Radiological Health, Safety and Environmental Services
A USA Environment, L.P. Company

WEST LAKE LANDFILL

PERIMETER AIR MONITORING

QUARTER REPORT

AUGUST, SEPTEMBER, AND OCTOBER, 2015

June 2016

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1. INTRODUCTION

This West Lake Landfill Perimeter Air Monitoring Quarterly Report (Report) summarizes the results of the second three months (August, September, and October of 2015) of perimeter air monitoring under this program. The purpose of the monitoring is to obtain baseline air monitoring data prior to implementation of future remedial actions at Operable Unit-1 (OU-1) of the West Lake Landfill Superfund Site (the site).

The air monitoring activities include sampling for airborne radioactive particulates, radon gas, volatile organic compounds (VOCs), and measurements of gamma radiation. Sampling is performed continuously at the perimeters of OU-1 Areas 1 and 2. Data collected from the monitoring activities are used to assess and document the air quality along the boundaries of OU-1. The monitoring was performed according to the requirements described in the Air Monitoring, Sampling, and Quality Assurance/Quality Control (QA/QC) Plan (Plan) (Auxier and Associates (A&A) 2014), which describes the environmental air sampling and monitoring activities performed at the West Lake Landfill Superfund Site in Bridgeton, Missouri, as required by Paragraph 30d of the April 14, 2014, Administrative Settlement Agreement and Order on Consent for Removal Action – Preconstruction Work (Preconstruction ASAOC) entered into between the U.S. Environmental Protection Agency (EPA) and Respondents Bridgeton Landfill, LLC and Rock Road Industries, Inc. EPA approval of the Plan was received on December 8, 2014.

1.1 SITE DESCRIPTION

The West Lake Landfill Superfund Site is located at 13570 St. Charles Rock Road in Bridgeton, St. Louis County, Missouri, approximately one mile north of the intersection of Interstate 70 and Interstate 270. The site is divided into two Operable Units. Operable Unit-1 (OU-1) is composed of the two disposal areas (Area 1 and Area 2) where waste materials containing radionuclides have been identified. Municipal solid waste (MSW) and industrial wastes were disposed of in OU-1 from approximately the early 1950s or late 1940s until 1974. Operable Unit-2 (OU-2) consists of the remainder of the site and includes several inactive landfilled areas containing sanitary waste or demolition debris, and a permitted sanitary landfill (the Bridgeton Sanitary Landfill), which stopped receiving waste on Dec. 31, 2004. The Bridgeton Sanitary Landfill is a quarry-fill landfill containing municipal waste, and consists of the North Quarry and South Quarry landfill units. Since late 2010, the Bridgeton Sanitary Landfill South Quarry unit has experienced a subsurface reaction (SSR). The southern border of OU-1 Area 1 is contiguous with the North Quarry cell of the Bridgeton Sanitary Landfill. OU-1 Area 2 is located along the northern portion of the overall site, approximately 1,000 feet (at the closest) from the outer boundary of the North Quarry landfill unit, and is separated from it by a road and by the closed demolition landfill (Figure 1).

Land use surrounding the site is primarily commercial and industrial, with residential uses located approximately ½ mile to the south of the site (the Spanish Village subdivision) and approximately ½ mile to the south east (the Terrisan Reste mobile home park).

1.2 BACKGROUND

According to the Nuclear Regulatory Commission (NRC), in 1973, approximately 8,700 tons of leached barium sulfate residue (a remnant from Manhattan Engineer District/Atomic Energy Commission projects) were reportedly mixed with approximately 39,000 tons of soil from the

9200 Latty Avenue Superfund site in Hazelwood, Missouri, transported to the West Lake Landfill, and used as daily or intermediate cover material (NRC 1988, RMC 1982 and 1981).

EPA added the West Lake Landfill Superfund Site to its National Priorities List in 1990. In May 2008, EPA signed a Record of Decision (ROD) for OU-1, which selected a remedial action for the radiologically contaminated landfill areas and the area formerly described as the Ford Property, now called the Buffer Zone/Crossroads property. The 2008 ROD requires installation of a modified solid waste landfill cover over OU-1 Areas 1 and 2.

1.3 CONSTITUENTS OF CONCERN

West Lake Landfill contains both municipal solid waste and construction and demolition wastes. In a March 7, 2014 meeting, representatives from the EPA met with representatives from Engineering Management Support, Inc. (EMSI) and requested that air monitoring be performed for airborne radiological contaminants and volatile organic compounds (VOCs). A Baseline Risk Assessment (BRA) was published in 2000 and identified the radionuclides of concern at the West Lake Landfill. These compounds, plus EPA's requested VOC sampling, are the constituents of concern (COCs).

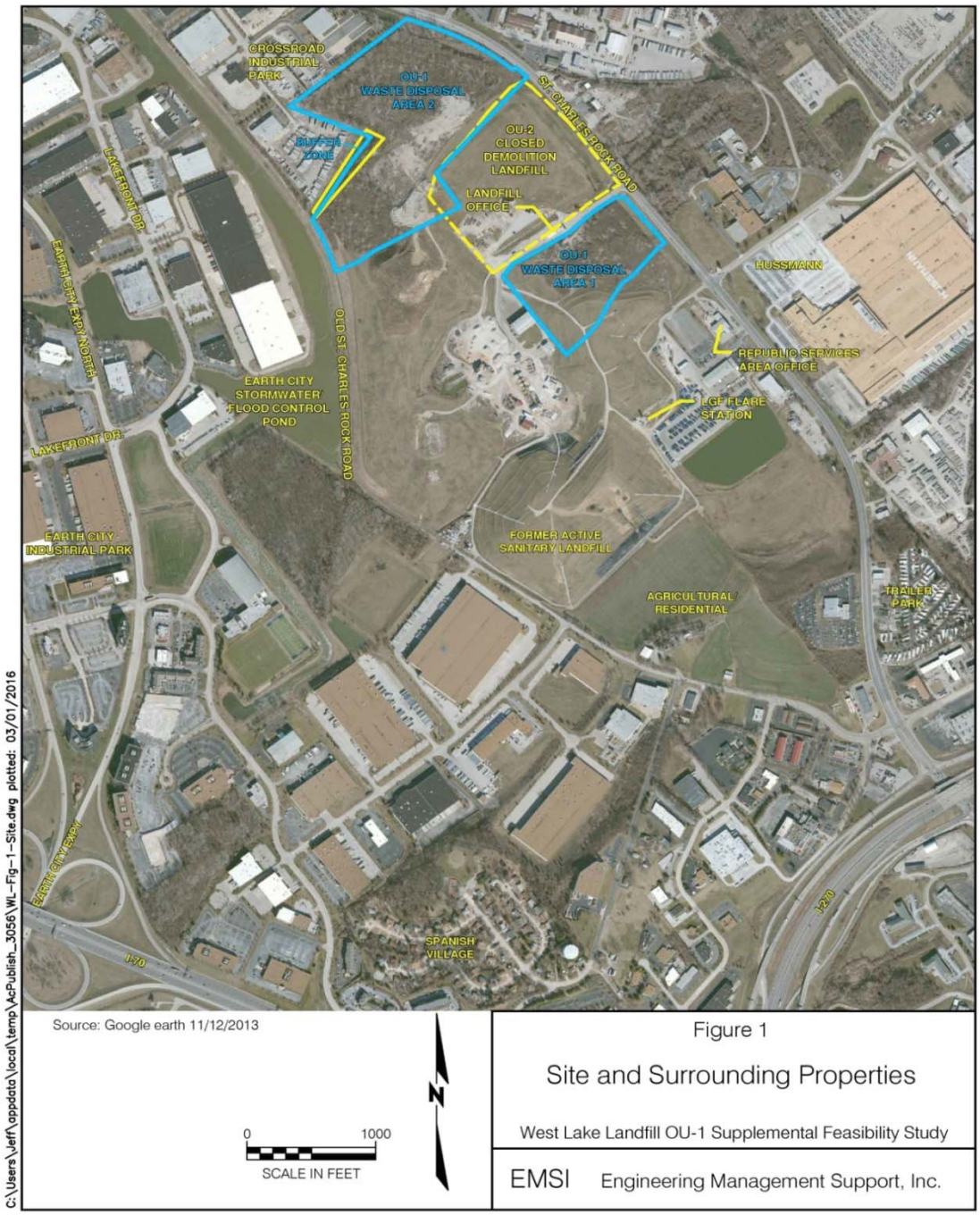

Figure 1 Site Location

2. AIR MONITORING APPROACH AND SAMPLING METHODS

An integrated system of 13 environmental monitoring stations has been installed at the site. Twelve of these stations are located around the perimeters of OU-1 Areas 1 and 2, with two located close to the nearest on-site buildings (the landfill office and the transfer station building). The thirteenth station is located in the southwest corner of the site, the farthest distance on-site from Areas 1 and 2. These 13 locations were selected to ensure that the monitoring network encompassed Areas 1 and 2, including the landfill entry road and the road through the center of the site (see Figure 2).

