracer compound: _____ Trade name: _____ Tested before use: Y ☒ N ☐

36 Locations applied: Probe top ☐ Sampling train: ☒ Other: _____

37 **Field Duplicate** Y ☐ N ☒ If Yes, fill in the blanks blow:

38 Used the Duplicate Splitter? Y ☐ N ☒ If no, describe the procedure: _____

Other Information

39 Identify the equipment and method used to install probe and collect sample SHOP VACUUM

40 What was the equilibration time between probe installation and withdrawal of any soil vapor? —

41 Sample storage /shipping temperature 70 F

42 Sample storage /shipping container Plastic Tote

43 Sample transportation mode(s) COMPANY VEHICLE

44 Was an equipment blank taken? Y ☐ N ☒ Was Tank air or Nitrogen used? _____

Note: Ambient air should not be used

45 Was a field blank taken? Y ☐ N ☒

46 Was a background (upwind ambient) san Y ☐ N ☒

47 Are there any potential VOC sources other than the identified release nearby?

Groundwater/active fueling station/ dry cleaners/ dry wells/ other - please describe —

48 **Well (Probe) Inspection Note:**

Arizona Department of Environmental Quality QA/QC checklist for Soil Vapor Sampling

Sampling Company

1 Date: 3-5-15 Start time: 1302 1327 ☐ ☐

2 Company Name: AMEC F/W Sampler's Name: ERIC MILLER

Consulting Firm:

3 Company Name: AMEC F/W Project Name: BROADWAY PANTANO

4 Project Manager: ALEX YIANNAKAKIS Project Number: 14-2014-2029

Well's Information

5 Location: BROADWAY PANTANO Client ID: WR-434A-50 Permanent ☒ Temporary ☐

6 Address: TUCSON, AZ

7 ADEQ File Identification #(s) —

8 Describe the probe location: YMCA/Park

9 Probe Depth: 50 ~~inch~~ FT Probe ID: .5 inch **Probe volume: 0 inch^3 (0) mls**

10 Probe type: Tygon ☐ Teflon ☐ Vinyl ☐ PVC ☐ Metal ☐ Other: PVC

11 Is probe tested in the lab before installed? Y ☐ N ☐ NA ☒ Don't know ☐

12 Comments:

Weather Conditions

13 Temperature: 70 C^0 ☐ F^0 ☒

14 Has there been significant rain or snow recent to the sampling event? Y ☐ N ☒

15 If Yes to Question 14 Date _____ Amount of Precipitate _____ inches

Soil Conditions Information

16 Was a soil sample collected and analyzed for volumetric moisture content? Y ☐ N ☒ attach results if yes

If yes, attach results

If no, is the apparent moisture content dry ☐ moist ☒ saturated ☐

17 What is soil type encountered at sample location? NA

18 Was sample collected beneath a surface cover (e.g. parking lot, sidewalk, road, building, other)? Y ☐ N ☐

19 Describe the surface cover , if any CONCRETE PAD ON GRASS

20 Was the sample collected near a subsurface conduit? Y ☐ N ☒

Describe subsurface conduit, if any

Sampling Train

21 Sample container: Canister : 1.0 L ☒ 6.0 L ☐ Silanized: Y ☐ N ☒

Other:

Tedlar bag: Y ☐ N ☒ Gas tight syringe Y ☐ N ☒

22 Flow restrictor: On 1000 mL/min ☐ 500 mL/min ☐ 200 mL/min ☒ Other:

One min = Taking one minute to fill one liter canister.

23 Tubing type: Tygon ☐ Teflon ☐ Vinyl ☐ PVC ☐ Other: NA

24 Tubing used from probe top to canister: Length: 0 inch ID 0 inch

25 **Tubing volume: 0 inch^3 (0) mls**

26 Are all parts of Sampling Train tested in the lab before sampling? Y ☒ N ☐

Probe Purging Before Sampling

27 Total volume: probe(v) + tubing(v) = Probe volume 0 + Tubing volume 0 = 0 mls

28 Total volume to be purged (mls): 1x 0 ☐ 1.5x 0 ☐ 2x 0 ☐ 3x 0 ☐

29 Purging pump #: — Purging flow rate: ml/min Purging time: mins seconds

30 Gauge reading: < 5 inHg ☒ Other: _____ Comments: _____

31 Syringe Purging: NA ☒ Dedicated Syringe ☐ Re-used Suringe ☐ Volume _____

32 Is there condensation evident in the sampling train? Y ☐ N ☒

33 Post sample collection - Is there condensation evident in the sampling container? Y ☐ N ☒

34 **Leak Test** Y ☒ N ☐ If Yes, fill in the blanks blow:

35 Tracer compound: _____ Trade name: _____ Tested before use: Y ☒ N ☐

36 Locations applied: Probe top ☐ Sampling train: ☒ Other: _____

37 **Field Duplicate** Y ☐ N ☒ If Yes, fill in the blanks blow:

38 Used the Duplicate Splitter? Y ☐ N ☒ If no, describe the procedure: _____

Other Information

39 Identify the equipment and method used to install probe and collect sample SHOP VACUUM

40 What was the equilibration time between probe installation and withdrawal of any soil vapor? —

41 Sample storage /shipping temperature 70 F

42 Sample storage /shipping container Plastic Tote

43 Sample transportation mode(s) COMPANY VEHICLE

44 Was an equipment blank taken? Y ☐ N ☒ Was Tank air or Nitrogen used? _____

Note: Ambient air should not be used

45 Was a field blank taken? Y ☐ N ☒

46 Was a background (upwind ambient) san Y ☐ N ☒

47 Are there any potential VOC sources other than the identified release nearby?

Groundwater/active fueling station/ dry cleaners/ dry wells/ other - please describe —

48 **Well (Probe) Inspection Note:**

Arizona Department of Environmental Quality QA/QC checklist for Soil Vapor Sampling

Sampling Company

1 Date: 3-5-15 Start time: 1345 1415 ☐ ☐

2 Company Name: AMEC F/W Sampler's Name: ERIC MILLER

Consulting Firm:

3 Company Name: AMEC F/W Project Name: BROADWAY PANTANO

4 Project Manager: ALEX YIANNAKAKIS Project Number: 14-2014-2029

Well's Information

5 Location: BROADWAY PANTANO Client ID: WR-434A-150 Permanent ☒ Temporary ☐

6 Address: TUCSON, AZ

7 ADEQ File Identification #(s) —

8 Describe the probe location: YMCA, Park

9 Probe Depth: 150 ~~inch~~ FT Probe ID: .5 inch **Probe volume: 0 inch^3 (0) mls**

10 Probe type: Tygon ☐ Teflon ☐ Vinyl ☐ PVC ☐ Metal ☐ Other: PVC

11 Is probe tested in the lab before installed? Y ☐ N ☐ NA ☒ Don't know ☐

12 Comments:

Weather Conditions

13 Temperature: 70 C^0 ☐ F^0 ☒

14 Has there been significant rain or snow recent to the sampling event? Y ☐ N ☒

15 If Yes to Question 14 Date _____ Amount of Precipitate _____ inches

Soil Conditions Information

16 Was a soil sample collected and analyzed for volumetric moisture content? Y ☐ N ☒ attach results if yes

If yes, attach results

If no, is the apparent moisture content dry ☐ moist ☒ saturated ☐

17 What is soil type encountered at sample location? NA

18 Was sample collected beneath a surface cover (e.g. parking lot, sidewalk, road, building, other)? Y ☐ N ☐

19 Describe the surface cover , if any CONCRETE PAD ON GRASS

20 Was the sample collected near a subsurface conduit? Y ☐ N ☒

Describe subsurface conduit, if any

Sampling Train

21 Sample container: Canister : 1.0 L ☒ 6.0 L ☐ Silanized: Y ☐ N ☒

Other:

Tedlar bag: Y ☐ N ☒ Gas tight syringe Y ☐ N ☒

22 Flow restrictor: On 1000 mL/min ☐ 500 mL/min ☐ 200 mL/min ☒ Other:

One min = Taking one minute to fill one liter canister.

23 Tubing type: Tygon ☐ Teflon ☐ Vinyl ☐ PVC ☐ Other: NA

24 Tubing used from probe top to canister: Length: 0 inch ID 0 inch

25 **Tubing volume: 0 inch^3 (0) mls**

26 Are all parts of Sampling Train tested in the lab before sampling? Y ☒ N ☐

Probe Purging Before Sampling

27 Total volume: probe(v) + tubing(v) = Probe volume 0 + Tubing volume 0 = 0 mls

28 Total volume to be purged (mls): 1x 0 ☐ 1.5x 0 ☐ 2x 0 ☐ 3x 0 ☐

29 Purging pump #: — | Purging flow rate: ml/min Purging time: mins seconds

30 Gauge reading: < 5 inHg ☒ Other: _____ Comments: _____

31 Syringe Purging: NA ☒ Dedicated Syringe ☐ Re-used Suringe ☐ Volume _____

32 Is there condensation evident in the sampling train? Y ☐ N ☒

33 Post sample collection - Is there condensation evident in the sampling container? Y ☐ N ☒

34 **Leak Test** Y ☒ N ☐ If Yes, fill in the blanks blow:

35 Tracer compound: _____ Trade name: _____ Tested before use: Y ☒ N ☐

36 Locations applied: Probe top ☐ Sampling train: ☒ Other: _____

37 **Field Duplicate** Y ☐ N ☒ If Yes, fill in the blanks blow:

38 Used the Duplicate Splitter? Y ☐ N ☒ If no, describe the procedure: _____

Other Information

39 Identify the equipment and method used to install probe and collect sample SHOP VACUUM

40 What was the equilibration time between probe installation and withdrawal of any soil vapor? —

41 Sample storage /shipping temperature 70 F

42 Sample storage /shipping container Plastic Tote

43 Sample transportation mode(s) COMPANY VEHICLE

44 Was an equipment blank taken? Y ☐ N ☒ Was Tank air or Nitrogen used? _____

Note: Ambient air should not be used

45 Was a field blank taken? Y ☐ N ☒

46 Was a background (upwind ambient) san Y ☐ N ☒

47 Are there any potential VOC sources other than the identified release nearby?

Groundwater/active fueling station/ dry cleaners/ dry wells/ other - please describe —

48 **Well (Probe) Inspection Note:**

Arizona Department of Environmental Quality QA/QC checklist for Soil Vapor Sampling

Sampling Company

1 Date: 3-5-15 Start time: 1425 1450 ☐ ☐

2 Company Name: AMEC F/W Sampler's Name: ERIC MILLER

Consulting Firm:

3 Company Name: AMEC F/W Project Name: BROADWAY PANTANO

4 Project Manager: ALEX YIANNAKAKIS Project Number: 14-2014-2029

Well's Information

5 Location: BROADWAY PANTANO Client ID: WR-434A-250 Permanent ☒ Temporary ☐

6 Address: TUCSON, AZ

7 ADEQ File Identification #(s) —

8 Describe the probe location: YMCA / Park

9 Probe Depth: 250 ~~inch~~ FT Probe ID: .5 inch **Probe volume: 0 inch³ (0) mls**

10 Probe type: Tygon ☐ Teflon ☐ Vinyl ☐ PVC ☐ Metal ☐ Other: PVC

11 Is probe tested in the lab before installed? Y ☐ N ☐ NA ☒ Don't know ☐

12 Comments:

Weather Conditions

13 Temperature: 70 C⁰ ☐ F⁰ ☒

14 Has there been significant rain or snow recent to the sampling event? Y ☐ N ☒

15 If Yes to Question 14 Date _____ Amount of Precipitate _____ inches

Soil Conditions Information

16 Was a soil sample collected and analyzed for volumetric moisture content? Y ☐ N ☒ attach results if yes

If yes, attach results

If no, is the apparent moisture content dry ☐ moist ☒ saturated ☐

17 What is soil type encountered at sample location? NA

18 Was sample collected beneath a surface cover (e.g. parking lot, sidewalk, road, building, other)? Y ☐ N ☐

19 Describe the surface cover , if any CONCRETE PAD ON GRASS

20 Was the sample collected near a subsurface conduit? Y ☐ N ☒

Describe subsurface conduit, if any

Sampling Train

21 Sample container: Canister : 1.0 L ☒ 6.0 L ☐ Silanized: Y ☐ N ☒

Other:

Tedlar bag: Y ☐ N ☒ Gas tight syringe Y ☐ N ☒

22 Flow restrictor: On 1000 mL/min ☐ 500 mL/min ☐ 200 mL/min ☒ Other:

One min = Taking one minute to fill one liter canister.

23 Tubing type: Tygon ☐ Teflon ☐ Vinyl ☐ PVC ☐ Other: NA

24 Tubing used from probe top to canister: Length: 0 inch ID 0 inch

25 **Tubing volume: 0 inch³ (0) mls**

26 Are all parts of Sampling Train tested in the lab before sampling? Y ☒ N ☐

Probe Purging Before Sampling

27 Total volume: probe(v) + tubing(v) = Probe volume 0 + Tubing volume 0 = 0 mls

28 Total volume to be purged (mls): 1x 0 ☐ 1.5x 0 ☐ 2x 0 ☐ 3x 0 ☐

29 Purging pump #: — Purging flow rate: ml/min Purging time: mins seconds

30 Gauge reading: < 5 inHg ☒ Other: _____ Comments: _____

31 Syringe Purging: NA ☒ Dedicated Syringe ☐ Re-used Suringe ☐ Volume _____

32 Is there condensation evident in the sampling train? Y ☐ N ☒

33 Post sample collection - Is there condensation evident in the sampling container? Y ☐ N ☒

34 **Leak Test** Y ☒ N ☐ If Yes, fill in the blanks blow:

35 Tracer compound: _____ Trade name: _____ Tested before use: Y ☒ N ☐

36 Locations applied: Probe top ☐ Sampling train: ☒ Other: _____

37 **Field Duplicate** Y ☐ N ☒ If Yes, fill in the blanks blow:

38 Used the Duplicate Splitter? Y ☐ N ☒ If no, describe the procedure: _____

Other Information

39 Identify the equipment and method used to install probe and collect sample SHOP VACUUM

40 What was the equilibration time between probe installation and withdrawal of any soil vapor? —

41 Sample storage /shipping temperature 70 F

42 Sample storage /shipping container Plastic Tote

43 Sample transportation mode(s) COMPANY VEHICLE

44 Was an equipment blank taken? Y ☐ N ☒ Was Tank air or Nitrogen used? _____

Note: Ambient air should not be used

45 Was a field blank taken? Y ☐ N ☒

46 Was a background (upwind ambient) san Y ☐ N ☒

47 Are there any potential VOC sources other than the identified release nearby?

Groundwater/active fueling station/ dry cleaners/ dry wells/ other - please describe —

48 **Well (Probe) Inspection Note:**

Arizona Department of Environmental Quality QA/QC checklist for Soil Vapor Sampling

Sampling Company

1 Date: 3.5.15 Start time: 1455 1520 ☐ ☐

2 Company Name: AMEC F/W Sampler's Name: ERIC MILLER

Consulting Firm:

3 Company Name: AMEC F/W Project Name: BROADWAY PANTANO

4 Project Manager: ALEX YIANNAKAKIS Project Number: 14-2014-2029

Well's Information

5 Location: BROADWAY PANTANO Client ID: WR-434A-350 Permanent ☒ Temporary ☐

6 Address: TUCSON, AZ

7 ADEQ File Identification #(s) —

8 Describe the probe location: YMCA / PARK

9 Probe Depth: 350 ~~inch~~ FT Probe ID: .5 inch **Probe volume: 0 inch^3 (0) mls**

10 Probe type: Tygon ☐ Teflon ☐ Vinyl ☐ PVC ☐ Metal ☐ Other: PVC

11 Is probe tested in the lab before installed? Y ☐ N ☐ NA ☒ Don't know ☐

12 Comments:

Weather Conditions

13 Temperature: 70 C^0 ☐ F^0 ☒

14 Has there been significant rain or snow recent to the sampling event? Y ☐ N ☒

15 If Yes to Question 14 Date _____ Amount of Precipitate _____ inches

Soil Conditions Information

16 Was a soil sample collected and analyzed for volumetric moisture content? Y ☐ N ☒ attach results if yes

If yes, attach results

If no, is the apparent moisture content dry ☐ moist ☒ saturated ☐

17 What is soil type encountered at sample location? NA

18 Was sample collected beneath a surface cover (e.g. parking lot, sidewalk, road, building, other)? Y ☐ N ☐

19 Describe the surface cover , if any CONCRETE PAD ON GRASS

20 Was the sample collected near a subsurface conduit? Y ☐ N ☒

Describe subsurface conduit, if any

Sampling Train

21 Sample container: Canister : 1.0 L ☒ 6.0 L ☐ Silanized: Y ☐ N ☒

Other:

Tedlar bag: Y ☐ N ☒ Gas tight syringe Y ☐ N ☒

22 Flow restrictor: On 1000 mL/min ☐ 500 mL/min ☐ 200 mL/min ☒ Other:

One min = Taking one minute to fill one liter canister.