An on-site meteorological station (the "met station") measures and logs temperature, barometric pressure, relative humidity, wind speed and direction. The station is located adjacent to the landfill office building (13570 St. Charles Rock Road).

The monitoring network shown in Figure 2 provides coverage around Areas 1 and 2 under all wind direction conditions. The air monitoring and sampling locations near the center of the site are arranged in a broad line oriented approximately southeast to northwest and parallel to the predominant wind directions. Additional stations are located transverse to this orientation, parallel to the less dominant southwest and northeast wind directions. Stations A1-A6 and A9 bound the perimeter of Area 2. Stations A5, A7, A8, A10 and 11 bound Area 1. Station A13 is at the southern boundary of the South Quarry pit area, and is located upwind of Areas 1 and 2 based on the predominant southerly wind direction as shown in Figure 3 and Figure 4.

Table 1 lists the types and quantities of environmental monitoring equipment for the different monitoring stations depicted in Figure 2. The table also lists the COCs measured by the equipment housed at each station.

Table 1 List of Samplers for Perimeter Monitoring

Perimeter Monitor Inventory per Location	Sampling Mode and Collection Frequency	Contaminants Measured
Proposed list of samplers at A01, A05, A07, A08, A11		
Metered air pump with dual chamber sampler for particulate fiber filter	Continuous / Every 28 days	Total alpha and beta activity
Alpha Track Etch Detector for radon gas	Continuous / Quarterly	Radon-222 and radon daughters
Radiello RAD130 Canister	Continuous / Every 14 days	Volatile Organic Compounds[1]
Radiation dosimeter (TLD)	Continuous / Quarterly	Gamma radiation levels
Proposed list of samplers at remaining on-site and perimeter locations (x8)		
Metered air pump with filter to collect particulates	Continuous / Monthly	Total alpha and beta activity
Alpha Track Etch Detector for radon gas	Continuous / Quarterly	Radon-222 and radon daughters
Radiation dosimeter (TLD)	Continuous / Quarterly	Gamma radiation levels
Meteorological monitoring station		
High resolution wind sensor	Continuous	Wind speed and direction

[1] The Radiello 130 media are analyzed for the list of analytes included in Appendix F of the Plan. This list was provided by the laboratory and reflects common analytes for which sampling rates have been calculated for the Radiello 130 media.

The sampling and sensor equipment in each monitoring station enclosure operate continuously. The equipment in these stations consists of a high volume air sampler for airborne particulates, a continuous radon monitor (alpha track etch), and an environmental radiation detector called a thermoluminescent dosimeter (TLD). Alpha track etch monitors provide a cumulative measure of radon gas present and allow determination of average radon levels for the sampling period. TLDs measure ambient gamma radiation levels.

Particulates gathered on air sample filters are collected every four weeks (28 days) and analyzed for alpha and beta emitters. Radiation dosimeters and alpha track etch detectors are exchanged and sent for analysis every calendar quarter.

Five of the monitoring stations house continuous passive samplers to monitor for VOCs. Monitoring of VOCs is performed using the Radiello RAD 130 chemical adsorbing cartridge diffusion samplers that are left in place for periods of 14 days. The Radiello RAD 130 cartridges consist of a stainless steel net cylinder with 100 mesh grid openings and a 5.8 mm diameter, packed with approximately 530 milligrams of activated charcoal. VOCs are trapped by adsorption and recovered by carbon disulfide displacement.

Table 2 provides a summary of the types of measurements, sampling numbers and frequency as listed in the Plan.

Table 2 Field Sampling Summary

Analytical Parameter	Level of Sensitivity	Matrix	Sample Frequency	Container Type	Annual Subtotal Target Field Samples	Field QC Extras			Total Annual Field Samples
						Trip Blank	Filter Blanks	Field Duplicates	
Gross Alpha/Beta	1 dpm/ sample	Air Filter	13 x Continuous Air Samplers /Monthly	Glassine Envelope	156	NA	12	12	180
Radon	0.5 pCi/l	Track Etch Detector	13 x Continuous Samplers /Quarter	Track Etch Detector	56	NA	NA	NA	56
Gamma Dose	1 mrem	TLD	13 x Stations/ Quarter	TLD	56	1 (Jan 2016)	NA	NA	56
VOC	See Plan Appendix B for MDL and RL	Radiello Canister	5 Continuous Every 14 Days	Radiello Canister	130	1 (8/15/15)	NA	1 Every 14 Days	156

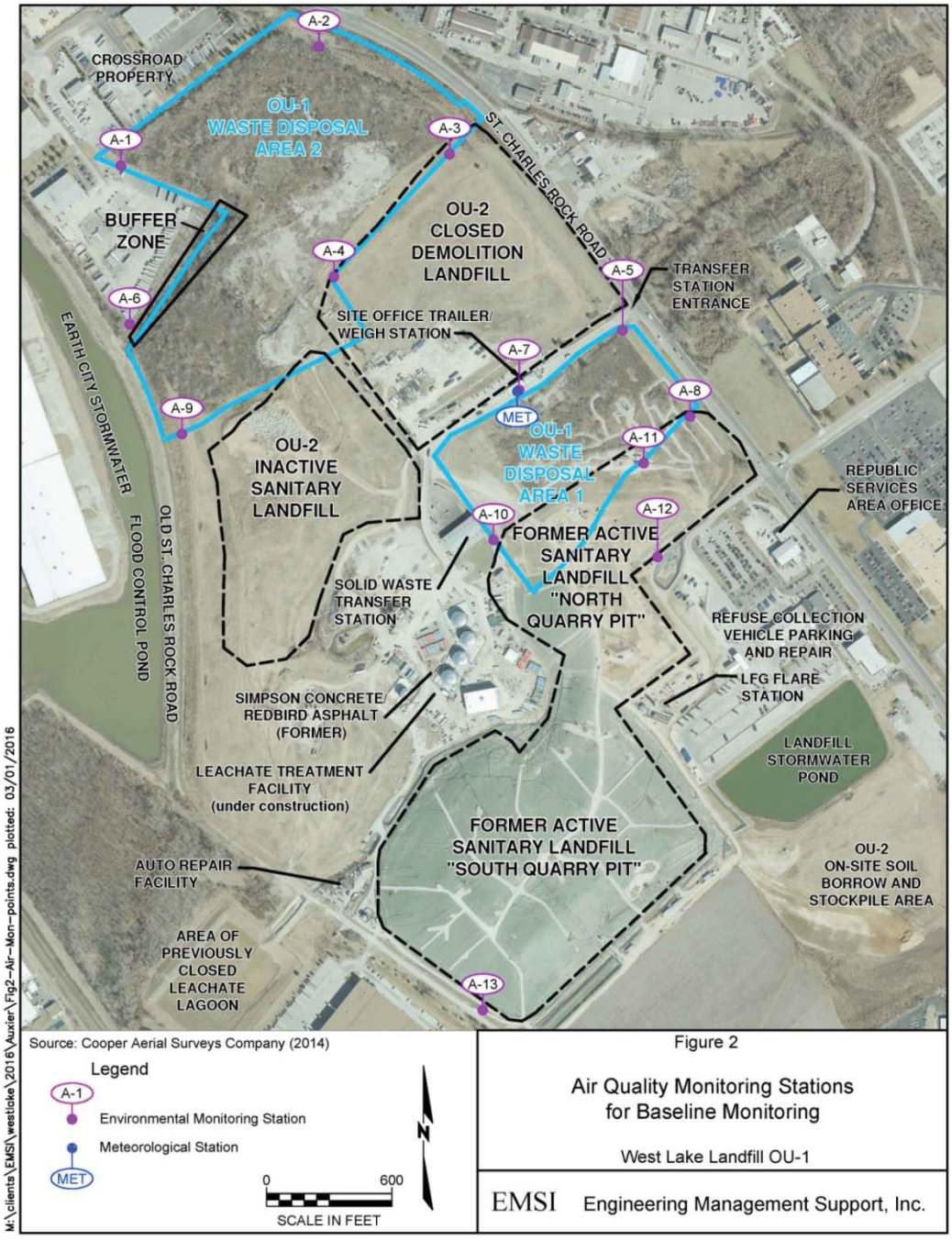

Figure 2 Air Monitoring Locations

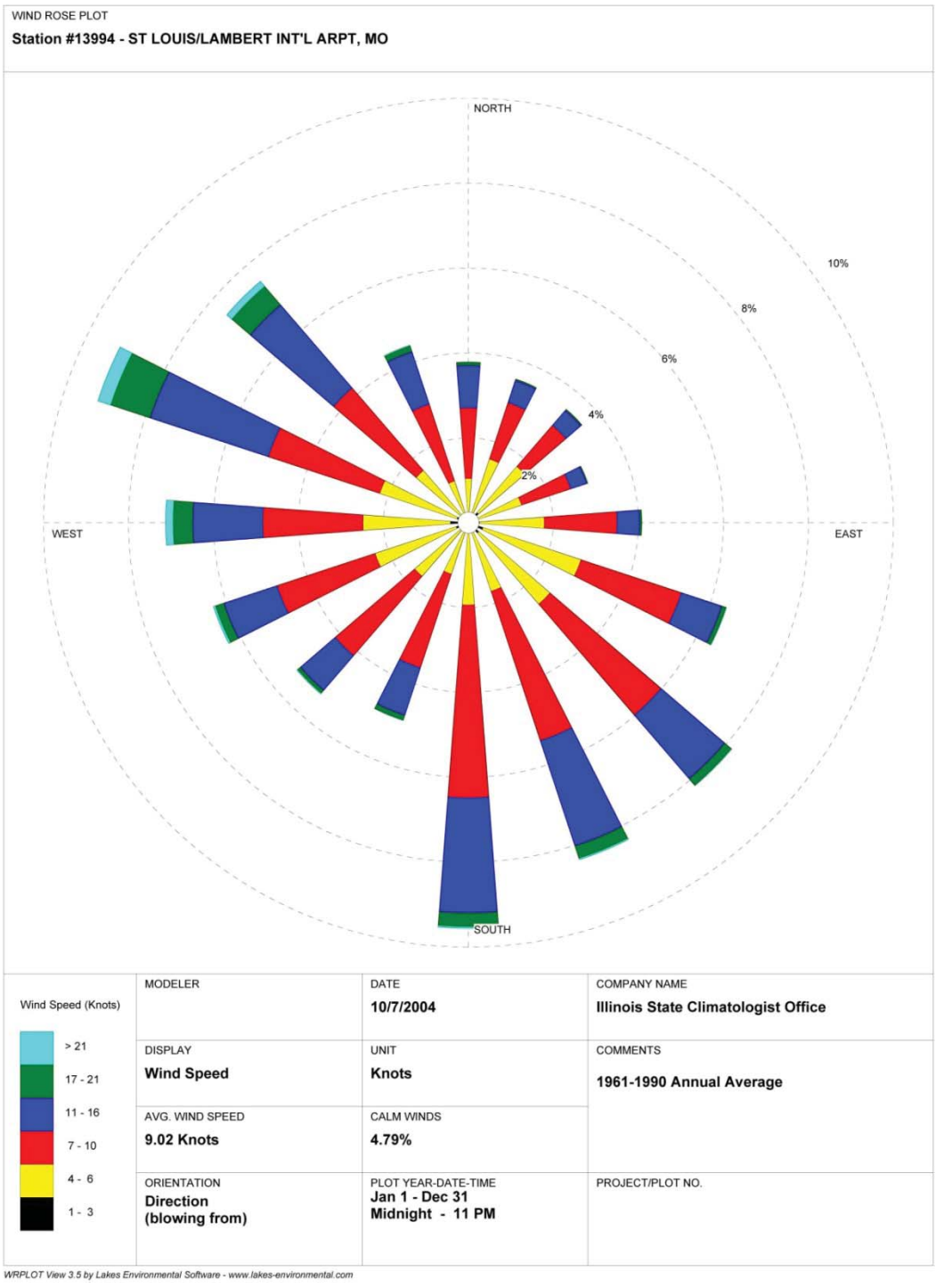

Figure 3 Predominant Wind Directions

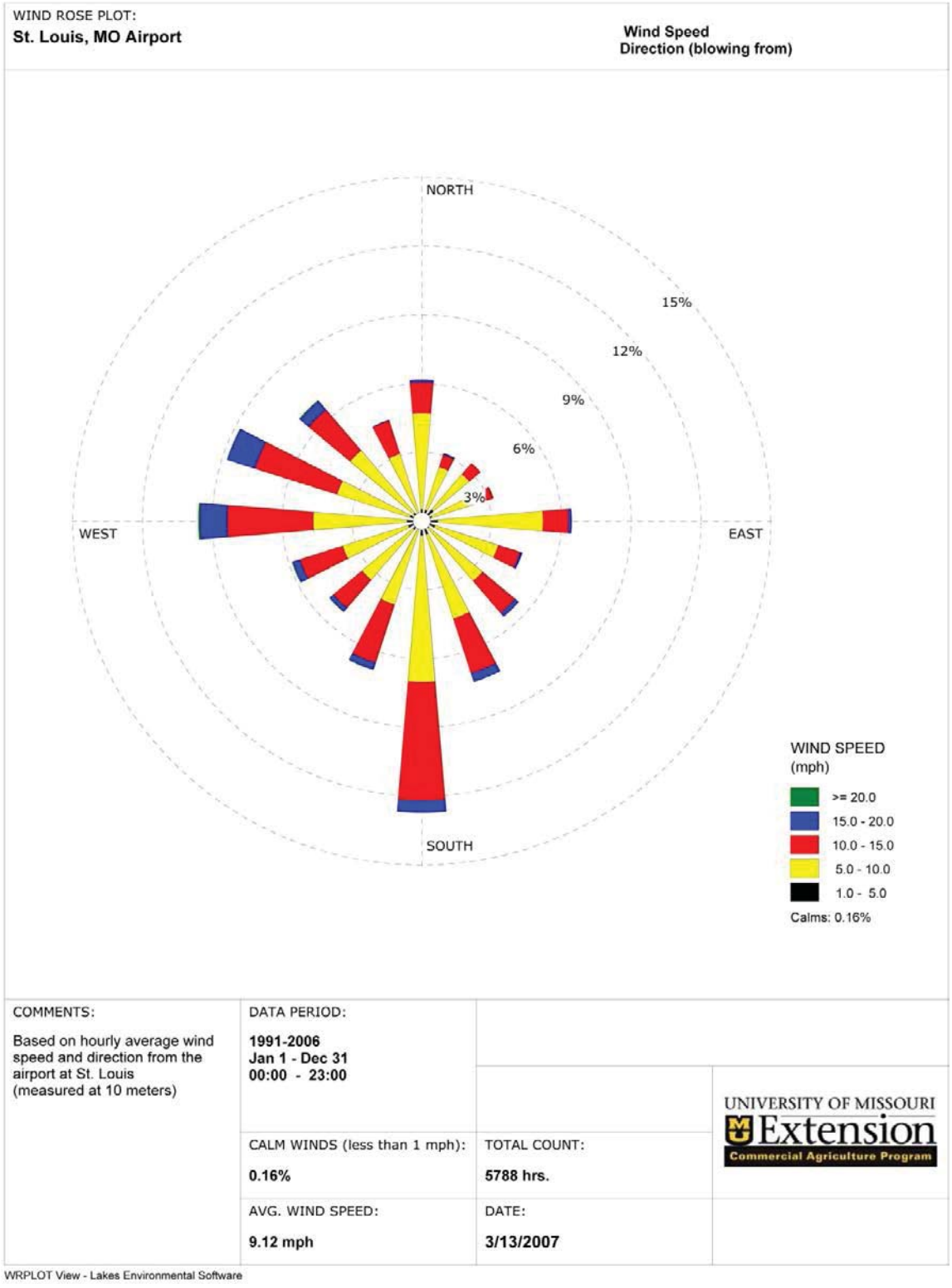

Figure 4 Predominant Wind Directions

2.1 DATA EVALUATION

The purpose of the air monitoring program is to provide baseline data regarding air quality prior to implementation of remedial actions. Ultimately, baseline data will be compared to future data obtained during implementation of remedial actions to assess whether such actions contribute to any release of radionuclides or VOCs.

2.2 SAMPLE COLLECTION AND ANALYSES

2.2.1 Air Particulates

Air sampling equipment is calibrated, and the functionality of the equipment is checked according to manufacturer specifications and A&A procedures 5.1 and 5.2, "Calibration Procedure for PM2.5 Air Monitoring" and "One Point Flow Audit for PM2.5 Air Monitoring". Samples are collected according to the instructions contained in A&A procedure 5.3 "Sampling Procedure for PM2.5 Monitoring" (Appendix H).

Air particulate samples are collected every 28 days and submitted for analysis. The operability of air sampling equipment is verified at the time of sample collection according to the One Point Flow Audit portion of Procedure 5.1 (Appendix H). Air flow meters, differential pressure indicators, and other devices used to determine volumetric flow rates of air particulate samplers are calibrated annually. Copies of the calibration records are maintained on-site as well as in A&A's corporate offices.

The air particulate samples are collected on 8-inch by 10-inch quartz filters. The laboratory removes five independent 47 millimeter (mm) pieces for the aliquot. Each 47 mm piece is adhered to a planchet. Each planchet is counted, and the counts summed. For the field duplicate, five pieces are removed for the sample, and five pieces are removed for the field duplicate, and each set of five pieces are counted and summed separately. The field duplicate is collected from a different sample each month. A blank filter is submitted and analyzed with each batch of samples submitted to the laboratory.

May, June, and September particulate filters were submitted for isotopic analysis. At least one set of samples for each subsequent three-month sampling event will be submitted for isotopic analysis and gamma spectroscopy in addition to the gross alpha and gross beta analysis.