23 Tubing type: Tygon ☐ Teflon ☐ Vinyl ☐ PVC ☐ Other: NA

24 Tubing used from probe top to canister: Length: 0 inch ID 0 inch

25 **Tubing volume: 0 inch^3 (0) mls**

26 Are all parts of Sampling Train tested in the lab before sampling? Y ☒ N ☐

Probe Purging Before Sampling

27 Total volume: probe(v) + tubing(v) = Probe volume 0 + Tubing volume 0 = 0 mls

28 Total volume to be purged (mls): 1x 0 ☐ 1.5x 0 ☐ 2x 0 ☐ 3x 0 ☐

29 Purging pump #: — | Purging flow rate: ml/min Purging time: mins seconds

30 Gauge reading: < 5 inHg ☒ Other: _____ Comments: _____

31 Syringe Purging: NA ☒ Dedicated Syringe ☐ Re-used Suringe ☐ Volume _____

32 Is there condensation evident in the sampling train? Y ☐ N ☒

33 Post sample collection - Is there condensation evident in the sampling container? Y ☐ N ☒

34 **Leak Test** Y ☒ N ☐ If Yes, fill in the blanks blow:

35 Tracer compound: _____ Trade name: _____ Tested before use: Y ☒ N ☐

36 Locations applied: Probe top ☐ Sampling train: ☒ Other: _____

37 **Field Duplicate** Y ☐ N ☒ If Yes, fill in the blanks blow:

38 Used the Duplicate Splitter? Y ☐ N ☒ If no, describe the procedure: _____

Other Information

39 Identify the equipment and method used to install probe and collect sample SHOP VACUUM

40 What was the equilibration time between probe installation and withdrawal of any soil vapor? —

41 Sample storage /shipping temperature 70 F

42 Sample storage /shipping container Plastic Tote

43 Sample transportation mode(s) COMPANY VEHICLE

44 Was an equipment blank taken? Y ☐ N ☒ Was Tank air or Nitrogen used? _____

Note: Ambient air should not be used

45 Was a field blank taken? Y ☐ N ☒

46 Was a background (upwind ambient) san Y ☐ N ☒

47 Are there any potential VOC sources other than the identified release nearby?

Groundwater/active fueling station/ dry cleaners/ dry wells/ other - please describe —

48 **Well (Probe) Inspection Note:**

Arizona Department of Environmental Quality QA/QC checklist for Soil Vapor Sampling

Sampling Company

1 Date: 3-6-15 Start time: 815 835 ☐ ☐

2 Company Name: AMEC F/W Sampler's Name: ERIC MILLER

Consulting Firm:

3 Company Name: AMEC F/W Project Name: BROADWAY PANTANO

4 Project Manager: ALEX YIANNAKAKIS Project Number: 14-2014-2029

Well's Information

5 Location: BROADWAY PANTANO Client ID: BSDP-1-100 Permanent ☒ Temporary ☐

6 Address: TUCSON, AZ

7 ADEQ File Identification #(s) —

8 Describe the probe location: B.P.

9 Probe Depth: 100 ~~inch~~ FT Probe ID: 1 inch **Probe volume: 0 inch^3 (0) mls**

10 Probe type: Tygon ☐ Teflon ☐ Vinyl ☐ PVC ☐ Metal ☐ Other: PVC

11 Is probe tested in the lab before installed? Y ☐ N ☐ NA ☒ Don't know ☐

12 Comments:

Weather Conditions

13 Temperature: 70 C^0 ☐ F^0 ☒

14 Has there been significant rain or snow recent to the sampling event? Y ☐ N ☒

15 If Yes to Question 14 Date _____ Amount of Precipitate _____ inches

Soil Conditions Information

16 Was a soil sample collected and analyzed for volumetric moisture content? Y ☐ N ☒ attach results if yes

If yes, attach results

If no, is the apparent moisture content dry ☐ moist ☒ saturated ☐

17 What is soil type encountered at sample location? NA

18 Was sample collected beneath a surface cover (e.g. parking lot, sidewalk, road, building, other)? Y ☐ N ☐

19 Describe the surface cover , if any CONCRETE PAD ON UNDEVELOPED LOT

20 Was the sample collected near a subsurface conduit? Y ☐ N ☒

Describe subsurface conduit, if any

Sampling Train

21 Sample container: Canister : 1.0 L ☒ 6.0 L ☐ Silanized: Y ☐ N ☒

Other:

Tedlar bag: Y ☐ N ☒ Gas tight syringe Y ☐ N ☒

22 Flow restrictor: On 1000 mL/min ☐ 500 mL/min ☐ 200 mL/min ☒ Other:

One min = Taking one minute to fill one liter canister.

23 Tubing type: Tygon ☐ Teflon ☐ Vinyl ☐ PVC ☐ Other: NA

24 Tubing used from probe top to canister: Length: 0 inch ID 0 inch

25 **Tubing volume: 0 inch^3 (0) mls**

26 Are all parts of Sampling Train tested in the lab before sampling? Y ☒ N ☐

Probe Purging Before Sampling

27 Total volume: probe(v) + tubing(v) = Probe volume 0 + Tubing volume 0 = 0 mls

28 Total volume to be purged (mls): 1x 0 ☐ 1.5x 0 ☐ 2x 0 ☐ 3x 0 ☐

29 Purging pump #: — Purging flow rate: ml/min Purging time: mins seconds

30 Gauge reading: < 5 inHg ☒ Other: _____ Comments: _____

31 Syringe Purging: NA ☒ Dedicated Syringe ☐ Re-used Suringe ☐ Volume _____

32 Is there condensation evident in the sampling train? Y ☐ N ☒

33 Post sample collection - Is there condensation evident in the sampling container? Y ☐ N ☒

34 **Leak Test** Y ☒ N ☐ If Yes, fill in the blanks blow:

35 Tracer compound: _____ Trade name: _____ Tested before use: Y ☒ N ☐

36 Locations applied: Probe top ☐ Sampling train: ☒ Other: _____

37 **Field Duplicate** Y ☐ N ☒ If Yes, fill in the blanks blow:

38 Used the Duplicate Splitter? Y ☐ N ☒ If no, describe the procedure: _____

Other Information

39 Identify the equipment and method used to install probe and collect sample SHOP VACUUM

40 What was the equilibration time between probe installation and withdrawal of any soil vapor? —

41 Sample storage /shipping temperature 70 F

42 Sample storage /shipping container Plastic Tote

43 Sample transportation mode(s) COMPANY VEHICLE

44 Was an equipment blank taken? Y ☐ N ☒ Was Tank air or Nitrogen used? _____

Note: Ambient air should not be used

45 Was a field blank taken? Y ☐ N ☒

46 Was a background (upwind ambient) san Y ☐ N ☒

47 Are there any potential VOC sources other than the identified release nearby?

Groundwater/active fueling station/ dry cleaners/ dry wells/ other - please describe —

48 **Well (Probe) Inspection Note:**

Arizona Department of Environmental Quality QA/QC checklist for Soil Vapor Sampling

Sampling Company

1 Date: 3-6-15 Start time: 846 908 ☐ ☐

2 Company Name: AMEC F/W Sampler's Name: ERIC MILLER

Consulting Firm:

3 Company Name: AMEC F/W Project Name: BROADWAY PANTANO

4 Project Manager: ALEX YIANNAKAKIS Project Number: 14-2014-2029

Well's Information

5 Location: BROADWAY PANTANO Client ID: BSAP-1-150 Permanent ☒ Temporary ☐

6 Address: TUCSON, AZ

7 ADEQ File Identification #(s) —

8 Describe the probe location: B.P

9 Probe Depth: 150 ~~inch~~ FT Probe ID: 1 inch **Probe volume: 0 inch^3 (0) mls**

10 Probe type: Tygon ☐ Teflon ☐ Vinyl ☐ PVC ☐ Metal ☐ Other: PVC

11 Is probe tested in the lab before installed? Y ☐ N ☐ NA ☒ Don't know ☐

12 Comments:

Weather Conditions

13 Temperature: 70 C^0 ☐ F^0 ☒

14 Has there been significant rain or snow recent to the sampling event? Y ☐ N ☒

15 If Yes to Question 14 Date _____ Amount of Precipitate _____ inches

Soil Conditions Information

16 Was a soil sample collected and analyzed for volumetric moisture content? Y ☐ N ☒ attach results if yes

If yes, attach results

If no, is the apparent moisture content dry ☐ moist ☒ saturated ☐

17 What is soil type encountered at sample location? NA

18 Was sample collected beneath a surface cover (e.g. parking lot, sidewalk, road, building, other)? Y ☐ N ☐

19 Describe the surface cover , if any CONCRETE PAD ON UNDEVELOPED LOT

20 Was the sample collected near a subsurface conduit? Y ☐ N ☒

Describe subsurface conduit, if any

Sampling Train

21 Sample container: Canister : 1.0 L ☒ 6.0 L ☐ Silanized: Y ☐ N ☒

Other:

Tedlar bag: Y ☐ N ☒ Gas tight syringe Y ☐ N ☒

22 Flow restrictor: On 1000 mL/min ☐ 500 mL/min ☐ 200 mL/min ☒ Other:

One min = Taking one minute to fill one liter canister.

23 Tubing type: Tygon ☐ Teflon ☐ Vinyl ☐ PVC ☐ Other: NA

24 Tubing used from probe top to canister: Length: 0 inch ID 0 inch

25 **Tubing volume: 0 inch^3 (0) mls**

26 Are all parts of Sampling Train tested in the lab before sampling? Y ☒ N ☐

Probe Purging Before Sampling

27 Total volume: probe(v) + tubing(v) = Probe volume 0 + Tubing volume 0 = 0 mls

28 Total volume to be purged (mls): 1x 0 ☐ 1.5x 0 ☐ 2x 0 ☐ 3x 0 ☐

29 Purging pump #: — | Purging flow rate: ml/min Purging time: mins seconds

30 Gauge reading: < 5 inHg ☒ Other: _____ Comments: _____

31 Syringe Purging: NA ☒ Dedicated Syringe ☐ Re-used Suringe ☐ Volume _____

32 Is there condensation evident in the sampling train? Y ☐ N ☒

33 Post sample collection - Is there condensation evident in the sampling container? Y ☐ N ☒

34 **Leak Test** Y ☒ N ☐ If Yes, fill in the blanks blow:

35 Tracer compound: _____ Trade name: _____ Tested before use: Y ☒ N ☐

36 Locations applied: Probe top ☐ Sampling train: ☒ Other: _____

37 **Field Duplicate** Y ☐ N ☒ If Yes, fill in the blanks blow:

38 Used the Duplicate Splitter? Y ☐ N ☒ If no, describe the procedure: _____

Other Information

39 Identify the equipment and method used to install probe and collect sample SHOP VACUUM

40 What was the equilibration time between probe installation and withdrawal of any soil vapor? —

41 Sample storage /shipping temperature 70 F

42 Sample storage /shipping container Plastic Tote

43 Sample transportation mode(s) COMPANY VEHICLE

44 Was an equipment blank taken? Y ☐ N ☒ Was Tank air or Nitrogen used? _____

Note: Ambient air should not be used

45 Was a field blank taken? Y ☐ N ☒

46 Was a background (upwind ambient) san Y ☐ N ☒

47 Are there any potential VOC sources other than the identified release nearby?

Groundwater/active fueling station/ dry cleaners/ dry wells/ other - please describe —

48 **Well (Probe) Inspection Note:**

Arizona Department of Environmental Quality QA/QC checklist for Soil Vapor Sampling

Sampling Company

1 Date: 3-6-15 Start time: 920 940 ☐ ☐

2 Company Name: AMEC F/W Sampler's Name: ERIC MILLER

Consulting Firm:

3 Company Name: AMEC F/W Project Name: BROADWAY PANTANO

4 Project Manager: ALEX YIANNAKAKIS Project Number: 14-2014-2029

Well's Information

5 Location: BROADWAY PANTANO Client ID: BSAP-1-200 Permanent ☒ Temporary ☐

6 Address: TUCSON, AZ

7 ADEQ File Identification #(s) —

8 Describe the probe location: B.P

9 Probe Depth: 200 ~~inch~~ FT Probe ID: 1 inch **Probe volume: 0 inch^3 (0) mls**

10 Probe type: Tygon ☐ Teflon ☐ Vinyl ☐ PVC ☐ Metal ☐ Other: PVC

11 Is probe tested in the lab before installed? Y ☐ N ☐ NA ☒ Don't know ☐

12 Comments:

Weather Conditions

13 Temperature: 70 C^0 ☐ F^0 ☒

14 Has there been significant rain or snow recent to the sampling event? Y ☐ N ☒

15 If Yes to Question 14 Date _____ Amount of Precipitate _____ inches

Soil Conditions Information

16 Was a soil sample collected and analyzed for volumetric moisture content? Y ☐ N ☒ attach results if yes

If yes, attach results

If no, is the apparent moisture content dry ☐ moist ☒ saturated ☐

17 What is soil type encountered at sample location? NA

18 Was sample collected beneath a surface cover (e.g. parking lot, sidewalk, road, building, other)? Y ☐ N ☐

19 Describe the surface cover , if any CONCRETE PAD ON UNDEVELOPED LOT

20 Was the sample collected near a subsurface conduit? Y ☐ N ☒

Describe subsurface conduit, if any

Sampling Train

21 Sample container: Canister : 1.0 L ☒ 6.0 L ☐ Silanized: Y ☐ N ☒

Other:

Tedlar bag: Y ☐ N ☒ Gas tight syringe Y ☐ N ☒

22 Flow restrictor: On 1000 mL/min ☐ 500 mL/min ☐ 200 mL/min ☒ Other:

One min = Taking one minute to fill one liter canister.

23 Tubing type: Tygon ☐ Teflon ☐ Vinyl ☐ PVC ☐ Other: NA

24 Tubing used from probe top to canister: Length: 0 inch ID 0 inch

25 **Tubing volume: 0 inch^3 (0) mls**

26 Are all parts of Sampling Train tested in the lab before sampling? Y ☒ N ☐

Probe Purging Before Sampling

27 Total volume: probe(v) + tubing(v) = Probe volume 0 + Tubing volume 0 = 0 mls

28 Total volume to be purged (mls): 1x 0 ☐ 1.5x 0 ☐ 2x 0 ☐ 3x 0 ☐

29 Purging pump #: — Purging flow rate: ml/min Purging time: mins seconds

30 Gauge reading: < 5 inHg ☒ Other: _____ Comments: _____

31 Syringe Purging: NA ☒ Dedicated Syringe ☐ Re-used Suringe ☐ Volume _____

32 Is there condensation evident in the sampling train? Y ☐ N ☒

33 Post sample collection - Is there condensation evident in the sampling container? Y ☐ N ☒

34 **Leak Test** Y ☒ N ☐ If Yes, fill in the blanks blow:

35 Tracer compound: _____ Trade name: _____ Tested before use: Y ☒ N ☐

36 Locations applied: Probe top ☐ Sampling train: ☒ Other: _____

37 **Field Duplicate** Y ☐ N ☒ If Yes, fill in the blanks blow:

38 Used the Duplicate Splitter? Y ☐ N ☒ If no, describe the procedure: _____

Other Information

39 Identify the equipment and method used to install probe and collect sample SHOP VACUUM

40 What was the equilibration time between probe installation and withdrawal of any soil vapor? —

41 Sample storage /shipping temperature 70 F

42 Sample storage /shipping container Plastic Tote

43 Sample transportation mode(s) COMPANY VEHICLE

44 Was an equipment blank taken? Y ☐ N ☒ Was Tank air or Nitrogen used? _____

Note: Ambient air should not be used

45 Was a field blank taken? Y ☐ N ☒

46 Was a background (upwind ambient) san Y ☐ N ☒

47 Are there any potential VOC sources other than the identified release nearby?

Groundwater/active fueling station/ dry cleaners/ dry wells/ other - please describe —

48 **Well (Probe) Inspection Note:**

Arizona Department of Environmental Quality QA/QC checklist for Soil Vapor Sampling

Sampling Company

1 Date: 3-6-15 Start time: 1002 1025 ☐ ☐

2 Company Name: AMEC F/W Sampler's Name: ERIC MILLER

Consulting Firm:

3 Company Name: AMEC F/W Project Name: BROADWAY PANTANO

4 Project Manager: ALEX YIANNAKAKIS Project Number: 14-2014-2029

Well's Information

5 Location: BROADWAY PANTANO Client ID: BSAP-1-248 Permanent ☒ Temporary ☐

6 Address: TUCSON, AZ

7 ADEQ File Identification #(s) —

8 Describe the probe location: B.P

9 Probe Depth: 248 ~~inch~~ FT Probe ID: 1 inch **Probe volume: 0 inch^3 (0) mls**

10 Probe type: Tygon ☐ Teflon ☐ Vinyl ☐ PVC ☐ Metal ☐ Other: PVC

11 Is probe tested in the lab before installed? Y ☐ N ☐ NA ☒ Don't know ☐

12 Comments:

Weather Conditions

13 Temperature: 70 C^0 ☐ F^0 ☒

14 Has there been significant rain or snow recent to the sampling event? Y ☐ N ☒

15 If Yes to Question 14 Date _____ Amount of Precipitate _____ inches

Soil Conditions Information

16 Was a soil sample collected and analyzed for volumetric moisture content? Y ☐ N ☒ attach results if yes

If yes, attach results

If no, is the apparent moisture content dry ☐ moist ☒ saturated ☐

17 What is soil type encountered at sample location? NA

18 Was sample collected beneath a surface cover (e.g. parking lot, sidewalk, road, building, other)? Y ☐ N ☐

19 Describe the surface cover , if any CONCRETE PAD ON UNDEVELOPED LOT

20 Was the sample collected near a subsurface conduit? Y ☐ N ☒

Describe subsurface conduit, if any

Sampling Train

21 Sample container: Canister : 1.0 L ☒ 6.0 L ☐ Silanized: Y ☐ N ☒

Other:

Tedlar bag: Y ☐ N ☒ Gas tight syringe Y ☐ N ☒

22 Flow restrictor: On 1000 mL/min ☐ 500 mL/min ☐ 200 mL/min ☒ Other:

One min = Taking one minute to fill one liter canister.