2.2.2 VOCs

Passive Radiello samplers for VOCs are deployed on Stations A01, A05, A07, A08 and A011. Samples are collected every 14 days and submitted for analysis. On a rotating basis, a field duplicate is placed in one of the stations during each 14-day sampling cycle. The Radiello passive/diffusive samples are analyzed by Gas Chromatography Mass Spectrometry (GCMS) using EPA method TO-15.

2.2.3 Gamma

Gamma radiation is measured by installing Thermoluminescent detectors (TLDs) at each of the 13 air monitoring stations. The TLDs are installed approximately three feet above the ground surface inside a housing shelter. A duplicate TLD is installed at one of the stations.

Mirion Technologies forwards 14 new TLDs to the site approximately 5-7 days prior to the quarterly change-out event. Upon arrival, the packages are examined to verify the number and designations of the new TLDs.

TLD change-outs consist of unclipping the exposed TLD at each station and attaching its replacement to the metal bracket. A duplicate TLD is placed at one of the stations.

The TLDs are placed in the shipping envelope provided by Mirion. The envelope is sealed and placed into a FedEx envelope that is labeled with the following statement cautioning against X-raying the package.

CAUTION: DOSIMETERS

DO NOT SANITIZE, X-RAY, IRRADIATE, OR NEUTRALIZE PACKAGE AS PRODUCT WILL BE DAMAGED. KEEP AWAY FROM RADIOACTIVITY, EXCESSIVE HEAT, AND MOISTURE.

2.2.4 Radon

Radon alpha track detectors are used at the monitoring stations to measure alpha particles emitted from radon and its associated decay products. Radon detectors are co-located with TLDs approximately three feet above the ground surface in housing shelters at the monitoring stations. The radon detectors are collected every three months and sent to an off-site laboratory for analysis. Recorded radon concentrations are listed in picocuries per liter (pCi/l). A duplicate detector is included at one of the stations.

Table 3 details the analytical methods required for each contaminant of concern.

Table 3 Sample Analyses and Methods

Analyte (COC)	Collection Method	Test	Sensitivity Level	Test Facility	Facility Location
Thorium Uranium Radium-226	Particulate Air Sample (4 in)	EPA Method 900.0 Gross Alpha/ Beta (GAGB)	1 dpm/sample	Eberline Analytical	Oak Ridge, TN
Rn-222	Track Etch	Alpha Track Etch	0.5 pCi/L	Inspect USA	Marshall, NC
Radiation Dose	TLD	TLD	<1 mRem	Mirion Tech	Irvine, CA
VOC	Radiello RAD130 Passive sorbent diffusion sampler	carbon disulfide desorption followed GC/MS analysis by EPA Method TO-15	See Plan Appendix E	Eurofins Air Toxics	Folsom, CA

2.2.5 Accredited Laboratories and Contacts

Eberline Analytical
Mike McDougall
601 Scarboro Road
Oak Ridge, TN 37830
Tel 865-481-0683

Eurofins Air Toxics
Kelly Buettner
180 Blue Ravine Road, Suite B
Folsom, CA 95630
Tel 800-985-5955

Inspect USA
100 S Main Street, Ste 609
Marshall, NC 28753
Tel 888-480-8812

Mirion Technologies, Inc.
17192 Murphy Avenue
Irvine, CA 92614
800-251-3331

2.2.6 Data Management

The laboratories performing radioanalytical and VOC analyses supply Level IV CLP-like data reports with all analytical results to A&A and EMSI. These laboratories also supply analytical results in electronic spreadsheet format to the A&A Project Manager and EMSI.

2.2.7 Data Verification, Validation, Quality Assessment, and Delivery

The primary goal of data verification and validation (V&V) is to ensure that decisions are supported by data of the type and quality needed and expected for the intended use. Data verification is the process of evaluating the completeness, correctness, and consistency of a laboratory package or final data to assure that laboratory conditions and operations are compliant with project plan documents. Data validation addresses the reliability of the data. Results are evaluated to determine the presence or absence of an analyte and the uncertainty of the measurement process for contaminants of concern. Finally, scientific and statistical evaluation of the data may be required to determine if the quality of the data can support its intended use (MARLAP 2004). V&V and summary reports are generated and submitted to project management.

3. RESULTS SUMMARIES

The second quarter of sampling commenced July 23, 2015 and concluded October 15, 2015. While the on-site meteorological station began logging data on May 26, 2015, the data were not retrieved in time to submit the total volume of air sampled to the analytical laboratory; therefore, the results for the July 23 through August 19 particulate samples were reported as picoCuries/sample. The wind roses for August, September and October are shown in Figure 5, Figure 6 and Figure 7.

Telemetry was installed on each unit except Station 2 in June and July, 2015. The telemetry units send a text message to specified individuals if power is lost to the unit. Telemetry was not installed for Station 2 until it was relocated on October 6, 2015 due to flooding.

3.1 OFF NORMAL EVENTS

During the second quarter there were several significant periods of time where power to some of the samplers was not functioning, or had been interrupted for other operations (relocating A2, etc.). The samplers run ~40,000 minutes each month. A 5% loss of sample time for the month would be ~2,000 minutes, or 33 hours. A loss of less than 5% does not require adjustment. Stations 3, 4, 6, 9, and 13 lost between three and four days in late July/August. These losses were not accounted for in the field; therefore, the laboratory reported the results for the entire sampling period. Necessary adjustments in the time fields (and thus total flow) of the field data forms and to the results reported by the laboratory were made to account for the lost sampling time.

3.2 AIR PARTICULATE RESULTS

The particulate air sampling duration is approximately 28 days, after which time the air filters are collected, packaged, and shipped under chain-of-custody to the radioanalytical laboratory. Samples were collected on August 19th, September 16th and 17th, and October 14th and 15th of 2015. The laboratory acknowledged receipt of the samples on August 21st, September 18th, and October 16th, respectively.

An aliquot of each 8 x 10 filter was analyzed for gross alpha/gross beta activity (GAGB). For the second quarter, the laboratory reported the July 23 through August 18 results in pCi/sample due to delays in obtaining data from the meteorological tower. The procedure set forth below was used to convert the results from pCi/sample to standard units. The laboratory reported the August to September results in microCuries per milliliter (µCi/ml). The result was multiplied by 1E12 to obtain results in pCi/m^3. All subsequent gross alpha and beta results will be reported in pCi/m^3.

3.2.1 pCi/sample to standard unit conversion procedure:

1. Convert the pCi/sample result to standard units.

   Divide by 1E6 to obtain µCi/sample. The result reflects the gross alpha or gross beta activity on the entire filter.

2. Determine the volume of air sampled.

   The density of air, and thus the air flow through the filter, is affected by changes in air temperature and barometric pressure. As described in Procedure 5.3, "Sampling Procedure for PM 2.5 Air Monitoring," the anticipated temperature and pressure (based on historical

meteorological conditions) is used to set the Mass Flow Controller (MFC) to the target flow rate

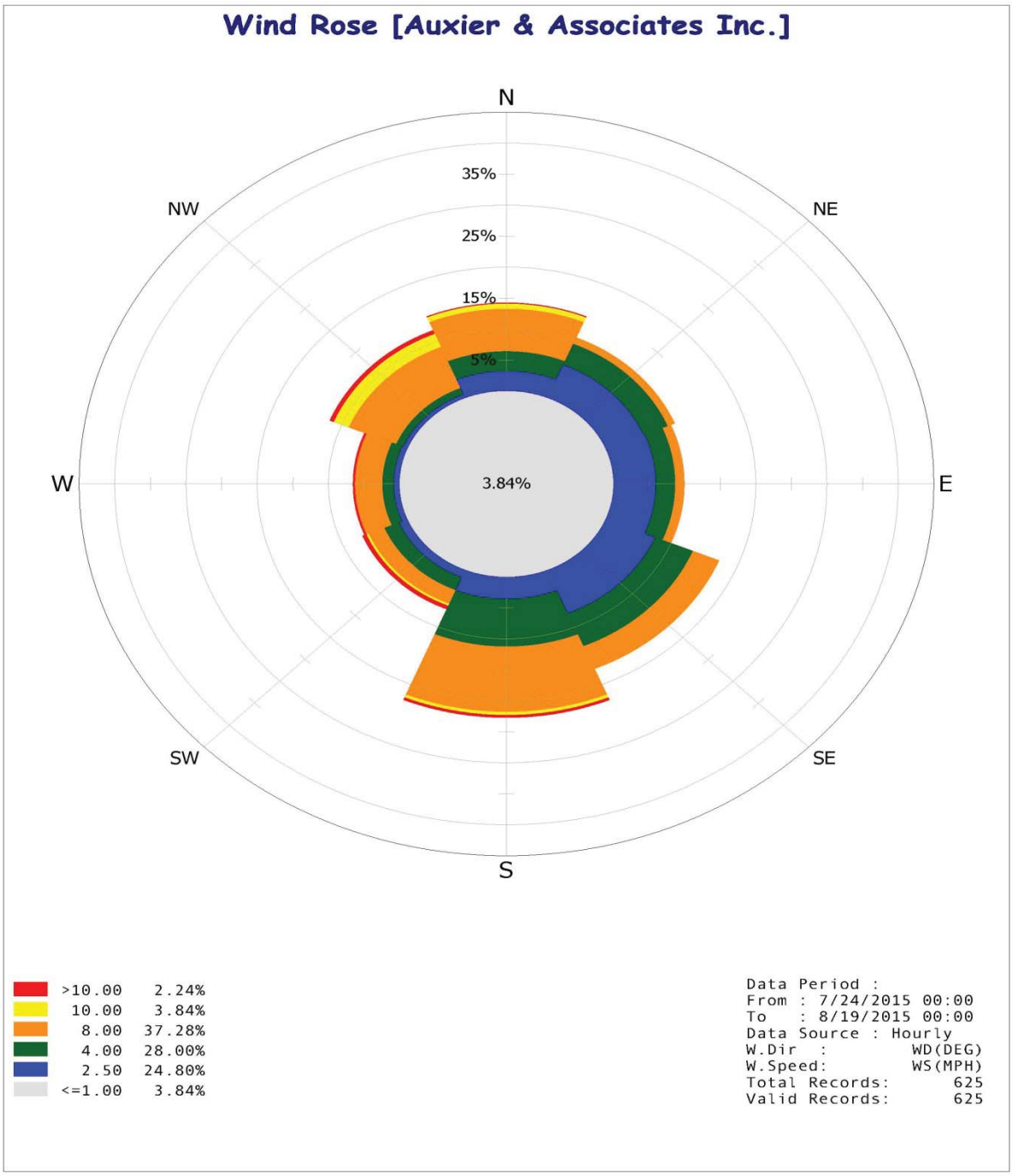

Figure 5 August 2015 Wind Rose

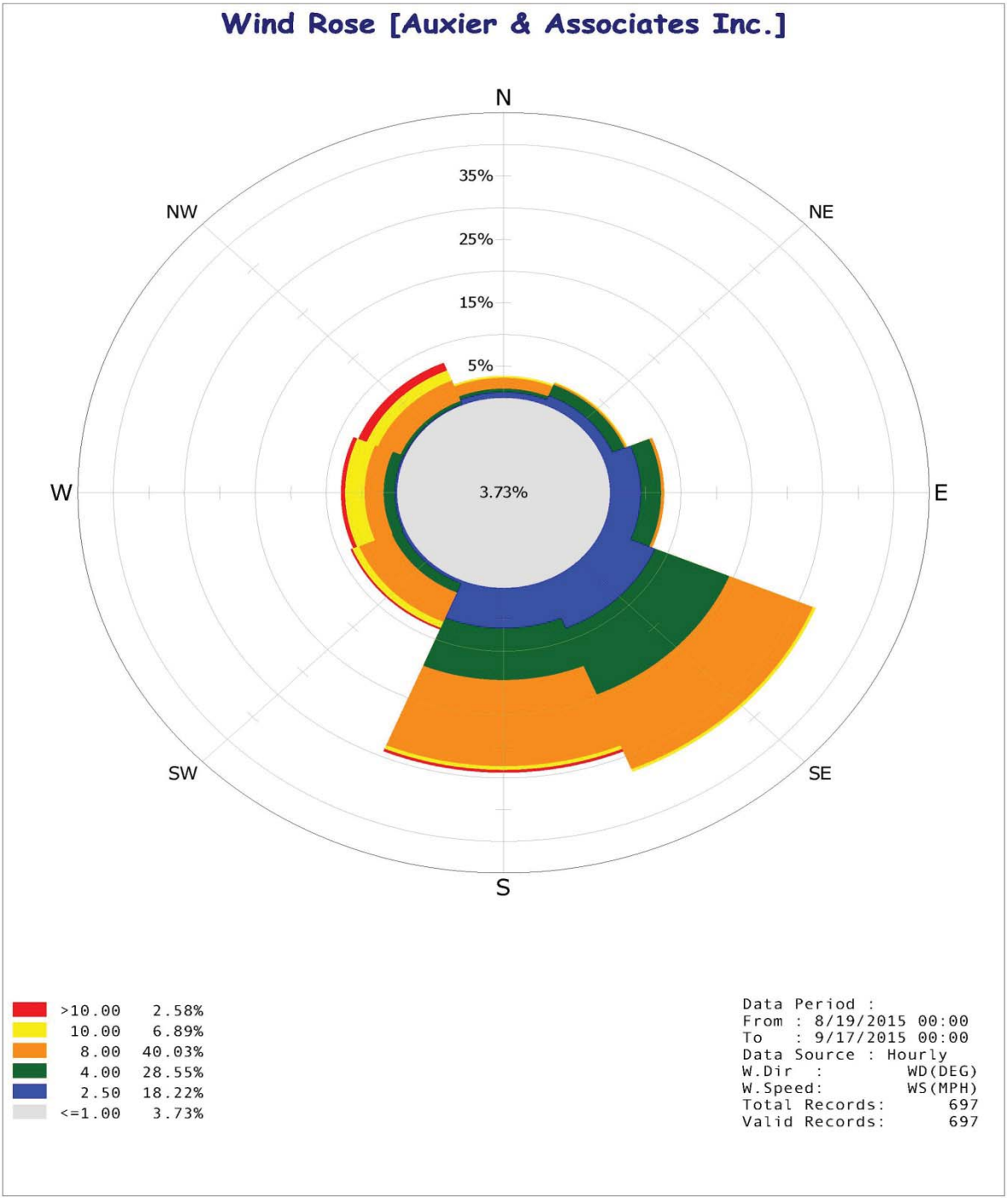

Figure 6 September 2015 Wind Rose

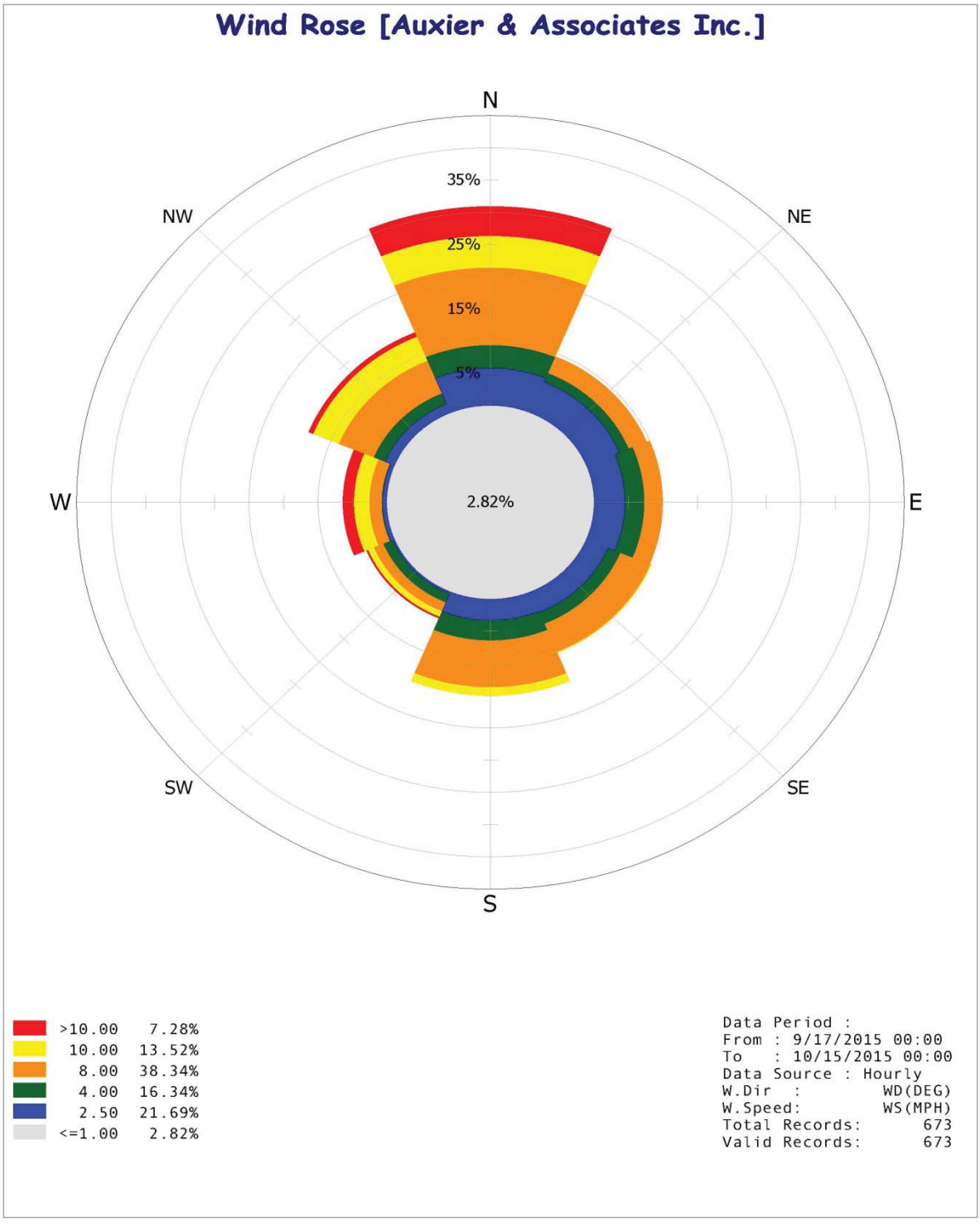

Figure 7 October 2015 Wind Rose

of 40 cubic feet per minute (CFM) for the sampling period. At the time of filter collection, the actual conditions for the sampling period as measured by the met station are used to calculate the actual flow rate. The met station data are presented in Appendix G.