23 Tubing type: Tygon ☐ Teflon ☐ Vinyl ☐ PVC ☐ Other: NA

24 Tubing used from probe top to canister: Length: 0 inch ID 0 inch

25 **Tubing volume: 0 inch^3 (0) mls**

26 Are all parts of Sampling Train tested in the lab before sampling? Y ☒ N ☐

Probe Purging Before Sampling

27 Total volume: probe(v) + tubing(v) = Probe volume 0 + Tubing volume 0 = 0 mls

28 Total volume to be purged (mls): 1x 0 ☐ 1.5x 0 ☐ 2x 0 ☐ 3x 0 ☐

29 Purging pump #: — Purging flow rate: ml/min Purging time: mins seconds

30 Gauge reading: < 5 inHg ☒ Other: _____ Comments: _____

31 Syringe Purging: NA ☒ Dedicated Syringe ☐ Re-used Suringe ☐ Volume _____

32 Is there condensation evident in the sampling train? Y ☐ N ☒

33 Post sample collection - Is there condensation evident in the sampling container? Y ☐ N ☒

34 **Leak Test** Y ☒ N ☐ If Yes, fill in the blanks blow:

35 Tracer compound: _____ Trade name: _____ Tested before use: Y ☒ N ☐

36 Locations applied: Probe top ☐ Sampling train: ☒ Other: _____

37 **Field Duplicate** Y ☐ N ☒ If Yes, fill in the blanks blow:

38 Used the Duplicate Splitter? Y ☐ N ☒ If no, describe the procedure: _____

Other Information

39 Identify the equipment and method used to install probe and collect sample SHOP VACUUM

40 What was the equilibration time between probe installation and withdrawal of any soil vapor? —

41 Sample storage /shipping temperature 70 F

42 Sample storage /shipping container Plastic Tote

43 Sample transportation mode(s) COMPANY VEHICLE

44 Was an equipment blank taken? Y ☐ N ☒ Was Tank air or Nitrogen used? _____

Note: Ambient air should not be used

45 Was a field blank taken? Y ☐ N ☒

46 Was a background (upwind ambient) san Y ☐ N ☒

47 Are there any potential VOC sources other than the identified release nearby?

Groundwater/active fueling station/ dry cleaners/ dry wells/ other - please describe —

48 **Well (Probe) Inspection Note:**

Arizona Department of Environmental Quality QA/QC checklist for Soil Vapor Sampling

Sampling Company

1 Date: 3-6-15 Start time: 1033 1055 ☐ ☐

2 Company Name: AMEC F/W Sampler's Name: ERIC MILLER

Consulting Firm:

3 Company Name: AMEC F/W Project Name: BROADWAY PANTANO

4 Project Manager: ALEX YIANNAKAKIS Project Number: 14-2014-2029

Well's Information

5 Location: BROADWAY PANTANO Client ID: BSPP-1-300 Permanent ☒ Temporary ☐

6 Address: TUCSON, AZ

7 ADEQ File Identification #(s) —

8 Describe the probe location: BP

9 Probe Depth: 300 ~~inch~~ FT Probe ID: 1 inch **Probe volume: 0 inch^3 (0) mls**

10 Probe type: Tygon ☐ Teflon ☐ Vinyl ☐ PVC ☐ Metal ☐ Other: PVC

11 Is probe tested in the lab before installed? Y ☐ N ☐ NA ☒ Don't know ☐

12 Comments:

Weather Conditions

13 Temperature: 70 C^0 ☐ F^0 ☒

14 Has there been significant rain or snow recent to the sampling event? Y ☐ N ☒

15 If Yes to Question 14 Date _____ Amount of Precipitate _____ inches

Soil Conditions Information

16 Was a soil sample collected and analyzed for volumetric moisture content? Y ☐ N ☒ attach results if yes

If yes, attach results

If no, is the apparent moisture content dry ☐ moist ☒ saturated ☐

17 What is soil type encountered at sample location? NA

18 Was sample collected beneath a surface cover (e.g. parking lot, sidewalk, road, building, other)? Y ☐ N ☐

19 Describe the surface cover , if any CONCRETE PAD ON UNDEVELOPED LOT

20 Was the sample collected near a subsurface conduit? Y ☐ N ☒

Describe subsurface conduit, if any

Sampling Train

21 Sample container: Canister : 1.0 L ☒ 6.0 L ☐ Silanized: Y ☐ N ☒

Other:

Tedlar bag: Y ☐ N ☒ Gas tight syringe Y ☐ N ☒

22 Flow restrictor: On 1000 mL/min ☐ 500 mL/min ☐ 200 mL/min ☒ Other:

One min = Taking one minute to fill one liter canister.

23 Tubing type: Tygon ☐ Teflon ☐ Vinyl ☐ PVC ☐ Other: NA

24 Tubing used from probe top to canister: Length: 0 inch ID 0 inch

25 **Tubing volume: 0 inch^3 (0) mls**

26 Are all parts of Sampling Train tested in the lab before sampling? Y ☒ N ☐

Probe Purging Before Sampling

27 Total volume: probe(v) + tubing(v) = Probe volume 0 + Tubing volume 0 = 0 mls

28 Total volume to be purged (mls): 1x 0 ☐ 1.5x 0 ☐ 2x 0 ☐ 3x 0 ☐

29 Purging pump #: — Purging flow rate: ml/min Purging time: mins seconds

30 Gauge reading: < 5 inHg ☒ Other: _____ Comments: _____

31 Syringe Purging: NA ☒ Dedicated Syringe ☐ Re-used Suringe ☐ Volume _____

32 Is there condensation evident in the sampling train? Y ☐ N ☒

33 Post sample collection - Is there condensation evident in the sampling container? Y ☐ N ☒

34 **Leak Test** Y ☒ N ☐ If Yes, fill in the blanks blow:

35 Tracer compound: _____ Trade name: _____ Tested before use: Y ☒ N ☐

36 Locations applied: Probe top ☐ Sampling train: ☒ Other: _____

37 **Field Duplicate** Y ☐ N ☐ If Yes, fill in the blanks blow:

38 Used the Duplicate Splitter? Y ☐ N ☐ If no, describe the procedure: _____

Other Information

39 Identify the equipment and method used to install probe and collect sample SHOP VACUUM

40 What was the equilibration time between probe installation and withdrawal of any soil vapor? —

41 Sample storage /shipping temperature 70 F

42 Sample storage /shipping container Plastic Tote

43 Sample transportation mode(s) COMPANY VEHICLE

44 Was an equipment blank taken? Y ☐ N ☒ Was Tank air or Nitrogen used? _____

Note: Ambient air should not be used

45 Was a field blank taken? Y ☐ N ☒

46 Was a background (upwind ambient) san Y ☐ N ☒

47 Are there any potential VOC sources other than the identified release nearby?

Groundwater/active fueling station/ dry cleaners/ dry wells/ other - please describe —

48 **Well (Probe) Inspection Note:**

Arizona Department of Environmental Quality QA/QC checklist for Soil Vapor Sampling

Sampling Company

1 Date: 3-6-15 Start time: 1100 1120 ☐ ☐

2 Company Name: AMEC F/W Sampler's Name: ERIC MILLER

Consulting Firm:

3 Company Name: AMEC F/W Project Name: BROADWAY PANTANO

4 Project Manager: ALEX YIANNAKAKIS Project Number: 14-2014-2029

Well's Information

5 Location: BROADWAY PANTANO Client ID: BSAP-1-350 Permanent ☒ Temporary ☐

6 Address: TUCSON, AZ

7 ADEQ File Identification #(s) —

8 Describe the probe location: BP

9 Probe Depth: 350 ~~inch~~ FT Probe ID: 1 inch **Probe volume: 0 inch^3 (0) mls**

10 Probe type: Tygon ☐ Teflon ☐ Vinyl ☐ PVC ☐ Metal ☐ Other: PVC

11 Is probe tested in the lab before installed? Y ☐ N ☐ NA ☒ Don't know ☐

12 Comments:

Weather Conditions

13 Temperature: 70 C^0 ☐ F^0 ☒

14 Has there been significant rain or snow recent to the sampling event? Y ☐ N ☒

15 If Yes to Question 14 Date _____ Amount of Precipitate _____ inches

Soil Conditions Information

16 Was a soil sample collected and analyzed for volumetric moisture content? Y ☐ N ☒ attach results if yes

If yes, attach results

If no, is the apparent moisture content dry ☐ moist ☒ saturated ☐

17 What is soil type encountered at sample location? NA

18 Was sample collected beneath a surface cover (e.g. parking lot, sidewalk, road, building, other)? Y ☐ N ☐

19 Describe the surface cover , if any CONCRETE PAD ON UNDEVELOPED LOT

20 Was the sample collected near a subsurface conduit? Y ☐ N ☒

Describe subsurface conduit, if any

Sampling Train

21 Sample container: Canister : 1.0 L ☒ 6.0 L ☐ Silanized: Y ☐ N ☒

Other:

Tedlar bag: Y ☐ N ☒ Gas tight syringe Y ☐ N ☒

22 Flow restrictor: On 1000 mL/min ☐ 500 mL/min ☐ 200 mL/min ☒ Other:

One min = Taking one minute to fill one liter canister.

23 Tubing type: Tygon ☐ Teflon ☐ Vinyl ☐ PVC ☐ Other: NA

24 Tubing used from probe top to canister: Length: 0 inch ID 0 inch

25 **Tubing volume: 0 inch^3 (0) mls**

26 Are all parts of Sampling Train tested in the lab before sampling? Y ☒ N ☐

Probe Purging Before Sampling

27 Total volume: probe(v) + tubing(v) = Probe volume 0 + Tubing volume 0 = 0 mls

28 Total volume to be purged (mls): 1x 0 ☐ 1.5x 0 ☐ 2x 0 ☐ 3x 0 ☐

29 Purging pump #: — | Purging flow rate: ml/min Purging time: mins seconds

30 Gauge reading: < 5 inHg ☒ Other: _____ Comments: _____

31 Syringe Purging: NA ☒ Dedicated Syringe ☐ Re-used Suringe ☐ Volume _____

32 Is there condensation evident in the sampling train? Y ☐ N ☒

33 Post sample collection - Is there condensation evident in the sampling container? Y ☐ N ☒

34 **Leak Test** Y ☒ N ☐ If Yes, fill in the blanks blow:

35 Tracer compound: _____ Trade name: _____ Tested before use: Y ☒ N ☐

36 Locations applied: Probe top ☐ Sampling train: ☒ Other: _____

37 **Field Duplicate** Y ☐ N ☒ If Yes, fill in the blanks blow:

38 Used the Duplicate Splitter? Y ☐ N ☒ If no, describe the procedure: _____

Other Information

39 Identify the equipment and method used to install probe and collect sample Shop Vacuum

40 What was the equilibration time between probe installation and withdrawal of any soil vapor? —

41 Sample storage /shipping temperature 70 F

42 Sample storage /shipping container Plastic Tote

43 Sample transportation mode(s) Company Vehicle

44 Was an equipment blank taken? Y ☐ N ☒ Was Tank air or Nitrogen used? _____

Note: Ambient air should not be used

45 Was a field blank taken? Y ☐ N ☒

46 Was a background (upwind ambient) san Y ☐ N ☒

47 Are there any potential VOC sources other than the identified release nearby?

Groundwater/active fueling station/ dry cleaners/ dry wells/ other - please describe —

48 **Well (Probe) Inspection Note:**

Arizona Department of Environmental Quality QA/QC checklist for Soil Vapor Sampling

Sampling Company

1 Date: 3-6-15 Start time: 1217 1237 ☐ ☐

2 Company Name: AMEC F/W Sampler's Name: ERIC MILLER

Consulting Firm:

3 Company Name: AMEC F/W Project Name: BROADWAY PANTANO

4 Project Manager: ALEX YIANNAKAKIS Project Number: 14-2014-2029

Well's Information

5 Location: BROADWAY PANTANO Client ID: BSDP-2-100 Permanent ☒ Temporary ☐

6 Address: TUCSON, AZ

7 ADEQ File Identification #(s) —

8 Describe the probe location: BP

9 Probe Depth: 100 ~~inch~~ FT Probe ID: 1 inch **Probe volume: 0 inch^3 (0) mls**

10 Probe type: Tygon ☐ Teflon ☐ Vinyl ☐ PVC ☐ Metal ☐ Other: PVC

11 Is probe tested in the lab before installed? Y ☐ N ☐ NA ☒ Don't know ☐

12 Comments:

Weather Conditions

13 Temperature: 70 C^0 ☐ F^0 ☒

14 Has there been significant rain or snow recent to the sampling event? Y ☐ N ☒

15 If Yes to Question 14 Date _____ Amount of Precipitate _____ inches

Soil Conditions Information

16 Was a soil sample collected and analyzed for volumetric moisture content? Y ☐ N ☒ attach results if yes

If yes, attach results

If no, is the apparent moisture content dry ☐ moist ☒ saturated ☐

17 What is soil type encountered at sample location? NA

18 Was sample collected beneath a surface cover (e.g. parking lot, sidewalk, road, building, other)? Y ☐ N ☐

19 Describe the surface cover , if any CONCRETE PAD ON UNDEVELOPED LOT

20 Was the sample collected near a subsurface conduit? Y ☐ N ☒

Describe subsurface conduit, if any

Sampling Train

21 Sample container: Canister : 1.0 L ☒ 6.0 L ☐ Silanized: Y ☐ N ☒

Other:

Tedlar bag: Y ☐ N ☒ Gas tight syringe Y ☐ N ☒

22 Flow restrictor: On 1000 mL/min ☐ 500 mL/min ☐ 200 mL/min ☒ Other:

One min = Taking one minute to fill one liter canister.

23 Tubing type: Tygon ☐ Teflon ☐ Vinyl ☐ PVC ☐ Other: NA

24 Tubing used from probe top to canister: Length: 0 inch ID 0 inch

25 **Tubing volume: 0 inch^3 (0) mls**

26 Are all parts of Sampling Train tested in the lab before sampling? Y ☒ N ☐

Probe Purging Before Sampling

27 Total volume: probe(v) + tubing(v) = Probe volume 0 + Tubing volume 0 = 0 mls

28 Total volume to be purged (mls): 1x 0 ☐ 1.5x 0 ☐ 2x 0 ☐ 3x 0 ☐

29 Purging pump #: — | Purging flow rate: ml/min Purging time: mins seconds

30 Gauge reading: < 5 inHg ☒ Other: _____ Comments: _____

31 Syringe Purging: NA ☒ Dedicated Syringe ☐ Re-used Suringe ☐ Volume _____

32 Is there condensation evident in the sampling train? Y ☐ N ☒

33 Post sample collection - Is there condensation evident in the sampling container? Y ☐ N ☒

34 **Leak Test** Y ☒ N ☐ If Yes, fill in the blanks blow:

35 Tracer compound: _____ Trade name: _____ Tested before use: Y ☒ N ☐

36 Locations applied: Probe top ☐ Sampling train: ☒ Other: _____

37 **Field Duplicate** Y ☐ N ☒ If Yes, fill in the blanks blow:

38 Used the Duplicate Splitter? Y ☐ N ☒ If no, describe the procedure: _____

Other Information

39 Identify the equipment and method used to install probe and collect sample SHOP VACUUM

40 What was the equilibration time between probe installation and withdrawal of any soil vapor? —

41 Sample storage /shipping temperature 70 F

42 Sample storage /shipping container Plastic Tote

43 Sample transportation mode(s) COMPANY VEHICLE

44 Was an equipment blank taken? Y ☐ N ☒ Was Tank air or Nitrogen used? _____

Note: Ambient air should not be used

45 Was a field blank taken? Y ☐ N ☒

46 Was a background (upwind ambient) san Y ☐ N ☒

47 Are there any potential VOC sources other than the identified release nearby?

Groundwater/active fueling station/ dry cleaners/ dry wells/ other - please describe —

48 **Well (Probe) Inspection Note:**

Arizona Department of Environmental Quality QA/QC checklist for Soil Vapor Sampling

Sampling Company

1 Date: 3-6-15 Start time: 1242 1303 ☐ ☐

2 Company Name: AMEC F/W Sampler's Name: ERIC MILLER

Consulting Firm:

3 Company Name: AMEC F/W Project Name: BROADWAY PANTANO

4 Project Manager: ALEX YIANNAKAKIS Project Number: 14-2014-2029

Well's Information

5 Location: BROADWAY PANTANO Client ID: BSAP-2-150 Permanent ☒ Temporary ☐

6 Address: TUCSON, AZ

7 ADEQ File Identification #(s) —

8 Describe the probe location: B.P

9 Probe Depth: 150 ~~FT inch~~ Probe ID: 1 inch **Probe volume: 0 inch^3 (0) mls**

10 Probe type: Tygon ☐ Teflon ☐ Vinyl ☐ PVC ☐ Metal ☐ Other: PVC

11 Is probe tested in the lab before installed? Y ☐ N ☐ NA ☒ Don't know ☐

12 Comments:

Weather Conditions

13 Temperature: 70 C^0 ☐ F^0 ☒

14 Has there been significant rain or snow recent to the sampling event? Y ☐ N ☒

15 If Yes to Question 14 Date _____ Amount of Precipitate _____ inches

Soil Conditions Information

16 Was a soil sample collected and analyzed for volumetric moisture content? Y ☐ N ☒ attach results if yes

If yes, attach results

If no, is the apparent moisture content dry ☐ moist ☒ saturated ☐

17 What is soil type encountered at sample location? NA

18 Was sample collected beneath a surface cover (e.g. parking lot, sidewalk, road, building, other)? Y ☐ N ☐

19 Describe the surface cover , if any CONCRETE PAD ON UNDEVELOPED LOT

20 Was the sample collected near a subsurface conduit? Y ☐ N ☒

Describe subsurface conduit, if any

Sampling Train

21 Sample container: Canister : 1.0 L ☒ 6.0 L ☐ Silanized: Y ☐ N ☒

Other:

Tedlar bag: Y ☐ N ☒ Gas tight syringe Y ☐ N ☒

22 Flow restrictor: On 1000 mL/min ☐ 500 mL/min ☐ 200 mL/min ☒ Other:

One min = Taking one minute to fill one liter canister.