A meteorological data logger was installed on the Bridgeton Landfill property and began operations on May 26, 2015, allowing for the collection of site-specific temperature and barometric pressure data for the August through October sampling periods.

The actual flow rate for the sampling period is converted from CFM to milliliters (ml) or cubic meters (m^3). The flow rate is then multiplied by the sampling time to obtain the total volume of air sampled.

3. Calculate the concentration of the air sampled.

   Divide the activity calculated in Step 1 by the volume of air sampled as calculated in Step 2. Unit conversion is necessary in order to compare to the results obtained by other entities such as the EPA or NRC emission limits. Activity units and volume units are chosen based on the equivalent comparison units.

In addition to gross alpha and gross beta analysis, the samples from September were analyzed for isotopic uranium, isotopic thorium and by gamma spectroscopy.

3.2.2 Gross alpha and gross beta results

Statistical analysis for gross alpha and beta results for each station in pCi/m^3 for the first two quarters of operation are shown in Table 4 and Table 6. The second-quarter results are reflected graphically in Figure 8 and Figure 9. A summary of the validated results is shown in Appendix A.

The results of the first two quarters (May through October 2015) of on-site monitoring for gross alpha and gross beta were compared to the results obtained from the EPA off-site monitoring program over the period from May 2014 through February 2015. The EPA off-site sampling results are shown in Table 5 and Table 7. Overall, the gross alpha results obtained from the 13 on-site stations are similar to or slightly higher than the results obtained from EPA's five off-site stations. Whether this effect is statistically significant cannot be determined until additional on-site data are obtained. The differences may reflect dust levels, seasonal conditions (pollen levels), differences in precipitation (i.e., soil moisture), or differences in the total particulate levels between the period covered by EPA's air monitoring program and the period covered by the on-site air monitoring program. The gross beta results obtained from the 13 on-site stations are similar to the gross beta results obtained from the EPA off-site monitoring locations.

Table 4 Summary of On-site Gross Alpha Results

Summary Statistic	Station 1 (pCi/m^3)	Station 2 (pCi/m^3)	Station 3 (pCi/m^3)	Station 4 (pCi/m^3)	Station 5 (pCi/m^3)	Station (pCi/m^3)
Detections	6/6	2/6	6/6	6/6	6/6	6/6
Minimum Concentration	1.45E-03	1.54E-03	1.52E-03	1.28E-03	1.40E-03	5.27E-04
Median Concentration	3.44E-03	1.98E-03	3.43E-03	3.72E-03	4.17E-03	3.86E-0
Maximum Concentration	5.31E-03 J+	2.42E-03 J+	4.78E-03 J+	6.09E-03 J+	5.38E-03 J+	5.05E-03

Summary Statistic	Station 8 (pCi/m^3)	Station 9 (pCi/m^3)	Station 10 (pCi/m^3)	Station 11 (pCi/m^3)	Station 12 (pCi/m^3)	Station (pCi/m^3)
Detections	6/6	5/6	6/6	6/6	6/6	6/6
Minimum Concentration	1.50E-03	2.43E-03 J+	1.09E-03	1.95E-03	1.58E-03	1.40E-0
Median Concentration	4.54E-03	3.56E-03	3.51E-03	3.20E-03	4.06E-03	3.23E-0
Maximum Concentration	5.75E-03 J+	4.37E-03 J+	4.26E-03 J+	6.16E-03 J+	5.72E-03 J+	5.23E-03

Table 5 Summary of Off-site EPA Gross Alpha Results (Tetra Tech 2015)

Summary Statistic	Station 1 (pCi/m^3)	Station 2 (pCi/m^3)	Station 3 (pCi/m^3)	Station 4 (pCi/m^3)
Detections	32/40	32/40	27/40	26/40
Minimum Concentration	1.99E-04 U	1.93E-04 U	1.02E-04 U	1.17E-04 U
Median Concentration	6.17E-04	6.25E-04	6.71E-04	6.11E-04
Maximum Concentration	1.63E-03 J	1.68E-03 J	1.58E-03 J	1.38E-03 J

Table 6 Summary of On-site Gross Beta Results

Summary Statistic	Station 1 (pCi/m^3)	Station 2 (pCi/m^3)	Station 3 (pCi/m^3)	Station 4 (pCi/m^3)	Station 5 (pCi/m^3)	Station (pCi/m^3)
Detections	6/6	2/6	6/6	6/6	6/6	6/6
Minimum Concentration	1.84E-02 J+	1.94E-02 J+	2.05E-02 J+	1.76E-02 J+	1.73E-02 J+	4.06E-03
Median Concentration	2.87E-02	1.94E-02	2.83E-02	2.94E-02	3.09E-02	3.01E-0
Maximum Concentration	4.45E-02 J+	1.95E-02	4.37E-02 J+	4.77E-02 J+	4.31E-02 J+	4.43E-02

Summary Statistic	Station 8 (pCi/m^3)	Station 9 (pCi/m^3)	Station 10 (pCi/m^3)	Station 11 (pCi/m^3)	Station 12 (pCi/m^3)	Station (pCi/m^3)
Detections	6/6	5/6	6/6	6/6	6/6	6/6
Minimum Concentration	1.89E-02 J+	2.21E-02 J+	1.53E-02 J+	2.03E-02 J+	2.15E-02 J+	1.86E-02
Median Concentration	3.54E-02	3.03E-02	2.70E-02	2.33E-02	3.12E-02	2.65E-0
Maximum Concentration	4.36E-02 J+	4.01E-02 J+	3.80E-02 J+	4.76E-02 J+	4.26E-02 J+	3.90E-02

Table 7 Summary of Off-site EPA Gross Beta Results (Tetra Tech 2015)

Summary Statistic	Station 1 (pCi/m^3)	Station 2 (pCi/m^3)	Station 3 (pCi/m^3)	Station 4 (pCi/m^3)	St
Detections	40/40	40/40	40/40	40/40	
Minimum Concentration	1.15E-02	4.13E-03 J	1.32E-02 J	1.32E-02 J	
Median Concentration	1.96E-02	1.96E-02	2.02E-02	2.01E-02	
Maximum Concentration	3.57E-02	3.61E-02	3.88E-02	3.70E-02	

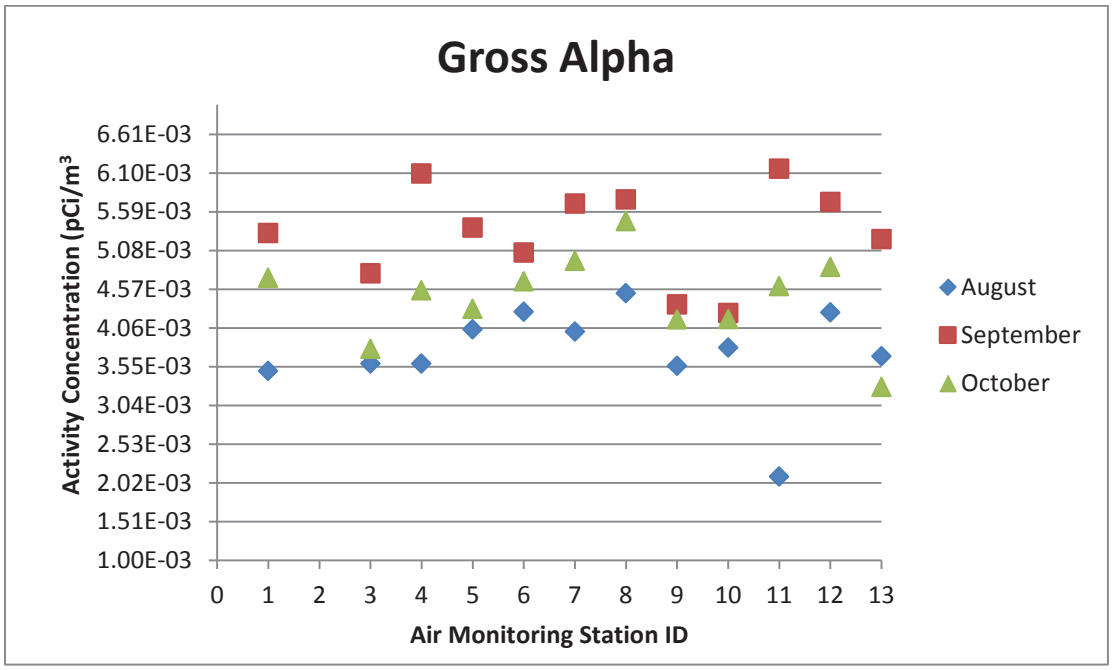

Figure 8 Graphical Representation of Gross Alpha Results in pCi/m^3

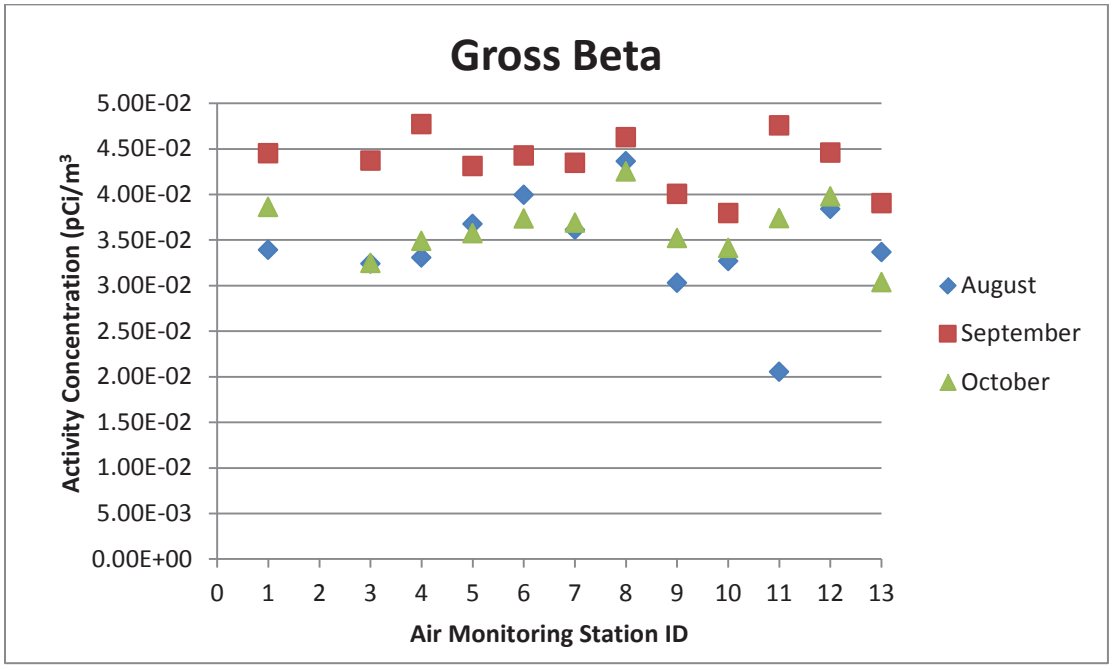

Figure 9 Graphical Representation of Gross Beta Results in pCi/m^3

3.2.3 Isotopic and gamma spectroscopy results

For the first quarter of sampling (May through July), May and June particulate samples were analyzed for isotopic thorium, uranium, and by gamma spectroscopy. The middle month of subsequent quarters will be submitted for isotopic analysis and gamma spectroscopy. For the second quarter, the particulate samples for September were analyzed for isotopic analyses and by gamma spectroscopy.

As expected, the isotopic and the gamma spectroscopy results show only naturally occurring radioactive materials. Isotopic results for uranium-238, thorium-230, and combined radium results (the sum of actinium-228 (for radium-228) and bismuth-214 (for radium-226) from gamma spectrometry) for each station in pCi/m^3 for May, June and September are shown in Table 8. Statistical evaluations will be performed on the data in subsequent reports when sufficient numbers of sample results are available. A summary of the validated results are shown in Appendix B.

The May, June, and September on-site monitoring results for uranium-238, thorium-230 and combined radium were compared to the results obtained from the EPA off-site monitoring program over the period from May 2014 through February 2015. The EPA off-site sampling results are shown in Table 9. In all cases, the maximum isotopic uranium and thorium and combined radium results obtained from the 13 on-site stations are lower than the results obtained from EPA's five off-site stations.

The isotopic results were reported in pCi/m^3, converted to μCi/ml and compared to 10 C.F.R. § 20 Appendix B Table 2, Effluent Limits. These effluent limits, established by the U.S. Department of Energy, set forth standards for protection of the public against radiation emissions. . The results are well below the applicable effluent limits, as shown in Appendix C .

Table 8 Isotopic and Total Radium Results for May, June and September

	U-238 pCi/m^3			Th-230 pCi/m^3			*Total Radium pCi/m^3		
Station	May	June	Sept	May	June	Sept	May	June	Sept
1	3.36E-05	3.13E-05	2.58E-05	2.36E-05	1.75E-05	3.45E-05	3.22E-04	6.62E-05	2.46E-04
2	3.43E-05	3.05E-05	**	2.76E-05	8.08E-06	**	3.27E-04	1.64E-04	**
3	5.08E-05	3.45E-05	2.99E-05	2.76E-05	1.90E-05	7.03E-05	3.23E-04	1.70E-04	1.76E-04
4	3.65E-05	3.47E-05	2.73E-05	3.14E-05	3.87E-05	4.82E-05	2.06E-04	3.18E-04	2.38E-04
5	4.28E-05	1.38E-05	3.81E-05	2.93E-05	3.39E-05	2.85E-05	1.01E-04	1.34E-04	4.93E-05
6	2.54E-05	3.19E-05	2.09E-05	3.08E-05	1.05E-05	8.06E-05	4.51E-05	1.97E-04	3.50E-04
7	4.32E-05	2.94E-05	2.92E-05	5.81E-05	2.93E-05	3.67E-05	4.16E-04	2.19E-04	2.70E-04
8	4.61E-05	3.39E-05	2.42E-05	3.17E-05	1.93E-05	5.87E-05	2.16E-04	2.71E-04	5.86E-05
9	**	3.32E-05	3.57E-05	**	3.05E-05	2.34E-05	*	6.98E-05	2.75E-05
10	3.82E-05	3.16E-05	4.34E-05	4.14E-05	2.66E-05	7.20E-05	2.26E-04	4.61E-05	2.14E-04
11	2.51E-05	2.39E-05	3.96E-05	3.65E-05	2.23E-05	7.63E-05	3.73E-04	1.97E-04	2.89E-04
12	2.69E-05	4.13E-05	2.23E-05	3.51E-05	4.96E-05	8.64E-05	3.63E-05	1.44E-04	2.38E-04
13	1.95E-05	3.49E-05	2.67E-05	4.39E-05	1.78E-05	2.21E-05	3.50E-04	1.70E-04	1.94E-04

*Calculated from the bismouth-214 (radium-226) and actinium-228 (Ra-228) gamma spectroscopy results. **Samplers not functioning

Table 9 Summary of Isotopic and Radium Results (Tetra Tech 2015)

SUMMARY STATISTICS OF URANIUM-238 RESULTS	Station 1 (pCi/m^3)	Station 2 (pCi/m^3)	Station 3 (pCi/m^3)	Station 4 (pCi/m^3)	Station 5 (reference) (pCi/m^3)
Detections1	11/21	13/21	13/21	9/21	9/21
Minimum Concentration2	-1.03E-05 U	4.43E-06 U	-4.42E-05 U	2.75E-05 U	-2.25E-05 U
Median Concentration3	1.26E-04	1.21E-04	1.18E-04	9.15E-05	1.02E-04
Maximum Concentration4	6.22E-04 J	9.47E-04	3.86E-04 J	3.07E-04 J	1.67E-04 J
SUMMARY STATISTICS OF THORIUM-230 RESULTS	**Station 1** (pCi/m^3)	**Station 2** (pCi/m^3)	**Station 3** (pCi/m^3)	**Station 4** (pCi/m^3)	**Station 5 (reference)** (pCi/m^3)
Detections1	20/21	18/21	20/21	20/21	19/21
Minimum Concentration2	3.23E-04 J	3.07E-04 U	3.13E-04 J	3.05E-04 J	2.71E-04 U
Median Concentration3	4.94E-04	5.86E-04	5.99E-04	6.06E-04	5.78E-04
Maximum Concentration4	4.37E-03	1.36E-03 J	8.86E-04 J	1.06E-03 J	1.99E-03 J
SUMMARY STATISTICS OF TOTAL ALPHA-EMITTING RADIUM RESULTS	**Station 1** (pCi/m^3)	**Station 2** (pCi/m^3)	**Station 3** (pCi/m^3)	**Station 4** (pCi/m^3)	**Station 5 (reference)** (pCi/m^3)
Detections1	2/21	4/21	3/21	1/21	2/21
Minimum Concentration2	-2.50E-04 U	-2.01E-04 U	-4.04E-05 U	-4.86E-04 U	-4.34E-04 UG
Median Concentration3	3.97E-04	5.14E-04	4.55E-04	3.66E-04	4.68E-04
Maximum Concentration4	1.10E-03 J	1.80E-03 JG	2.01E-03	3.66E-04 J (226)	4.40E-03

3.3 VOC RESULTS

Prior to August 2015, the laboratory reported 26 VOCs from analysis of the Radiello passive/diffusive samples. laboratory issued a request to discontinue reporting 2-propanol (rubbing alcohol) from the Radiello 130 reporting was approved by the EPA via email on August 11, 2015. The second-quarter validated VOC results are presente following tables provide a statistical summary of the 15 VOCs with results above the laboratory reporting limits second quarter. Values are presented in µg/m^3. The remaining 11 VOCs for which the laboratory analyzed were reporting limit, and include 1,1,1-Trichloroethane, 1,2-Dichloroethane, 1,4-Dichlorobenzene, 4-Methyl,-2-Penta Ethanol, Methyl-tert-butyl ether, Naphthalene, Propylbenzene, Styrene, and Trichloroethene.