23 Tubing type: Tygon ☐ Teflon ☐ Vinyl ☐ PVC ☐ Other: NA

24 Tubing used from probe top to canister: Length: 0 inch ID 0 inch

25 **Tubing volume: 0 inch^3 (0) mls**

26 Are all parts of Sampling Train tested in the lab before sampling? Y ☒ N ☐

Probe Purging Before Sampling

27 Total volume: probe(v) + tubing(v) = Probe volume 0 + Tubing volume 0 = 0 mls

28 Total volume to be purged (mls): 1x 0 ☐ 1.5x 0 ☐ 2x 0 ☐ 3x 0 ☐

29 Purging pump #: — Purging flow rate: ml/min Purging time: mins seconds

30 Gauge reading: < 5 inHg ☒ Other: _____ Comments: _____

31 Syringe Purging: NA ☒ Dedicated Syringe ☐ Re-used Suringe ☐ Volume _____

32 Is there condensation evident in the sampling train? Y ☐ N ☒

33 Post sample collection - Is there condensation evident in the sampling container? Y ☐ N ☒

34 **Leak Test** Y ☒ N ☐ If Yes, fill in the blanks blow:

35 Tracer compound: _____ Trade name: _____ Tested before use: Y ☒ N ☐

36 Locations applied: Probe top ☐ Sampling train: ☒ Other: _____

37 **Field Duplicate** Y ☐ N ☒ If Yes, fill in the blanks blow:

38 Used the Duplicate Splitter? Y ☐ N ☒ If no, describe the procedure: _____

Other Information

39 Identify the equipment and method used to install probe and collect sample SHOP VACUUM

40 What was the equilibration time between probe installation and withdrawal of any soil vapor? —

41 Sample storage /shipping temperature 70 F

42 Sample storage /shipping container Plastic Tote

43 Sample transportation mode(s) COMPANY VEHICLE

44 Was an equipment blank taken? Y ☐ N ☒ Was Tank air or Nitrogen used? _____

Note: Ambient air should not be used

45 Was a field blank taken? Y ☐ N ☒

46 Was a background (upwind ambient) san Y ☐ N ☒

47 Are there any potential VOC sources other than the identified release nearby?

Groundwater/active fueling station/ dry cleaners/ dry wells/ other - please describe —

48 **Well (Probe) Inspection Note:**

Arizona Department of Environmental Quality QA/QC checklist for Soil Vapor Sampling

Sampling Company

1 Date: 3-6-15 Start time: 1308 1328 ☐ ☐

2 Company Name: AMEC F/W Sampler's Name: ERIC MILLER

Consulting Firm:

3 Company Name: AMEC F/W Project Name: BROADWAY PANTANO

4 Project Manager: ALEX YIANNAKAKIS Project Number: 14-2014-2029

Well's Information

5 Location: BROADWAY PANTANO Client ID: BSM-Z-200 Permanent ☒ Temporary ☐

6 Address: TUCSON, AZ

7 ADEQ File Identification #(s) —

8 Describe the probe location: BP

9 Probe Depth: 200 FT ~~inch~~ Probe ID: 1 inch **Probe volume: 0 inch^3 (0) mls**

10 Probe type: Tygon ☐ Teflon ☐ Vinyl ☐ PVC ☐ Metal ☐ Other: PVC

11 Is probe tested in the lab before installed? Y ☐ N ☐ NA ☒ Don't know ☐

12 Comments:

Weather Conditions

13 Temperature: 70 C^0 ☐ F^0 ☒

14 Has there been significant rain or snow recent to the sampling event? Y ☐ N ☒

15 If Yes to Question 14 Date _____ Amount of Precipitate _____ inches

Soil Conditions Information

16 Was a soil sample collected and analyzed for volumetric moisture content? Y ☐ N ☒ attach results if yes

If yes, attach results

If no, is the apparent moisture content dry ☐ moist ☒ saturated ☐

17 What is soil type encountered at sample location? NA

18 Was sample collected beneath a surface cover (e.g. parking lot, sidewalk, road, building, other)? Y ☐ N ☐

19 Describe the surface cover , if any CONCRETE PAD ON UNDEVELOPED LOT

20 Was the sample collected near a subsurface conduit? Y ☐ N ☒

Describe subsurface conduit, if any

Sampling Train

21 Sample container: Canister : 1.0 L ☒ 6.0 L ☐ Silanized: Y ☐ N ☒

Other:

Tedlar bag: Y ☐ N ☒ Gas tight syringe Y ☐ N ☒

22 Flow restrictor: On 1000 mL/min ☐ 500 mL/min ☐ 200 mL/min ☒ Other:

One min = Taking one minute to fill one liter canister.

23 Tubing type: Tygon ☐ Teflon ☐ Vinyl ☐ PVC ☐ Other: NA

24 Tubing used from probe top to canister: Length: 0 inch ID 0 inch

25 **Tubing volume: 0 inch^3 (0) mls**

26 Are all parts of Sampling Train tested in the lab before sampling? Y ☒ N ☐

Probe Purging Before Sampling

27 Total volume: probe(v) + tubing(v) = Probe volume 0 + Tubing volume 0 = 0 mls

28 Total volume to be purged (mls): 1x 0 ☐ 1.5x 0 ☐ 2x 0 ☐ 3x 0 ☐

29 Purging pump #: — | Purging flow rate: ml/min Purging time: mins seconds

30 Gauge reading: < 5 inHg ☒ Other: _____ Comments: _____

31 Syringe Purging: NA ☒ Dedicated Syringe ☐ Re-used Suringe ☐ Volume _____

32 Is there condensation evident in the sampling train? Y ☐ N ☒

33 Post sample collection - Is there condensation evident in the sampling container? Y ☐ N ☒

34 **Leak Test** Y ☒ N ☐ If Yes, fill in the blanks blow:

35 Tracer compound: _____ Trade name: _____ Tested before use: Y ☒ N ☐

36 Locations applied: Probe top ☐ Sampling train: ☒ Other: _____

37 **Field Duplicate** Y ☐ N ☒ If Yes, fill in the blanks blow:

38 Used the Duplicate Splitter? Y ☐ N ☒ If no, describe the procedure: _____

Other Information

39 Identify the equipment and method used to install probe and collect sample SHOP VACUUM

40 What was the equilibration time between probe installation and withdrawal of any soil vapor? —

41 Sample storage /shipping temperature 70 F

42 Sample storage /shipping container Plastic Tote

43 Sample transportation mode(s) COMPANY VEHICLE

44 Was an equipment blank taken? Y ☐ N ☒ Was Tank air or Nitrogen used? _____

Note: Ambient air should not be used

45 Was a field blank taken? Y ☐ N ☒

46 Was a background (upwind ambient) san Y ☐ N ☒

47 Are there any potential VOC sources other than the identified release nearby?

Groundwater/active fueling station/ dry cleaners/ dry wells/ other - please describe —

48 **Well (Probe) Inspection Note:**

Arizona Department of Environmental Quality QA/QC checklist for Soil Vapor Sampling

Sampling Company

1 Date: 3.6.15 Start time: 1333 1355 ☐ ☐

2 Company Name: AMEC F/W Sampler's Name: ERIC MILLER

Consulting Firm:

3 Company Name: AMEC F/W Project Name: BROADWAY PANTANO

4 Project Manager: ALEX YIANNAKAKIS Project Number: 14-2014-2029

Well's Information

5 Location: BROADWAY PANTANO Client ID: BSAP-2-250 Permanent ☒ Temporary ☐

6 Address: TUCSON, AZ

7 ADEQ File Identification #(s) —

8 Describe the probe location: B.P

9 Probe Depth: 250 FT ~~inch~~ Probe ID: 1 inch **Probe volume: 0 inch^3 (0) mls**

10 Probe type: Tygon ☐ Teflon ☐ Vinyl ☐ PVC ☐ Metal ☐ Other: PVC

11 Is probe tested in the lab before installed? Y ☐ N ☐ NA ☒ Don't know ☐

12 Comments:

Weather Conditions

13 Temperature: 70 C^0 ☐ F^0 ☒

14 Has there been significant rain or snow recent to the sampling event? Y ☐ N ☒

15 If Yes to Question 14 Date _____ Amount of Precipitate _____ inches

Soil Conditions Information

16 Was a soil sample collected and analyzed for volumetric moisture content? Y ☐ N ☒ attach results if yes

If yes, attach results

If no, is the apparent moisture content dry ☐ moist ☒ saturated ☐

17 What is soil type encountered at sample location? NA

18 Was sample collected beneath a surface cover (e.g. parking lot, sidewalk, road, building, other)? Y ☐ N ☐

19 Describe the surface cover , if any CONCRETE PAD ON UNDEVELOPED LOT

20 Was the sample collected near a subsurface conduit? Y ☐ N ☒

Describe subsurface conduit, if any

Sampling Train

21 Sample container: Canister : 1.0 L ☒ 6.0 L ☐ Silanized: Y ☐ N ☒

Other:

Tedlar bag: Y ☐ N ☒ Gas tight syringe Y ☐ N ☒

22 Flow restrictor: On 1000 mL/min ☐ 500 mL/min ☐ 200 mL/min ☒ Other:

One min = Taking one minute to fill one liter canister.

23 Tubing type: Tygon ☐ Teflon ☐ Vinyl ☐ PVC ☐ Other: NA

24 Tubing used from probe top to canister: Length: 0 inch ID 0 inch

25 **Tubing volume: 0 inch^3 (0) mls**

26 Are all parts of Sampling Train tested in the lab before sampling? Y ☒ N ☐

Probe Purging Before Sampling

27 Total volume: probe(v) + tubing(v) = Probe volume 0 + Tubing volume 0 = 0 mls

28 Total volume to be purged (mls): 1x 0 ☐ 1.5x 0 ☐ 2x 0 ☐ 3x 0 ☐

29 Purging pump #: — Purging flow rate: ml/min Purging time: mins seconds

30 Gauge reading: < 5 inHg ☒ Other: _____ Comments: _____

31 Syringe Purging: NA ☒ Dedicated Syringe ☐ Re-used Suringe ☐ Volume _____

32 Is there condensation evident in the sampling train? Y ☐ N ☒

33 Post sample collection - Is there condensation evident in the sampling container? Y ☐ N ☒

34 **Leak Test** Y ☒ N ☐ If Yes, fill in the blanks blow:

35 Tracer compound: _____ Trade name: _____ Tested before use: Y ☒ N ☐

36 Locations applied: Probe top ☐ Sampling train: ☒ Other: _____

37 **Field Duplicate** Y ☐ N ☒ If Yes, fill in the blanks blow:

38 Used the Duplicate Splitter? Y ☐ N ☒ If no, describe the procedure: _____

Other Information

39 Identify the equipment and method used to install probe and collect sample SHOP VACUUM

40 What was the equilibration time between probe installation and withdrawal of any soil vapor? —

41 Sample storage /shipping temperature 70 F

42 Sample storage /shipping container Plastic Tote

43 Sample transportation mode(s) COMPANY VEHICLE

44 Was an equipment blank taken? Y ☐ N ☒ Was Tank air or Nitrogen used? _____

Note: Ambient air should not be used

45 Was a field blank taken? Y ☐ N ☒

46 Was a background (upwind ambient) san Y ☐ N ☒

47 Are there any potential VOC sources other than the identified release nearby?

Groundwater/active fueling station/ dry cleaners/ dry wells/ other - please describe —

48 **Well (Probe) Inspection Note:**

Arizona Department of Environmental Quality QA/QC checklist for Soil Vapor Sampling

Sampling Company

1 Date: 3.6.15 Start time: 1402 1425 ☐ ☐

2 Company Name: AMEC F/W Sampler's Name: ERIC MILLER

Consulting Firm:

3 Company Name: AMEC F/W Project Name: BROADWAY PANTANO

4 Project Manager: ALEX YIANNAKAKIS Project Number: 14-2014-2029

Well's Information

5 Location: BROADWAY PANTANO Client ID: BSAP-2-300 Permanent ☒ Temporary ☐

6 Address: TUCSON, AZ

7 ADEQ File Identification #(s) —

8 Describe the probe location: BP

9 Probe Depth: 300ft ~~inch~~ Probe ID: 1 inch **Probe volume: 0 inch^3 (0) mls**

10 Probe type: Tygon ☐ Teflon ☐ Vinyl ☐ PVC ☐ Metal ☐ Other: PVC

11 Is probe tested in the lab before installed? Y ☐ N ☐ NA ☒ Don't know ☐

12 Comments:

Weather Conditions

13 Temperature: 70 C^0 ☐ F^0 ☒

14 Has there been significant rain or snow recent to the sampling event? Y ☐ N ☒

15 If Yes to Question 14 Date _____ Amount of Precipitate _____ inches

Soil Conditions Information

16 Was a soil sample collected and analyzed for volumetric moisture content? Y ☐ N ☒ attach results if yes

If yes, attach results

If no, is the apparent moisture content dry ☐ moist ☒ saturated ☐

17 What is soil type encountered at sample location? NA

18 Was sample collected beneath a surface cover (e.g. parking lot, sidewalk, road, building, other)? Y ☐ N ☐

19 Describe the surface cover , if any CONCRETE PAD ON UNDEVELOPED LOT

20 Was the sample collected near a subsurface conduit? Y ☐ N ☒

Describe subsurface conduit, if any

Sampling Train

21 Sample container: Canister : 1.0 L ☒ 6.0 L ☐ Silanized: Y ☐ N ☒

Other:

Tedlar bag: Y ☐ N ☒ Gas tight syringe Y ☐ N ☒

22 Flow restrictor: On 1000 mL/min ☐ 500 mL/min ☐ 200 mL/min ☒ Other:

One min = Taking one minute to fill one liter canister.

23 Tubing type: Tygon ☐ Teflon ☐ Vinyl ☐ PVC ☐ Other: NA

24 Tubing used from probe top to canister: Length: 0 inch ID 0 inch

25 **Tubing volume: 0 inch^3 (0) mls**

26 Are all parts of Sampling Train tested in the lab before sampling? Y ☒ N ☐

Probe Purging Before Sampling

27 Total volume: probe(v) + tubing(v) = Probe volume 0 + Tubing volume 0 = 0 mls

28 Total volume to be purged (mls): 1x 0 ☐ 1.5x 0 ☐ 2x 0 ☐ 3x 0 ☐

29 Purging pump #: — Purging flow rate: ml/min Purging time: mins seconds

30 Gauge reading: < 5 inHg ☒ Other: _____ Comments: _____

31 Syringe Purging: NA ☒ Dedicated Syringe ☐ Re-used Suringe ☐ Volume _____

32 Is there condensation evident in the sampling train? Y ☐ N ☒

33 Post sample collection - Is there condensation evident in the sampling container? Y ☐ N ☒

34 **Leak Test** Y ☒ N ☐ If Yes, fill in the blanks blow:

35 Tracer compound: _____ Trade name: _____ Tested before use: Y ☒ N ☐

36 Locations applied: Probe top ☐ Sampling train: ☒ Other: _____

37 **Field Duplicate** Y ☐ N ☒ If Yes, fill in the blanks blow:

38 Used the Duplicate Splitter? Y ☐ N ☒ If no, describe the procedure: _____

Other Information

39 Identify the equipment and method used to install probe and collect sample SHOP VACUUM

40 What was the equilibration time between probe installation and withdrawal of any soil vapor? —

41 Sample storage /shipping temperature 70 F

42 Sample storage /shipping container Plastic Tote

43 Sample transportation mode(s) COMPANY VEHICLE

44 Was an equipment blank taken? Y ☐ N ☒ Was Tank air or Nitrogen used? _____

Note: Ambient air should not be used

45 Was a field blank taken? Y ☐ N ☒

46 Was a background (upwind ambient) san Y ☐ N ☒

47 Are there any potential VOC sources other than the identified release nearby?

Groundwater/active fueling station/ dry cleaners/ dry wells/ other - please describe —

48 **Well (Probe) Inspection Note:**

Arizona Department of Environmental Quality QA/QC checklist for Soil Vapor Sampling

Sampling Company

1 Date: 3·6·15 Start time: 1430 1450 ☐ ☐

2 Company Name: AMEC F/W Sampler's Name: ERIC MILLER

Consulting Firm:

3 Company Name: AMEC F/W Project Name: BROADWAY PANTANO

4 Project Manager: ALEX YIANNAKAKIS Project Number: 14-2014-2029

Well's Information

5 Location: BROADWAY PANTANO Client ID: BSAP-2-350 Permanent ☒ Temporary ☐

6 Address: TUCSON, AZ

7 ADEQ File Identification #(s) —

8 Describe the probe location: BP

9 Probe Depth: 350 FT ~~inch~~ Probe ID: 1 inch **Probe volume: 0 inch^3 (0) mls**

10 Probe type: Tygon ☐ Teflon ☐ Vinyl ☐ PVC ☐ Metal ☐ Other: PVC

11 Is probe tested in the lab before installed? Y ☐ N ☐ NA ☒ Don't know ☐

12 Comments:

Weather Conditions

13 Temperature: 70 C^0 ☐ F^0 ☒

14 Has there been significant rain or snow recent to the sampling event? Y ☐ N ☒

15 If Yes to Question 14 Date _____ Amount of Precipitate _____ inches

Soil Conditions Information

16 Was a soil sample collected and analyzed for volumetric moisture content? Y ☐ N ☒ attach results if yes

If yes, attach results

If no, is the apparent moisture content dry ☐ moist ☒ saturated ☐

17 What is soil type encountered at sample location? NA

18 Was sample collected beneath a surface cover (e.g. parking lot, sidewalk, road, building, other)? Y ☐ N ☐

19 Describe the surface cover , if any CONCRETE PAD ON UNDEVELOPED LOT

20 Was the sample collected near a subsurface conduit? Y ☐ N ☒

Describe subsurface conduit, if any

Sampling Train

21 Sample container: Canister : 1.0 L ☒ 6.0 L ☐ Silanized: Y ☐ N ☒

Other:

Tedlar bag: Y ☐ N ☒ Gas tight syringe Y ☐ N ☒

22 Flow restrictor: On 1000 mL/min ☐ 500 mL/min ☐ 200 mL/min ☒ Other:

One min = Taking one minute to fill one liter canister.

23 Tubing type: Tygon ☐ Teflon ☐ Vinyl ☐ PVC ☐ Other: NA

24 Tubing used from probe top to canister: Length: 0 inch ID 0 inch

25 **Tubing volume: 0 inch^3 (0) mls**

26 Are all parts of Sampling Train tested in the lab before sampling? Y ☒ N ☐

Probe Purging Before Sampling

27 Total volume: probe(v) + tubing(v) = Probe volume 0 + Tubing volume 0 = 0 mls

28 Total volume to be purged (mls): 1x 0 ☐ 1.5x 0 ☐ 2x 0 ☐ 3x 0 ☐

29 Purging pump #: — | Purging flow rate: ml/min Purging time: mins seconds

30 Gauge reading: < 5 inHg ☒ Other: _____ Comments: _____

31 Syringe Purging: NA ☒ Dedicated Syringe ☐ Re-used Suringe ☐ Volume _____

32 Is there condensation evident in the sampling train? Y ☐ N ☒

33 Post sample collection - Is there condensation evident in the sampling container? Y ☐ N ☒

34 **Leak Test** Y ☒ N ☐ If Yes, fill in the blanks blow:

35 Tracer compound: _____ Trade name: _____ Tested before use: Y ☒ N ☐

36 Locations applied: Probe top ☐ Sampling train: ☒ Other: _____

37 **Field Duplicate** Y ☒ N ☐ If Yes, fill in the blanks blow:

38 Used the Duplicate Splitter? Y ☒ N ☐ If no, describe the procedure: _____

Other Information

39 Identify the equipment and method used to install probe and collect sample SHOP VACUUM

40 What was the equilibration time between probe installation and withdrawal of any soil vapor? —

41 Sample storage /shipping temperature 70 F

42 Sample storage /shipping container Plastic Tote

43 Sample transportation mode(s) COMPANY VEHICLE

44 Was an equipment blank taken? Y ☐ N ☒ Was Tank air or Nitrogen used? _____

Note: Ambient air should not be used

45 Was a field blank taken? Y ☐ N ☒

46 Was a background (upwind ambient) san Y ☐ N ☒

47 Are there any potential VOC sources other than the identified release nearby?

Groundwater/active fueling station/ dry cleaners/ dry wells/ other - please describe —

48 **Well (Probe) Inspection Note:**

Arizona Department of Environmental Quality QA/QC checklist for Soil Vapor Sampling

Sampling Company

1 Date: 3-10-15 Start time: 1220 1240 ☐ ☐

2 Company Name: AMEC F/W Sampler's Name: ERIC MILLER

Consulting Firm:

3 Company Name: AMEC F/W Project Name: BROADWAY PANTANO

4 Project Manager: ALEX YIANNAKAKIS Project Number: 14-2014-2029

Well's Information

5 Location: BROADWAY PANTANO Client ID: BSAP-3-50 Permanent ☒ Temporary ☐

6 Address: TUCSON, AZ

7 ADEQ File Identification #(s) —

8 Describe the probe location: BP

9 Probe Depth: 50 FT ~~inch~~ Probe ID: 1 inch **Probe volume: 0 inch^3 (0) mls**

10 Probe type: Tygon ☐ Teflon ☐ Vinyl ☐ PVC ☐ Metal ☐ Other: PVC

11 Is probe tested in the lab before installed? Y ☐ N ☐ NA ☒ Don't know ☐

12 Comments:

Weather Conditions

13 Temperature: 70 C^0 ☐ F^0 ☒

14 Has there been significant rain or snow recent to the sampling event? Y ☐ N ☒

15 If Yes to Question 14 Date _____ Amount of Precipitate _____ inches

Soil Conditions Information

16 Was a soil sample collected and analyzed for volumetric moisture content? Y ☐ N ☒ attach results if yes

If yes, attach results

If no, is the apparent moisture content dry ☐ moist ☒ saturated ☐

17 What is soil type encountered at sample location? NA

18 Was sample collected beneath a surface cover (e.g. parking lot, sidewalk, road, building, other)? Y ☐ N ☐

19 Describe the surface cover , if any CONCRETE PAD ON UNDEVELOPED LOT

20 Was the sample collected near a subsurface conduit? Y ☐ N ☒

Describe subsurface conduit, if any

Sampling Train

21 Sample container: Canister : 1.0 L ☒ 6.0 L ☐ Silanized: Y ☐ N ☒

Other:

Tedlar bag: Y ☐ N ☒ Gas tight syringe Y ☐ N ☒

22 Flow restrictor: On 1000 mL/min ☐ 500 mL/min ☐ 200 mL/min ☒ Other:

One min = Taking one minute to fill one liter canister.

23 Tubing type: Tygon ☐ Teflon ☐ Vinyl ☐ PVC ☐ Other: NA

24 Tubing used from probe top to canister: Length: 0 inch ID 0 inch

25 **Tubing volume: 0 inch^3 (0) mls**

26 Are all parts of Sampling Train tested in the lab before sampling? Y ☒ N ☐

Probe Purging Before Sampling

27 Total volume: probe(v) + tubing(v) = Probe volume 0 + Tubing volume 0 = 0 mls

28 Total volume to be purged (mls): 1x 0 ☐ 1.5x 0 ☐ 2x 0 ☐ 3x 0 ☐

29 Purging pump #: — Purging flow rate: ml/min Purging time: mins seconds

30 Gauge reading: < 5 inHg ☒ Other: _____ Comments: _____

31 Syringe Purging: NA ☒ Dedicated Syringe ☐ Re-used Suringe ☐ Volume _____

32 Is there condensation evident in the sampling train? Y ☐ N ☒

33 Post sample collection - Is there condensation evident in the sampling container? Y ☐ N ☒

34 **Leak Test** Y ☒ N ☐ If Yes, fill in the blanks blow:

35 Tracer compound: _____ Trade name: _____ Tested before use: Y ☒ N ☐

36 Locations applied: Probe top ☐ Sampling train: ☒ Other: _____

37 **Field Duplicate** Y ☐ N ☒ If Yes, fill in the blanks blow:

38 Used the Duplicate Splitter? Y ☐ N ☒ If no, describe the procedure: _____

Other Information

39 Identify the equipment and method used to install probe and collect sample SHOP VACUUM

40 What was the equilibration time between probe installation and withdrawal of any soil vapor? —

41 Sample storage /shipping temperature 70 F

42 Sample storage /shipping container Plastic Tote

43 Sample transportation mode(s) COMPANY VEHICLE

44 Was an equipment blank taken? Y ☐ N ☒ Was Tank air or Nitrogen used? _____

Note: Ambient air should not be used

45 Was a field blank taken? Y ☐ N ☒

46 Was a background (upwind ambient) san Y ☐ N ☒

47 Are there any potential VOC sources other than the identified release nearby?

Groundwater/active fueling station/ dry cleaners/ dry wells/ other - please describe —

48 **Well (Probe) Inspection Note:**

Arizona Department of Environmental Quality QA/QC checklist for Soil Vapor Sampling

Sampling Company

1 Date: 3.10.15 Start time: 1245 1305 ☐ ☐

2 Company Name: AMEC F/W Sampler's Name: ERIC MILLER

Consulting Firm:

3 Company Name: AMEC F/W Project Name: BROADWAY PANTANO

4 Project Manager: ALEX YIANNAKAKIS Project Number: 14-2014-2029

Well's Information

5 Location: BROADWAY PANTANO Client ID: BSAP-3-100 Permanent ☒ Temporary ☐

6 Address: TUCSON, AZ

7 ADEQ File Identification #(s) —

8 Describe the probe location: B.P

9 Probe Depth: 100FT ~~inch~~ Probe ID: 1 inch **Probe volume: 0 inch^3 (0) mls**

10 Probe type: Tygon ☐ Teflon ☐ Vinyl ☐ PVC ☐ Metal ☐ Other: PVC

11 Is probe tested in the lab before installed? Y ☐ N ☐ NA ☒ Don't know ☐

12 Comments:

Weather Conditions

13 Temperature: 70 C^0 ☐ F^0 ☒

14 Has there been significant rain or snow recent to the sampling event? Y ☐ N ☒

15 If Yes to Question 14 Date _____ Amount of Precipitate _____ inches

Soil Conditions Information

16 Was a soil sample collected and analyzed for volumetric moisture content? Y ☐ N ☒ attach results if yes

If yes, attach results

If no, is the apparent moisture content dry ☐ moist ☒ saturated ☐

17 What is soil type encountered at sample location? NA

18 Was sample collected beneath a surface cover (e.g. parking lot, sidewalk, road, building, other)? Y ☐ N ☐

19 Describe the surface cover , if any CONCRETE PAD ON UNDEVELOPED LOT

20 Was the sample collected near a subsurface conduit? Y ☐ N ☒

Describe subsurface conduit, if any

Sampling Train

21 Sample container: Canister : 1.0 L ☒ 6.0 L ☐ Silanized: Y ☐ N ☒

Other:

Tedlar bag: Y ☐ N ☒ Gas tight syringe Y ☐ N ☒

22 Flow restrictor: On 1000 mL/min ☐ 500 mL/min ☐ 200 mL/min ☒ Other:

One min = Taking one minute to fill one liter canister.

23 Tubing type: Tygon ☐ Teflon ☐ Vinyl ☐ PVC ☐ Other: NA

24 Tubing used from probe top to canister: Length: 0 inch ID 0 inch

25 **Tubing volume: 0 inch^3 (0) mls**

26 Are all parts of Sampling Train tested in the lab before sampling? Y ☒ N ☐

Probe Purging Before Sampling

27 Total volume: probe(v) + tubing(v) = Probe volume 0 + Tubing volume 0 = 0 mls

28 Total volume to be purged (mls): 1x 0 ☐ 1.5x 0 ☐ 2x 0 ☐ 3x 0 ☐

29 Purging pump #: — Purging flow rate: ml/min Purging time: mins seconds

30 Gauge reading: < 5 inHg ☒ Other: _____ Comments: _____

31 Syringe Purging: NA ☒ Dedicated Syringe ☐ Re-used Suringe ☐ Volume _____

32 Is there condensation evident in the sampling train? Y ☐ N ☒

33 Post sample collection - Is there condensation evident in the sampling container? Y ☐ N ☒

34 **Leak Test** Y ☒ N ☐ If Yes, fill in the blanks blow:

35 Tracer compound: _____ Trade name: _____ Tested before use: Y ☒ N ☐

36 Locations applied: Probe top ☐ Sampling train: ☒ Other: _____

37 **Field Duplicate** Y ☐ N ☒ If Yes, fill in the blanks blow:

38 Used the Duplicate Splitter? Y ☐ N ☒ If no, describe the procedure: _____

Other Information

39 Identify the equipment and method used to install probe and collect sample SHOP VACUUM

40 What was the equilibration time between probe installation and withdrawal of any soil vapor? —

41 Sample storage /shipping temperature 70 F

42 Sample storage /shipping container Plastic Tote

43 Sample transportation mode(s) COMPANY VEHICLE

44 Was an equipment blank taken? Y ☐ N ☒ Was Tank air or Nitrogen used? _____

Note: Ambient air should not be used

45 Was a field blank taken? Y ☐ N ☒

46 Was a background (upwind ambient) san Y ☐ N ☒

47 Are there any potential VOC sources other than the identified release nearby?

Groundwater/active fueling station/ dry cleaners/ dry wells/ other - please describe —

48 **Well (Probe) Inspection Note:**

Arizona Department of Environmental Quality QA/QC checklist for Soil Vapor Sampling

Sampling Company

1 Date: 3.10.15 Start time: 1316 1332 ☐ ☐

2 Company Name: AMEC F/W Sampler's Name: ERIC MILLER

Consulting Firm:

3 Company Name: AMEC F/W Project Name: BROADWAY PANTANO

4 Project Manager: ALEX YIANNAKAKIS Project Number: 14-2014-2029

Well's Information

5 Location: BROADWAY PANTANO Client ID: BSDP-3-150 Permanent ☒ Temporary ☐

6 Address: TUCSON, AZ

7 ADEQ File Identification #(s) —

8 Describe the probe location: B.P

9 Probe Depth: 150 FT ~~inch~~ Probe ID: 1 inch **Probe volume: 0 inch^3 (0) mls**

10 Probe type: Tygon ☐ Teflon ☐ Vinyl ☐ PVC ☐ Metal ☐ Other: PVC

11 Is probe tested in the lab before installed? Y ☐ N ☐ NA ☒ Don't know ☐

12 Comments:

Weather Conditions

13 Temperature: 70 C^0 ☐ F^0 ☒

14 Has there been significant rain or snow recent to the sampling event? Y ☐ N ☒

15 If Yes to Question 14 Date _____ Amount of Precipitate _____ inches

Soil Conditions Information

16 Was a soil sample collected and analyzed for volumetric moisture content? Y ☐ N ☒ attach results if yes

If yes, attach results

If no, is the apparent moisture content dry ☐ moist ☒ saturated ☐

17 What is soil type encountered at sample location? NA

18 Was sample collected beneath a surface cover (e.g. parking lot, sidewalk, road, building, other)? Y ☐ N ☐

19 Describe the surface cover , if any CONCRETE PAD ON UNDEVELOPED LOT

20 Was the sample collected near a subsurface conduit? Y ☐ N ☒

Describe subsurface conduit, if any

Sampling Train

21 Sample container: Canister : 1.0 L ☒ 6.0 L ☐ Silanized: Y ☐ N ☒

Other:

Tedlar bag: Y ☐ N ☒ Gas tight syringe Y ☐ N ☒

22 Flow restrictor: On 1000 mL/min ☐ 500 mL/min ☐ 200 mL/min ☒ Other:

One min = Taking one minute to fill one liter canister.

23 Tubing type: Tygon ☐ Teflon ☐ Vinyl ☐ PVC ☐ Other: NA

24 Tubing used from probe top to canister: Length: 0 inch ID 0 inch

25 **Tubing volume: 0 inch^3 (0) mls**

26 Are all parts of Sampling Train tested in the lab before sampling? Y ☒ N ☐

Probe Purging Before Sampling

27 Total volume: probe(v) + tubing(v) = Probe volume 0 + Tubing volume 0 = 0 mls

28 Total volume to be purged (mls): 1x 0 ☐ 1.5x 0 ☐ 2x 0 ☐ 3x 0 ☐

29 Purging pump #: — Purging flow rate: ml/min Purging time: mins seconds

30 Gauge reading: < 5 inHg ☒ Other: _____ Comments: _____

31 Syringe Purging: NA ☒ Dedicated Syringe ☐ Re-used Suringe ☐ Volume _____

32 Is there condensation evident in the sampling train? Y ☐ N ☒

33 Post sample collection - Is there condensation evident in the sampling container? Y ☐ N ☒

34 **Leak Test** Y ☒ N ☐ If Yes, fill in the blanks blow:

35 Tracer compound: _____ Trade name: _____ Tested before use: Y ☒ N ☐

36 Locations applied: Probe top ☐ Sampling train: ☒ Other: _____

37 **Field Duplicate** Y ☐ N ☒ If Yes, fill in the blanks blow:

38 Used the Duplicate Splitter? Y ☐ N ☒ If no, describe the procedure: _____

Other Information

39 Identify the equipment and method used to install probe and collect sample SHOP VACUUM

40 What was the equilibration time between probe installation and withdrawal of any soil vapor? —

41 Sample storage /shipping temperature 70 F

42 Sample storage /shipping container Plastic Tote

43 Sample transportation mode(s) COMPANY VEHICLE

44 Was an equipment blank taken? Y ☐ N ☒ Was Tank air or Nitrogen used? _____

Note: Ambient air should not be used

45 Was a field blank taken? Y ☐ N ☒

46 Was a background (upwind ambient) san Y ☐ N ☒

47 Are there any potential VOC sources other than the identified release nearby?

Groundwater/active fueling station/ dry cleaners/ dry wells/ other - please describe —

48 **Well (Probe) Inspection Note:**

Arizona Department of Environmental Quality QA/QC checklist for Soil Vapor Sampling

Sampling Company

1 Date: 3.10.15 Start time: 1346 1405 ☐ ☐

2 Company Name: AMEC F/W Sampler's Name: ERIC MILLER

Consulting Firm:

3 Company Name: AMEC F/W Project Name: BROADWAY PANTANO

4 Project Manager: ALEX YIANNAKAKIS Project Number: 14-2014-2029

Well's Information

5 Location: BROADWAY PANTANO Client ID: BSAP-4-48 Permanent ☒ Temporary ☐

6 Address: TUCSON, AZ

7 ADEQ File Identification #(s) —

8 Describe the probe location: B.P

9 Probe Depth: 48 FT ~~inch~~ Probe ID: 1 inch **Probe volume: 0 inch^3 (0) mls**

10 Probe type: Tygon ☐ Teflon ☐ Vinyl ☐ PVC ☐ Metal ☐ Other: PVC

11 Is probe tested in the lab before installed? Y ☐ N ☐ NA ☒ Don't know ☐

12 Comments:

Weather Conditions

13 Temperature: 70 C^0 ☐ F^0 ☒

14 Has there been significant rain or snow recent to the sampling event? Y ☐ N ☒

15 If Yes to Question 14 Date _____ Amount of Precipitate _____ inches

Soil Conditions Information

16 Was a soil sample collected and analyzed for volumetric moisture content? Y ☐ N ☒ attach results if yes

If yes, attach results

If no, is the apparent moisture content dry ☐ moist ☒ saturated ☐

17 What is soil type encountered at sample location? NA

18 Was sample collected beneath a surface cover (e.g. parking lot, sidewalk, road, building, other)? Y ☐ N ☐

19 Describe the surface cover , if any CONCRETE PAD ON UNDEVELOPED LOT

20 Was the sample collected near a subsurface conduit? Y ☐ N ☒

Describe subsurface conduit, if any

Sampling Train

21 Sample container: Canister : 1.0 L ☒ 6.0 L ☐ Silanized: Y ☐ N ☒

Other:

Tedlar bag: Y ☐ N ☒ Gas tight syringe Y ☐ N ☒

22 Flow restrictor: On 1000 mL/min ☐ 500 mL/min ☐ 200 mL/min ☒ Other:

One min = Taking one minute to fill one liter canister.

23 Tubing type: Tygon ☐ Teflon ☐ Vinyl ☐ PVC ☐ Other: NA

24 Tubing used from probe top to canister: Length: 0 inch ID 0 inch

25 **Tubing volume: 0 inch^3 (0) mls**

26 Are all parts of Sampling Train tested in the lab before sampling? Y ☒ N ☐

Probe Purging Before Sampling

27 Total volume: probe(v) + tubing(v) = Probe volume 0 + Tubing volume 0 = 0 mls

28 Total volume to be purged (mls): 1x 0 ☐ 1.5x 0 ☐ 2x 0 ☐ 3x 0 ☐

29 Purging pump #: — Purging flow rate: ml/min Purging time: mins seconds

30 Gauge reading: < 5 inHg ☒ Other: _____ Comments: _____

31 Syringe Purging: NA ☒ Dedicated Syringe ☐ Re-used Suringe ☐ Volume _____

32 Is there condensation evident in the sampling train? Y ☐ N ☒

33 Post sample collection - Is there condensation evident in the sampling container? Y ☐ N ☒

34 **Leak Test** Y ☒ N ☐ If Yes, fill in the blanks blow:

35 Tracer compound: _____ Trade name: _____ Tested before use: Y ☒ N ☐

36 Locations applied: Probe top ☐ Sampling train: ☒ Other: _____

37 **Field Duplicate** Y ☐ N ☒ If Yes, fill in the blanks blow:

38 Used the Duplicate Splitter? Y ☐ N ☒ If no, describe the procedure: _____

Other Information

39 Identify the equipment and method used to install probe and collect sample SHOP VACUUM

40 What was the equilibration time between probe installation and withdrawal of any soil vapor? —

41 Sample storage /shipping temperature 70 F

42 Sample storage /shipping container Plastic Tote

43 Sample transportation mode(s) COMPANY VEHICLE

44 Was an equipment blank taken? Y ☐ N ☒ Was Tank air or Nitrogen used? _____

Note: Ambient air should not be used

45 Was a field blank taken? Y ☐ N ☒

46 Was a background (upwind ambient) san Y ☐ N ☒

47 Are there any potential VOC sources other than the identified release nearby?

Groundwater/active fueling station/ dry cleaners/ dry wells/ other - please describe —

48 **Well (Probe) Inspection Note:**

Arizona Department of Environmental Quality QA/QC checklist for Soil Vapor Sampling

Sampling Company

1 Date: 3.10.15 Start time: 1419 1438 ☐ ☐

2 Company Name: AMEC F/W Sampler's Name: ERIC MILLER

Consulting Firm:

3 Company Name: AMEC F/W Project Name: BROADWAY PANTANO

4 Project Manager: ALEX YIANNAKAKIS Project Number: 14-2014-2029

Well's Information

5 Location: BROADWAY PANTANO Client ID: BSAP-4-100 Permanent ☒ Temporary ☐

6 Address: TUCSON, AZ

7 ADEQ File Identification #(s) —

8 Describe the probe location: B.P

9 Probe Depth: 100 ~~ft~~ ~~inch~~ Probe ID: 1 inch **Probe volume: 0 inch^3 (0) mls**

10 Probe type: Tygon ☐ Teflon ☐ Vinyl ☐ PVC ☐ Metal ☐ Other: PVC

11 Is probe tested in the lab before installed? Y ☐ N ☐ NA ☒ Don't know ☐

12 Comments:

Weather Conditions

13 Temperature: 70 C^0 ☐ F^0 ☒

14 Has there been significant rain or snow recent to the sampling event? Y ☐ N ☒

15 If Yes to Question 14 Date _____ Amount of Precipitate _____ inches

Soil Conditions Information

16 Was a soil sample collected and analyzed for volumetric moisture content? Y ☐ N ☒ attach results if yes

If yes, attach results

If no, is the apparent moisture content dry ☐ moist ☒ saturated ☐

17 What is soil type encountered at sample location? NA

18 Was sample collected beneath a surface cover (e.g. parking lot, sidewalk, road, building, other)? Y ☐ N ☐

19 Describe the surface cover , if any CONCRETE PAD ON UNDEVELOPED LOT

20 Was the sample collected near a subsurface conduit? Y ☐ N ☒

Describe subsurface conduit, if any

Sampling Train

21 Sample container: Canister : 1.0 L ☒ 6.0 L ☐ Silanized: Y ☐ N ☒

Other:

Tedlar bag: Y ☐ N ☒ Gas tight syringe Y ☐ N ☒

22 Flow restrictor: On 1000 mL/min ☐ 500 mL/min ☐ 200 mL/min ☒ Other:

One min = Taking one minute to fill one liter canister.

23 Tubing type: Tygon ☐ Teflon ☐ Vinyl ☐ PVC ☐ Other: NA

24 Tubing used from probe top to canister: Length: 0 inch ID 0 inch

25 **Tubing volume: 0 inch^3 (0) mls**

26 Are all parts of Sampling Train tested in the lab before sampling? Y ☒ N ☐

Probe Purging Before Sampling

27 Total volume: probe(v) + tubing(v) = Probe volume 0 + Tubing volume 0 = 0 mls

28 Total volume to be purged (mls): 1x 0 ☐ 1.5x 0 ☐ 2x 0 ☐ 3x 0 ☐

29 Purging pump #: — | Purging flow rate: ml/min Purging time: mins seconds

30 Gauge reading: < 5 inHg ☒ Other: _____ Comments: _____

31 Syringe Purging: NA ☒ Dedicated Syringe ☐ Re-used Suringe ☐ Volume _____

32 Is there condensation evident in the sampling train? Y ☐ N ☒

33 Post sample collection - Is there condensation evident in the sampling container? Y ☐ N ☒

34 **Leak Test** Y ☒ N ☐ If Yes, fill in the blanks blow:

35 Tracer compound: _____ Trade name: _____ Tested before use: Y ☒ N ☐

36 Locations applied: Probe top ☐ Sampling train: ☒ Other: _____

37 **Field Duplicate** Y ☐ N ☒ If Yes, fill in the blanks blow:

38 Used the Duplicate Splitter? Y ☐ N ☒ If no, describe the procedure: _____

Other Information

39 Identify the equipment and method used to install probe and collect sample SHOP VACUUM

40 What was the equilibration time between probe installation and withdrawal of any soil vapor? —

41 Sample storage /shipping temperature 70 F

42 Sample storage /shipping container Plastic Tote

43 Sample transportation mode(s) COMPANY VEHICLE

44 Was an equipment blank taken? Y ☐ N ☒ Was Tank air or Nitrogen used? _____

Note: Ambient air should not be used

45 Was a field blank taken? Y ☐ N ☒

46 Was a background (upwind ambient) san Y ☐ N ☒

47 Are there any potential VOC sources other than the identified release nearby?

Groundwater/active fueling station/ dry cleaners/ dry wells/ other - please describe —

48 **Well (Probe) Inspection Note:**

Arizona Department of Environmental Quality QA/QC checklist for Soil Vapor Sampling

Sampling Company

1 Date: 3.16.15 Start time: 1445 1508 ☐ ☐

2 Company Name: AMEC F/W Sampler's Name: ERIC MILLER

Consulting Firm:

3 Company Name: AMEC F/W Project Name: BROADWAY PANTANO

4 Project Manager: ALEX YIANNAKAKIS Project Number: 14-2014-2029

Well's Information

5 Location: BROADWAY PANTANO Client ID: BSAP-4-150 Permanent ☒ Temporary ☐

6 Address: TUCSON, AZ

7 ADEQ File Identification #(s) —

8 Describe the probe location: B.P

9 Probe Depth: 150 FT ~~inch~~ Probe ID: 1 inch **Probe volume: 0 inch^3 (0) mls**

10 Probe type: Tygon ☐ Teflon ☐ Vinyl ☐ PVC ☐ Metal ☐ Other: PVC

11 Is probe tested in the lab before installed? Y ☐ N ☐ NA ☒ Don't know ☐

12 Comments:

Weather Conditions

13 Temperature: 70 C^0 ☐ F^0 ☒

14 Has there been significant rain or snow recent to the sampling event? Y ☐ N ☒

15 If Yes to Question 14 Date _____ Amount of Precipitate _____ inches

Soil Conditions Information

16 Was a soil sample collected and analyzed for volumetric moisture content? Y ☐ N ☒ attach results if yes

If yes, attach results

If no, is the apparent moisture content dry ☐ moist ☒ saturated ☐

17 What is soil type encountered at sample location? NA

18 Was sample collected beneath a surface cover (e.g. parking lot, sidewalk, road, building, other)? Y ☐ N ☐

19 Describe the surface cover , if any CONCRETE PAD ON UNDEVELOPED LOT

20 Was the sample collected near a subsurface conduit? Y ☐ N ☒

Describe subsurface conduit, if any

Sampling Train

21 Sample container: Canister : 1.0 L ☒ 6.0 L ☐ Silanized: Y ☐ N ☒

Other:

Tedlar bag: Y ☐ N ☒ Gas tight syringe Y ☐ N ☒

22 Flow restrictor: On 1000 mL/min ☐ 500 mL/min ☐ 200 mL/min ☒ Other:

One min = Taking one minute to fill one liter canister.

23 Tubing type: Tygon ☐ Teflon ☐ Vinyl ☐ PVC ☐ Other: NA

24 Tubing used from probe top to canister: Length: 0 inch ID 0 inch

25 **Tubing volume: 0 inch^3 (0) mls**

26 Are all parts of Sampling Train tested in the lab before sampling? Y ☒ N ☐

Probe Purging Before Sampling

27 Total volume: probe(v) + tubing(v) = Probe volume 0 + Tubing volume 0 = 0 mls

28 Total volume to be purged (mls): 1x 0 ☐ 1.5x 0 ☐ 2x 0 ☐ 3x 0 ☐

29 Purging pump #: — Purging flow rate: ml/min Purging time: mins seconds

30 Gauge reading: < 5 inHg ☒ Other: _____ Comments: _____

31 Syringe Purging: NA ☒ Dedicated Syringe ☐ Re-used Suringe ☐ Volume _____

32 Is there condensation evident in the sampling train? Y ☐ N ☒

33 Post sample collection - Is there condensation evident in the sampling container? Y ☐ N ☒

34 **Leak Test** Y ☒ N ☐ If Yes, fill in the blanks blow:

35 Tracer compound: _____ Trade name: _____ Tested before use: Y ☒ N ☐

36 Locations applied: Probe top ☐ Sampling train: ☒ Other: _____

37 **Field Duplicate** Y ☐ N ☒ If Yes, fill in the blanks blow:

38 Used the Duplicate Splitter? Y ☐ N ☒ If no, describe the procedure: _____

Other Information

39 Identify the equipment and method used to install probe and collect sample SHOP VACUUM

40 What was the equilibration time between probe installation and withdrawal of any soil vapor? —

41 Sample storage /shipping temperature 70 F

42 Sample storage /shipping container Plastic Tote

43 Sample transportation mode(s) COMPANY VEHICLE

44 Was an equipment blank taken? Y ☐ N ☒ Was Tank air or Nitrogen used? _____

Note: Ambient air should not be used

45 Was a field blank taken? Y ☐ N ☒

46 Was a background (upwind ambient) san Y ☐ N ☒

47 Are there any potential VOC sources other than the identified release nearby?

Groundwater/active fueling station/ dry cleaners/ dry wells/ other - please describe —

48 **Well (Probe) Inspection Note:**

Arizona Department of Environmental Quality QA/QC checklist for Soil Vapor Sampling

Sampling Company

1 Date: 3-11-15 Start time: 733 755 ☐ ☐

2 Company Name: AMEC F/W Sampler's Name: ERIC MILLER

Consulting Firm:

3 Company Name: AMEC F/W Project Name: BROADWAY PANTANO

4 Project Manager: ALEX YIANNAKAKIS Project Number: 14-2014-2029

Well's Information

5 Location: BROADWAY PANTANO Client ID: BP-23-200 Permanent ☒ Temporary ☐

6 Address: TUCSON, AZ

7 ADEQ File Identification #(s) —

8 Describe the probe location: BP

9 Probe Depth: 200 FT ~~inch~~ Probe ID: 1 inch **Probe volume: 0 inch^3 (0) mls**

10 Probe type: Tygon ☐ Teflon ☐ Vinyl ☐ PVC ☐ Metal ☐ Other: PVC

11 Is probe tested in the lab before installed? Y ☐ N ☐ NA ☒ Don't know ☐

12 Comments:

Weather Conditions

13 Temperature: 70 C^0 ☐ F^0 ☒

14 Has there been significant rain or snow recent to the sampling event? Y ☐ N ☒

15 If Yes to Question 14 Date _____ Amount of Precipitate _____ inches

Soil Conditions Information

16 Was a soil sample collected and analyzed for volumetric moisture content? Y ☐ N ☒ attach results if yes

If yes, attach results

If no, is the apparent moisture content dry ☐ moist ☒ saturated ☐

17 What is soil type encountered at sample location? NA

18 Was sample collected beneath a surface cover (e.g. parking lot, sidewalk, road, building, other)? Y ☐ N ☐

19 Describe the surface cover , if any CONCRETE PAD ON UNDEVELOPED LOT

20 Was the sample collected near a subsurface conduit? Y ☐ N ☒

Describe subsurface conduit, if any

Sampling Train

21 Sample container: Canister : 1.0 L ☒ 6.0 L ☐ Silanized: Y ☐ N ☒

Other:

Tedlar bag: Y ☐ N ☒ Gas tight syringe Y ☐ N ☒

22 Flow restrictor: On 1000 mL/min ☐ 500 mL/min ☐ 200 mL/min ☒ Other:

One min = Taking one minute to fill one liter canister.

23 Tubing type: Tygon ☐ Teflon ☐ Vinyl ☐ PVC ☐ Other: NA

24 Tubing used from probe top to canister: Length: 0 inch ID 0 inch

25 **Tubing volume: 0 inch^3 (0) mls**

26 Are all parts of Sampling Train tested in the lab before sampling? Y ☒ N ☐

Probe Purging Before Sampling

27 Total volume: probe(v) + tubing(v) = Probe volume 0 + Tubing volume 0 = 0 mls

28 Total volume to be purged (mls): 1x 0 ☐ 1.5x 0 ☐ 2x 0 ☐ 3x 0 ☐

29 Purging pump #: — Purging flow rate: ml/min Purging time: mins seconds

30 Gauge reading: < 5 inHg ☒ Other: _____ Comments: _____

31 Syringe Purging: NA ☒ Dedicated Syringe ☐ Re-used Suringe ☐ Volume _____

32 Is there condensation evident in the sampling train? Y ☐ N ☒

33 Post sample collection - Is there condensation evident in the sampling container? Y ☐ N ☒

34 **Leak Test** Y ☒ N ☐ If Yes, fill in the blanks blow:

35 Tracer compound: _____ Trade name: _____ Tested before use: Y ☒ N ☐

36 Locations applied: Probe top ☐ Sampling train: ☒ Other: _____

37 **Field Duplicate** Y ☐ N ☒ If Yes, fill in the blanks blow:

38 Used the Duplicate Splitter? Y ☐ N ☒ If no, describe the procedure: _____

Other Information

39 Identify the equipment and method used to install probe and collect sample SHOP VACUUM

40 What was the equilibration time between probe installation and withdrawal of any soil vapor? —

41 Sample storage /shipping temperature 70 F

42 Sample storage /shipping container Plastic Tote

43 Sample transportation mode(s) COMPANY VEHICLE

44 Was an equipment blank taken? Y ☐ N ☒ Was Tank air or Nitrogen used? _____

Note: Ambient air should not be used

45 Was a field blank taken? Y ☐ N ☒

46 Was a background (upwind ambient) san Y ☐ N ☒

47 Are there any potential VOC sources other than the identified release nearby?

Groundwater/active fueling station/ dry cleaners/ dry wells/ other - please describe —

48 **Well (Probe) Inspection Note:**

Arizona Department of Environmental Quality QA/QC checklist for Soil Vapor Sampling

Sampling Company

1 Date: 3.11.15 Start time: 802 825 ☐ ☐

2 Company Name: AMEC F/W Sampler's Name: ERIC MILLER

Consulting Firm:

3 Company Name: AMEC F/W Project Name: BROADWAY PANTANO

4 Project Manager: ALEX YIANNAKAKIS Project Number: 14-2014-2029

Well's Information

5 Location: BROADWAY PANTANO Client ID: BP-23-250 Permanent ☒ Temporary ☐

6 Address: TUCSON, AZ

7 ADEQ File Identification #(s) —

8 Describe the probe location: B.P

9 Probe Depth: 250 FT ~~inch~~ Probe ID: 1 inch **Probe volume: 0 inch^3 (0) mls**

10 Probe type: Tygon ☐ Teflon ☐ Vinyl ☐ PVC ☐ Metal ☐ Other: PVC

11 Is probe tested in the lab before installed? Y ☐ N ☐ NA ☒ Don't know ☐

12 Comments:

Weather Conditions

13 Temperature: 70 C^0 ☐ F^0 ☒

14 Has there been significant rain or snow recent to the sampling event? Y ☐ N ☒

15 If Yes to Question 14 Date _____ Amount of Precipitate _____ inches

Soil Conditions Information

16 Was a soil sample collected and analyzed for volumetric moisture content? Y ☐ N ☒ attach results if yes

If yes, attach results

If no, is the apparent moisture content dry ☐ moist ☒ saturated ☐

17 What is soil type encountered at sample location? NA

18 Was sample collected beneath a surface cover (e.g. parking lot, sidewalk, road, building, other)? Y ☐ N ☐

19 Describe the surface cover , if any CONCRETE PAD ON UNDEVELOPED LOT

20 Was the sample collected near a subsurface conduit? Y ☐ N ☒

Describe subsurface conduit, if any

Sampling Train

21 Sample container: Canister : 1.0 L ☒ 6.0 L ☐ Silanized: Y ☐ N ☒

Other:

Tedlar bag: Y ☐ N ☒ Gas tight syringe Y ☐ N ☒

22 Flow restrictor: On 1000 mL/min ☐ 500 mL/min ☐ 200 mL/min ☒ Other:

One min = Taking one minute to fill one liter canister.

23 Tubing type: Tygon ☐ Teflon ☐ Vinyl ☐ PVC ☐ Other: NA

24 Tubing used from probe top to canister: Length: 0 inch ID 0 inch

25 **Tubing volume: 0 inch^3 (0) mls**

26 Are all parts of Sampling Train tested in the lab before sampling? Y ☒ N ☐

Probe Purging Before Sampling

27 Total volume: probe(v) + tubing(v) = Probe volume 0 + Tubing volume 0 = 0 mls

28 Total volume to be purged (mls): 1x 0 ☐ 1.5x 0 ☐ 2x 0 ☐ 3x 0 ☐

29 Purging pump #: — Purging flow rate: ml/min Purging time: mins seconds

30 Gauge reading: < 5 inHg ☒ Other: _____ Comments: _____

31 Syringe Purging: NA ☒ Dedicated Syringe ☐ Re-used Suringe ☐ Volume _____

32 Is there condensation evident in the sampling train? Y ☐ N ☒

33 Post sample collection - Is there condensation evident in the sampling container? Y ☐ N ☒

34 **Leak Test** Y ☒ N ☐ If Yes, fill in the blanks blow:

35 Tracer compound: _____ Trade name: _____ Tested before use: Y ☒ N ☐

36 Locations applied: Probe top ☐ Sampling train: ☒ Other: _____

37 **Field Duplicate** Y ☐ N ☒ If Yes, fill in the blanks blow:

38 Used the Duplicate Splitter? Y ☐ N ☒ If no, describe the procedure: _____

Other Information

39 Identify the equipment and method used to install probe and collect sample SHOP VACUUM

40 What was the equilibration time between probe installation and withdrawal of any soil vapor? —

41 Sample storage /shipping temperature 70 F

42 Sample storage /shipping container Plastic Tote

43 Sample transportation mode(s) COMPANY VEHICLE

44 Was an equipment blank taken? Y ☐ N ☒ Was Tank air or Nitrogen used? _____

Note: Ambient air should not be used

45 Was a field blank taken? Y ☐ N ☒

46 Was a background (upwind ambient) san Y ☐ N ☒

47 Are there any potential VOC sources other than the identified release nearby?

Groundwater/active fueling station/ dry cleaners/ dry wells/ other - please describe —

48 **Well (Probe) Inspection Note:**

Arizona Department of Environmental Quality QA/QC checklist for Soil Vapor Sampling

Sampling Company

1 Date: 3-11-15 Start time: 831 855 ☐ ☐

2 Company Name: AMEC F/W Sampler's Name: ERIC MILLER

Consulting Firm:

3 Company Name: AMEC F/W Project Name: BROADWAY PANTANO

4 Project Manager: ALEX YIANNAKAKIS Project Number: 14-2014-2029

Well's Information

5 Location: BROADWAY PANTANO Client ID: BP-23-300 Permanent ☒ Temporary ☐

6 Address: TUCSON, AZ

7 ADEQ File Identification #(s) —

8 Describe the probe location: B.P

9 Probe Depth: 300 FT ~~inch~~ Probe ID: 1 inch **Probe volume: 0 inch^3 (0) mls**

10 Probe type: Tygon ☐ Teflon ☐ Vinyl ☐ PVC ☐ Metal ☐ Other: PVC

11 Is probe tested in the lab before installed? Y ☐ N ☐ NA ☒ Don't know ☐

12 Comments:

Weather Conditions

13 Temperature: 70 C^0 ☐ F^0 ☒

14 Has there been significant rain or snow recent to the sampling event? Y ☐ N ☒

15 If Yes to Question 14 Date _____ Amount of Precipitate _____ inches

Soil Conditions Information

16 Was a soil sample collected and analyzed for volumetric moisture content? Y ☐ N ☒ attach results if yes

If yes, attach results

If no, is the apparent moisture content dry ☐ moist ☒ saturated ☐

17 What is soil type encountered at sample location? NA

18 Was sample collected beneath a surface cover (e.g. parking lot, sidewalk, road, building, other)? Y ☐ N ☐

19 Describe the surface cover , if any CONCRETE PAD ON UNDEVELOPED LOT

20 Was the sample collected near a subsurface conduit? Y ☐ N ☒

Describe subsurface conduit, if any

Sampling Train

21 Sample container: Canister : 1.0 L ☒ 6.0 L ☐ Silanized: Y ☐ N ☒

Other:

Tedlar bag: Y ☐ N ☒ Gas tight syringe Y ☐ N ☒

22 Flow restrictor: On 1000 mL/min ☐ 500 mL/min ☐ 200 mL/min ☒ Other:

One min = Taking one minute to fill one liter canister.

23 Tubing type: Tygon ☐ Teflon ☐ Vinyl ☐ PVC ☐ Other: NA

24 Tubing used from probe top to canister: Length: 0 inch ID 0 inch

25 **Tubing volume: 0 inch^3 (0) mls**

26 Are all parts of Sampling Train tested in the lab before sampling? Y ☒ N ☐

Probe Purging Before Sampling

27 Total volume: probe(v) + tubing(v) = Probe volume 0 + Tubing volume 0 = 0 mls

28 Total volume to be purged (mls): 1x 0 ☐ 1.5x 0 ☐ 2x 0 ☐ 3x 0 ☐

29 Purging pump #: — | Purging flow rate: ml/min Purging time: mins seconds

30 Gauge reading: < 5 inHg ☒ Other: _____ Comments: _____

31 Syringe Purging: NA ☒ Dedicated Syringe ☐ Re-used Suringe ☐ Volume _____

32 Is there condensation evident in the sampling train? Y ☐ N ☒

33 Post sample collection - Is there condensation evident in the sampling container? Y ☐ N ☒

34 **Leak Test** Y ☒ N ☐ If Yes, fill in the blanks blow:

35 Tracer compound: _____ Trade name: _____ Tested before use: Y ☒ N ☐

36 Locations applied: Probe top ☐ Sampling train: ☒ Other: _____

37 **Field Duplicate** Y ☐ N ☒ If Yes, fill in the blanks blow:

38 Used the Duplicate Splitter? Y ☐ N ☒ If no, describe the procedure: _____

Other Information

39 Identify the equipment and method used to install probe and collect sample SHOP VACUUM

40 What was the equilibration time between probe installation and withdrawal of any soil vapor? —

41 Sample storage /shipping temperature 70 F

42 Sample storage /shipping container Plastic Tote

43 Sample transportation mode(s) COMPANY VEHICLE

44 Was an equipment blank taken? Y ☐ N ☒ Was Tank air or Nitrogen used? _____

Note: Ambient air should not be used

45 Was a field blank taken? Y ☐ N ☒

46 Was a background (upwind ambient) san Y ☐ N ☒

47 Are there any potential VOC sources other than the identified release nearby?

Groundwater/active fueling station/ dry cleaners/ dry wells/ other - please describe —

48 **Well (Probe) Inspection Note:**

Arizona Department of Environmental Quality QA/QC checklist for Soil Vapor Sampling

Sampling Company

1 Date: 3-11-15 Start time: 905 1000 ☐ ☐

2 Company Name: AMEC F/W Sampler's Name: ERIC MILLER

Consulting Firm:

3 Company Name: AMEC F/W Project Name: BROADWAY PANTANO

4 Project Manager: ALEX YIANNAKAKIS Project Number: 14-2014-2029

Well's Information

5 Location: BROADWAY PANTANO Client ID: BP-23-440 Permanent ☒ Temporary ☐

6 Address: TUCSON, AZ

7 ADEQ File Identification #(s) —

8 Describe the probe location: B.P

9 Probe Depth: 440 FT ~~inch~~ Probe ID: 1 inch **Probe volume: 0 inch^3 (0) mls**

10 Probe type: Tygon ☐ Teflon ☐ Vinyl ☐ PVC ☐ Metal ☐ Other: PVC

11 Is probe tested in the lab before installed? Y ☐ N ☐ NA ☒ Don't know ☐

12 Comments:

Weather Conditions

13 Temperature: 70 C^0 ☐ F^0 ☒

14 Has there been significant rain or snow recent to the sampling event? Y ☐ N ☒

15 If Yes to Question 14 Date _____ Amount of Precipitate _____ inches

Soil Conditions Information

16 Was a soil sample collected and analyzed for volumetric moisture content? Y ☐ N ☒ attach results if yes

If yes, attach results

If no, is the apparent moisture content dry ☐ moist ☒ saturated ☐

17 What is soil type encountered at sample location? NA

18 Was sample collected beneath a surface cover (e.g. parking lot, sidewalk, road, building, other)? Y ☐ N ☐

19 Describe the surface cover , if any CONCRETE PAD ON UNDEVELOPED LOT

20 Was the sample collected near a subsurface conduit? Y ☐ N ☒

Describe subsurface conduit, if any

Sampling Train

21 Sample container: Canister : 1.0 L ☒ 6.0 L ☐ Silanized: Y ☐ N ☒

Other:

Tedlar bag: Y ☐ N ☒ Gas tight syringe Y ☐ N ☒

22 Flow restrictor: On 1000 mL/min ☐ 500 mL/min ☐ 200 mL/min ☒ Other:

One min = Taking one minute to fill one liter canister.

23 Tubing type: Tygon ☐ Teflon ☐ Vinyl ☐ PVC ☐ Other: NA

24 Tubing used from probe top to canister: Length: 0 inch ID 0 inch

25 **Tubing volume: 0 inch^3 (0) mls**

26 Are all parts of Sampling Train tested in the lab before sampling? Y ☒ N ☐

Probe Purging Before Sampling

27 Total volume: probe(v) + tubing(v) = Probe volume 0 + Tubing volume 0 = 0 mls

28 Total volume to be purged (mls): 1x 0 ☐ 1.5x 0 ☐ 2x 0 ☐ 3x 0 ☐

29 Purging pump #: — Purging flow rate: ml/min Purging time: mins seconds

30 Gauge reading: < 5 inHg ☒ Other: _____ Comments: _____

31 Syringe Purging: NA ☒ Dedicated Syringe ☐ Re-used Suringe ☐ Volume _____

32 Is there condensation evident in the sampling train? Y ☐ N ☒

33 Post sample collection - Is there condensation evident in the sampling container? Y ☐ N ☒

34 **Leak Test** Y ☒ N ☐ If Yes, fill in the blanks blow:

35 Tracer compound: _____ Trade name: _____ Tested before use: Y ☒ N ☐

36 Locations applied: Probe top ☐ Sampling train: ☒ Other: _____

37 **Field Duplicate** Y ☒ N ☐ If Yes, fill in the blanks blow:

38 Used the Duplicate Splitter? Y ☒ N ☐ If no, describe the procedure: _____

Other Information

39 Identify the equipment and method used to install probe and collect sample SHOP VACUUM

40 What was the equilibration time between probe installation and withdrawal of any soil vapor? —

41 Sample storage /shipping temperature 70 F

42 Sample storage /shipping container Plastic Tote

43 Sample transportation mode(s) COMPANY VEHICLE

44 Was an equipment blank taken? Y ☐ N ☒ Was Tank air or Nitrogen used? _____

Note: Ambient air should not be used

45 Was a field blank taken? Y ☐ N ☒

46 Was a background (upwind ambient) san Y ☐ N ☒

47 Are there any potential VOC sources other than the identified release nearby?

Groundwater/active fueling station/ dry cleaners/ dry wells/ other - please describe —

48 **Well (Probe) Inspection Note:**

Arizona Department of Environmental Quality QA/QC checklist for Soil Vapor Sampling

Sampling Company

1 Date: 3.11.15 Start time: 1028 1049 ☐ ☐

2 Company Name: AMEC F/W Sampler's Name: ERIC MILLER

Consulting Firm:

3 Company Name: AMEC F/W Project Name: BROADWAY PANTANO

4 Project Manager: ALEX YIANNAKAKIS Project Number: 14-2014-2029

Well's Information

5 Location: BROADWAY PANTANO Client ID: BP-22-200 Permanent ☒ Temporary ☐

6 Address: TUCSON, AZ

7 ADEQ File Identification #(s) —

8 Describe the probe location: BP

9 Probe Depth: 200ft ~~inch~~ Probe ID: 1 inch **Probe volume: 0 inch^3 (0) mls**

10 Probe type: Tygon ☐ Teflon ☐ Vinyl ☐ PVC ☐ Metal ☐ Other: PVC

11 Is probe tested in the lab before installed? Y ☐ N ☐ NA ☒ Don't know ☐

12 Comments:

Weather Conditions

13 Temperature: 70 C^0 ☐ F^0 ☒

14 Has there been significant rain or snow recent to the sampling event? Y ☐ N ☒

15 If Yes to Question 14 Date _____ Amount of Precipitate _____ inches

Soil Conditions Information

16 Was a soil sample collected and analyzed for volumetric moisture content? Y ☐ N ☒ attach results if yes

If yes, attach results

If no, is the apparent moisture content dry ☐ moist ☒ saturated ☐

17 What is soil type encountered at sample location? NA

18 Was sample collected beneath a surface cover (e.g. parking lot, sidewalk, road, building, other)? Y ☐ N ☐

19 Describe the surface cover , if any CONCRETE PAD ON UNDEVELOPED LOT

20 Was the sample collected near a subsurface conduit? Y ☐ N ☒

Describe subsurface conduit, if any

Sampling Train

21 Sample container: Canister : 1.0 L ☒ 6.0 L ☐ Silanized: Y ☐ N ☒

Other:

Tedlar bag: Y ☐ N ☒ Gas tight syringe Y ☐ N ☒

22 Flow restrictor: On 1000 mL/min ☐ 500 mL/min ☐ 200 mL/min ☒ Other:

One min = Taking one minute to fill one liter canister.

23 Tubing type: Tygon ☐ Teflon ☐ Vinyl ☐ PVC ☐ Other: NA

24 Tubing used from probe top to canister: Length: 0 inch ID 0 inch

25 **Tubing volume: 0 inch^3 (0) mls**

26 Are all parts of Sampling Train tested in the lab before sampling? Y ☒ N ☐

Probe Purging Before Sampling

27 Total volume: probe(v) + tubing(v) = Probe volume 0 + Tubing volume 0 = 0 mls

28 Total volume to be purged (mls): 1x 0 ☐ 1.5x 0 ☐ 2x 0 ☐ 3x 0 ☐

29 Purging pump #: — Purging flow rate: ml/min Purging time: mins seconds

30 Gauge reading: < 5 inHg ☒ Other: _____ Comments: _____

31 Syringe Purging: NA ☒ Dedicated Syringe ☐ Re-used Suringe ☐ Volume _____

32 Is there condensation evident in the sampling train? Y ☐ N ☒

33 Post sample collection - Is there condensation evident in the sampling container? Y ☐ N ☒

34 **Leak Test** Y ☒ N ☐ If Yes, fill in the blanks blow:

35 Tracer compound: _____ Trade name: _____ Tested before use: Y ☒ N ☐

36 Locations applied: Probe top ☐ Sampling train: ☒ Other: _____

37 **Field Duplicate** Y ☐ N ☒ If Yes, fill in the blanks blow:

38 Used the Duplicate Splitter? Y ☐ N ☒ If no, describe the procedure: _____

Other Information

39 Identify the equipment and method used to install probe and collect sample SHOP VACUUM

40 What was the equilibration time between probe installation and withdrawal of any soil vapor? —

41 Sample storage /shipping temperature 70 F

42 Sample storage /shipping container Plastic Tote

43 Sample transportation mode(s) COMPANY VEHICLE

44 Was an equipment blank taken? Y ☐ N ☒ Was Tank air or Nitrogen used? _____

Note: Ambient air should not be used

45 Was a field blank taken? Y ☐ N ☒

46 Was a background (upwind ambient) san Y ☐ N ☒

47 Are there any potential VOC sources other than the identified release nearby?

Groundwater/active fueling station/ dry cleaners/ dry wells/ other - please describe —

48 **Well (Probe) Inspection Note:**

Arizona Department of Environmental Quality QA/QC checklist for Soil Vapor Sampling

Sampling Company

1 Date: 3.11.15 Start time: 1054 1115 ☐ ☐

2 Company Name: AMEC F/W Sampler's Name: ERIC MILLER

Consulting Firm:

3 Company Name: AMEC F/W Project Name: BROADWAY PANTANO

4 Project Manager: ALEX YIANNAKAKIS Project Number: 14-2014-2029

Well's Information

5 Location: BROADWAY PANTANO Client ID: BP-22-250 Permanent ☒ Temporary ☐

6 Address: TUCSON, AZ

7 ADEQ File Identification #(s) —

8 Describe the probe location: B.P

9 Probe Depth: 250 FT ~~inch~~ Probe ID: 1 inch **Probe volume: 0 inch^3 (0) mls**

10 Probe type: Tygon ☐ Teflon ☐ Vinyl ☐ PVC ☐ Metal ☐ Other: PVC

11 Is probe tested in the lab before installed? Y ☐ N ☐ NA ☒ Don't know ☐

12 Comments:

Weather Conditions

13 Temperature: 70 C^0 ☐ F^0 ☒

14 Has there been significant rain or snow recent to the sampling event? Y ☐ N ☒

15 If Yes to Question 14 Date _____ Amount of Precipitate _____ inches

Soil Conditions Information

16 Was a soil sample collected and analyzed for volumetric moisture content? Y ☐ N ☒ attach results if yes

If yes, attach results

If no, is the apparent moisture content dry ☐ moist ☒ saturated ☐

17 What is soil type encountered at sample location? NA

18 Was sample collected beneath a surface cover (e.g. parking lot, sidewalk, road, building, other)? Y ☐ N ☐

19 Describe the surface cover , if any CONCRETE PAD ON UNDEVELOPED LOT

20 Was the sample collected near a subsurface conduit? Y ☐ N ☒

Describe subsurface conduit, if any

Sampling Train

21 Sample container: Canister : 1.0 L ☒ 6.0 L ☐ Silanized: Y ☐ N ☒

Other:

Tedlar bag: Y ☐ N ☒ Gas tight syringe Y ☐ N ☒

22 Flow restrictor: On 1000 mL/min ☐ 500 mL/min ☐ 200 mL/min ☒ Other:

One min = Taking one minute to fill one liter canister.

23 Tubing type: Tygon ☐ Teflon ☐ Vinyl ☐ PVC ☐ Other: NA

24 Tubing used from probe top to canister: Length: 0 inch ID 0 inch

25 **Tubing volume: 0 inch^3 (0) mls**

26 Are all parts of Sampling Train tested in the lab before sampling? Y ☒ N ☐

Probe Purging Before Sampling

27 Total volume: probe(v) + tubing(v) = Probe volume 0 + Tubing volume 0 = 0 mls

28 Total volume to be purged (mls): 1x 0 ☐ 1.5x 0 ☐ 2x 0 ☐ 3x 0 ☐

29 Purging pump #: — Purging flow rate: ml/min Purging time: mins seconds

30 Gauge reading: < 5 inHg ☒ Other: _____ Comments: _____

31 Syringe Purging: NA ☒ Dedicated Syringe ☐ Re-used Suringe ☐ Volume _____

32 Is there condensation evident in the sampling train? Y ☐ N ☒

33 Post sample collection - Is there condensation evident in the sampling container? Y ☐ N ☒

34 **Leak Test** Y ☒ N ☐ If Yes, fill in the blanks blow:

35 Tracer compound: _____ Trade name: _____ Tested before use: Y ☒ N ☐

36 Locations applied: Probe top ☐ Sampling train: ☒ Other: _____

37 **Field Duplicate** Y ☐ N ☒ If Yes, fill in the blanks blow:

38 Used the Duplicate Splitter? Y ☐ N ☒ If no, describe the procedure: _____

Other Information

39 Identify the equipment and method used to install probe and collect sample SHOP VACUUM

40 What was the equilibration time between probe installation and withdrawal of any soil vapor? —

41 Sample storage /shipping temperature 70 F

42 Sample storage /shipping container Plastic Tote

43 Sample transportation mode(s) COMPANY VEHICLE

44 Was an equipment blank taken? Y ☐ N ☒ Was Tank air or Nitrogen used? _____

Note: Ambient air should not be used

45 Was a field blank taken? Y ☐ N ☒

46 Was a background (upwind ambient) san Y ☐ N ☒

47 Are there any potential VOC sources other than the identified release nearby?

Groundwater/active fueling station/ dry cleaners/ dry wells/ other - please describe —

48 **Well (Probe) Inspection Note:**

Arizona Department of Environmental Quality QA/QC checklist for Soil Vapor Sampling

Sampling Company

1 Date: 3-11-15 Start time: 1125 1150 ☐ ☐

2 Company Name: AMEC F/W Sampler's Name: ERIC MILLER

Consulting Firm:

3 Company Name: AMEC F/W Project Name: BROADWAY PANTANO

4 Project Manager: ALEX YIANNAKAKIS Project Number: 14-2014-2029

Well's Information

5 Location: BROADWAY PANTANO Client ID: BP-22-300 Permanent ☒ Temporary ☐

6 Address: TUCSON, AZ

7 ADEQ File Identification #(s) —

8 Describe the probe location: B.P

9 Probe Depth: 300 FT ~~inch~~ Probe ID: 1 inch **Probe volume: 0 inch^3 (0) mls**

10 Probe type: Tygon ☐ Teflon ☐ Vinyl ☐ PVC ☐ Metal ☐ Other: PVC

11 Is probe tested in the lab before installed? Y ☐ N ☐ NA ☒ Don't know ☐

12 Comments:

Weather Conditions

13 Temperature: 70 C^0 ☐ F^0 ☒

14 Has there been significant rain or snow recent to the sampling event? Y ☐ N ☒

15 If Yes to Question 14 Date _____ Amount of Precipitate _____ inches

Soil Conditions Information

16 Was a soil sample collected and analyzed for volumetric moisture content? Y ☐ N ☒ attach results if yes

If yes, attach results

If no, is the apparent moisture content dry ☐ moist ☒ saturated ☐

17 What is soil type encountered at sample location? NA

18 Was sample collected beneath a surface cover (e.g. parking lot, sidewalk, road, building, other)? Y ☐ N ☐

19 Describe the surface cover , if any CONCRETE PAD ON UNDEVELOPED LOT

20 Was the sample collected near a subsurface conduit? Y ☐ N ☒

Describe subsurface conduit, if any

Sampling Train

21 Sample container: Canister : 1.0 L ☒ 6.0 L ☐ Silanized: Y ☐ N ☒

Other:

Tedlar bag: Y ☐ N ☒ Gas tight syringe Y ☐ N ☒

22 Flow restrictor: On 1000 mL/min ☐ 500 mL/min ☐ 200 mL/min ☒ Other:

One min = Taking one minute to fill one liter canister.

23 Tubing type: Tygon ☐ Teflon ☐ Vinyl ☐ PVC ☐ Other: NA

24 Tubing used from probe top to canister: Length: 0 inch ID 0 inch

25 **Tubing volume: 0 inch^3 (0) mls**

26 Are all parts of Sampling Train tested in the lab before sampling? Y ☒ N ☐

Probe Purging Before Sampling

27 Total volume: probe(v) + tubing(v) = Probe volume 0 + Tubing volume 0 = 0 mls

28 Total volume to be purged (mls): 1x 0 ☐ 1.5x 0 ☐ 2x 0 ☐ 3x 0 ☐

29 Purging pump #: — | Purging flow rate: ml/min Purging time: mins seconds

30 Gauge reading: < 5 inHg ☒ Other: _____ Comments: _____

31 Syringe Purging: NA ☒ Dedicated Syringe ☐ Re-used Suringe ☐ Volume _____

32 Is there condensation evident in the sampling train? Y ☐ N ☒

33 Post sample collection - Is there condensation evident in the sampling container? Y ☐ N ☒

34 **Leak Test** Y ☒ N ☐ If Yes, fill in the blanks blow:

35 Tracer compound: _____ Trade name: _____ Tested before use: Y ☒ N ☐

36 Locations applied: Probe top ☐ Sampling train: ☒ Other: _____

37 **Field Duplicate** Y ☐ N ☒ If Yes, fill in the blanks blow:

38 Used the Duplicate Splitter? Y ☐ N ☒ If no, describe the procedure: _____

Other Information

39 Identify the equipment and method used to install probe and collect sample SHOP VACUUM

40 What was the equilibration time between probe installation and withdrawal of any soil vapor? —

41 Sample storage /shipping temperature 70 F

42 Sample storage /shipping container Plastic Tote

43 Sample transportation mode(s) COMPANY VEHICLE

44 Was an equipment blank taken? Y ☐ N ☒ Was Tank air or Nitrogen used? _____

Note: Ambient air should not be used

45 Was a field blank taken? Y ☐ N ☒

46 Was a background (upwind ambient) san Y ☐ N ☒

47 Are there any potential VOC sources other than the identified release nearby?

Groundwater/active fueling station/ dry cleaners/ dry wells/ other - please describe —

48 **Well (Probe) Inspection Note:**

Arizona Department of Environmental Quality QA/QC checklist for Soil Vapor Sampling

Sampling Company

1 Date: 3-11-15 Start time: 1155 1248 ☐ ☐

2 Company Name: AMEC F/W Sampler's Name: ERIC MILLER

Consulting Firm:

3 Company Name: AMEC F/W Project Name: BROADWAY PANTANO

4 Project Manager: ALEX YIANNAKAKIS Project Number: 14-2014-2029

Well's Information

5 Location: BROADWAY PANTANO Client ID: BP-22-438 Permanent ☒ Temporary ☐

6 Address: TUCSON, AZ

7 ADEQ File Identification #(s) —

8 Describe the probe location: BP

9 Probe Depth: 438 FT ~~inch~~ Probe ID: 1 inch **Probe volume: 0 inch^3 (0) mls**

10 Probe type: Tygon ☐ Teflon ☐ Vinyl ☐ PVC ☐ Metal ☐ Other: PVC

11 Is probe tested in the lab before installed? Y ☐ N ☐ NA ☒ Don't know ☐

12 Comments:

Weather Conditions

13 Temperature: 70 C^0 ☐ F^0 ☒

14 Has there been significant rain or snow recent to the sampling event? Y ☐ N ☒

15 If Yes to Question 14 Date _____ Amount of Precipitate _____ inches

Soil Conditions Information

16 Was a soil sample collected and analyzed for volumetric moisture content? Y ☐ N ☒ attach results if yes

If yes, attach results

If no, is the apparent moisture content dry ☐ moist ☒ saturated ☐

17 What is soil type encountered at sample location? NA

18 Was sample collected beneath a surface cover (e.g. parking lot, sidewalk, road, building, other)? Y ☐ N ☐

19 Describe the surface cover , if any CONCRETE PAD ON UNDEVELOPED LOT

20 Was the sample collected near a subsurface conduit? Y ☐ N ☒

Describe subsurface conduit, if any

Sampling Train

21 Sample container: Canister : 1.0 L ☒ 6.0 L ☐ Silanized: Y ☐ N ☒

Other:

Tedlar bag: Y ☐ N ☒ Gas tight syringe Y ☐ N ☒

22 Flow restrictor: On 1000 mL/min ☐ 500 mL/min ☐ 200 mL/min ☒ Other:

One min = Taking one minute to fill one liter canister.

23 Tubing type: Tygon ☐ Teflon ☐ Vinyl ☐ PVC ☐ Other: NA

24 Tubing used from probe top to canister: Length: 0 inch ID 0 inch

25 **Tubing volume: 0 inch^3 (0) mls**

26 Are all parts of Sampling Train tested in the lab before sampling? Y ☒ N ☐

Probe Purging Before Sampling

27 Total volume: probe(v) + tubing(v) = Probe volume 0 + Tubing volume 0 = 0 mls

28 Total volume to be purged (mls): 1x 0 ☐ 1.5x 0 ☐ 2x 0 ☐ 3x 0 ☐

29 Purging pump #: — Purging flow rate: ml/min Purging time: mins seconds

30 Gauge reading: < 5 inHg ☒ Other: _____ Comments: _____

31 Syringe Purging: NA ☒ Dedicated Syringe ☐ Re-used Suringe ☐ Volume _____

32 Is there condensation evident in the sampling train? Y ☐ N ☒

33 Post sample collection - Is there condensation evident in the sampling container? Y ☐ N ☒

34 **Leak Test** Y ☒ N ☐ If Yes, fill in the blanks blow:

35 Tracer compound: _____ Trade name: _____ Tested before use: Y ☒ N ☐

36 Locations applied: Probe top ☐ Sampling train: ☒ Other: _____

37 **Field Duplicate** Y ☐ N ☒ If Yes, fill in the blanks blow:

38 Used the Duplicate Splitter? Y ☐ N ☒ If no, describe the procedure: _____

Other Information

39 Identify the equipment and method used to install probe and collect sample SHOP VACUUM

40 What was the equilibration time between probe installation and withdrawal of any soil vapor? —

41 Sample storage /shipping temperature 70 F

42 Sample storage /shipping container Plastic Tote

43 Sample transportation mode(s) COMPANY VEHICLE

44 Was an equipment blank taken? Y ☐ N ☒ Was Tank air or Nitrogen used? _____

Note: Ambient air should not be used

45 Was a field blank taken? Y ☐ N ☒

46 Was a background (upwind ambient) san Y ☐ N ☒

47 Are there any potential VOC sources other than the identified release nearby?

Groundwater/active fueling station/ dry cleaners/ dry wells/ other - please describe —

48 **Well (Probe) Inspection Note:**