An anomalous result for Toluene of 19 µg/m^3 occurred for the 6/24/15 to 7/8/15 sampling period at sampling Sta located at the intersection of St. Charles Rock Road and the facility entrance. Toluene is an additive in gasoline, paints, and is frequently used in laboratories as a solvent. The anomalous Toluene value was not included in the the data. Trip blanks are now included with the samples to assist in evaluating the source of the sample exposure

Table 10 Detected VOCs

Station	1 (µg/m^3)	5 (µg/m^3)	7 (µg/m^3)	8 (µg/m^3)	11 (µg/m^3)
Analyte	**2- Butanone (Methyl Ethyl Ketone)**				
No. Detects	13	13	13	13	12
No. Samples	13	13	13	13	13
Min	0.09	0.12	0.10	0.10	0.14
Median	0.18	0.19	0.20	0.17	0.19
Max	0.22	0.27	0.27	0.26	0.27
Analyte	**Benzene**				
No. Detects	9	9	10	10	9
No. Samples	13	13	13	13	13
Min	0.25	0.26	0.26	0.26	0.28
Median	0.28	0.30	0.31	0.32	0.30
Max	0.41	0.42	0.42	0.48	0.48

1 (µg/m^3)	5 (µg/m^3)	7 (µg/m^3)	8 (µg/m^3)	11 (µg/m^3)
2-Propanol (first quarter only)				
0	1	4	2	1
6	6	6	6	6
ND	0.21	0.22	0.22	0.21
ND	0.21	0.23	0.23	0.21
ND	0.21	0.24	0.24	0.21
Carbon Tetrachloride				
13	13	13	13	13
13	13	13	13	13
0.23	0.20	0.26	0.22	0.19
0.32	0.30	0.30	0.29	0.27
0.35	0.39	0.41	0.38	0.34

1 (µg/m^3)	5 (µg/m^3)	7 (µg/m^3)
Aceton		
8	7	10
13	13	13
0.15	0.18	0.13
0.20	0.30	0.19
0.38	0.50	0.45
Chlorofo		
3	6	3
13	13	13
0.07	0.07	0.07
0.07	0.08	0.08
0.11	0.10	0.11

Station	1 (µg/m^3)	5 (µg/m^3)	7 (µg/m^3)	8 (µg/m^3)	11 (µg/m^3)
Analyte	**Cyclohexane**				
No. Detects	5	8	11	3	5
No. Samples	13	13	13	13	13
Min	0.10	0.10	0.09	0.10	0.10
Median	0.12	0.11	0.12	0.11	0.12
Max	0.14	0.14	0.15	0.15	0.15
Analyte	**Heptane**				
No. Detects	13	13	13	13	13
No. Samples	13	13	13	13	13
Min	0.18	0.13	0.15	0.12	0.12
Median	0.26	0.21	0.25	0.20	0.18
Max	0.61	0.34	0.35	0.29	0.41
Analyte	**o-Xylene**				
No. Detects	12	11	13	10	9
No. Samples	13	13	13	13	13
Min	0.08	0.09	0.09	0.09	0.08
Median	0.09	0.12	0.13	0.12	0.10
Max	0.15	0.15	0.19	0.13	0.17

1 (µg/m^3)	5 (µg/m^3)	7 (µg/m^3)	8 (µg/m^3)	11 (µg/m^3)
Ethyl Acetate				
1	4	13	1	2
13	13	13	13	13
0.33	0.28	0.29	0.25	0.25
0.33	0.28	0.39	0.25	0.26
0.33	0.35	0.51	0.25	0.26
Hexane				
13	13	13	13	13
13	13	13	13	13
0.13	0.15	0.27	0.19	0.21
0.36	0.33	0.37	0.30	0.32
0.68	2.00	0.64	0.48	1.20
Tetrachloroethene				
12	6	10	3	3
13	13	13	13	13
0.14	0.09	0.09	0.10	0.10
0.22	0.10	0.10	0.10	0.12
0.47	0.14	0.17	0.15	0.20

1 (µg/m^3)	5 (µg/m^3)	7 (µg/m^3)
Ethyl Benzen		
12	13	13
13	13	13
0.08	0.08	0.09
0.09	0.11	0.14
0.13	0.14	0.17
m,p-Xylene		
13	13	13
13	13	13
0.21	0.22	0.27
0.30	0.35	0.42
0.39	0.45	0.58
Toluene		
13	13	13
13	13	13
0.43	0.43	0.57
0.55	0.69	0.87
0.82	0.94	1.20

EPA performed similar off-site sampling for VOCs using passive/diffusive samplers from December 2014 to March 2015. However, EPA sampled for seven days except for one period in January in which they sampled for 14 days. They noted no significant difference between the seven and 14-day sample results. The table below presents the results obtained from the five on-site monitoring stations compared to the results obtained from EPA's off-site monitoring program for those VOCs that were analyzed and detected by both programs (Tetra Tech 3 2015).

Table 11 Common Analytes (µg/m^3)

VOC	EPA Off-site Result Range	EPA MDL	On-site Range	On-site MDL
Benzene	041-0.7	0.023-0.039	0.25-0.48	0.052
Ethyl benzene	0.17-0.32	0.006-0.08	0.07-0.17	0.010
m,p-Xylene	0.44-1.1	0.015-0.07	0.18-0.58	0.026
o-Xylene	0.16-0.39	0.0085-0.085	0.08-0.19	0.014
Methyl Tert-butyl ether	ND	0.029-0.170.	ND	0.029
Toluene	0.2-0.58	0.03-0.2	0.32-1.20*	0.013
Trichloroethene	0.33-0.51	0.016-0.5	ND	0.012
Tetrachloroethene	0.23-0.46	0.018-0.14	0.089-0.47	0.014

*Maximum value does not include the value of 19 ug/m^3 reported for the July 8, 2015 sample as this result appears to be anomalous.

With the possible exception of the toluene results, the on-site results are similar to those obtained by EPA from the off-site monitoring locations.

3.4 TLD RESULTS

Thirteen TLDs for station monitoring and a control badge were received from the laboratory for the second quarter of monitoring. The field crew deployed the control badge as a station dosimeter when requested to include a duplicate TLD at one of the stations. This practice continued for the third quarter monitoring period; however, as a result of an audit and subsequent corrective action, a dosimeter specifically designated as a duplicate badge was requested, received and deployed for the January 2016 monitoring period.

Second-quarter gross TLD measurements for all 13 monitoring stations, and the duplicate placed at station 11 (labeled 11A in the report), are shown in Appendix E. The statistics for the first two quarters are presented in Table 12.

TLDs more suited to outdoor conditions were identified and deployed in January 2016. Also beginning in January 2016, trip blanks were included to assist in evaluating the source of sample exposures. The trip blank is stored in a lead-lined container during the sampling period, but shipped normally with the other TLDs. This allows for differentiating exposures that occur during shipping from exposures that occur during deployment.

Table 12 TLD Statistics

Statistic	Quarter 1 mrem	Quarter 2 mrem
Minimum	23	25
Median	25	30
Max	70	35

3.5 RADON RESULTS

Radon results for the 13 monitoring stations range from < 0.4 pCi/L to 0.7 pCi/L. The results are presented in Appendix G.

4. REFERENCES

A&A 2014 — *Air Monitoring, Sampling, and QA/QC Plan, West Lake Superfund Site Operable Unit 1,* October, 2014.

A&A 2016 — West Lake Landfill Perimeter Air Monitoring First Quarter Report, May, June, and July, March 2016

NRC 1988 — *"Radioactive Material in the West Lake Landfill – Summary Report," U.S. Nuclear Regulatory Commission (NRC), NUREG 1308* – Rev. 1, June 1988

RMC 1982 — *"Radiological Survey of the West Lake Landfill, St. Louis County, Missouri," Radiation Management Corporation (RMC),* NUREG/CR-2722, May 1982.

RMC 1981 — "Report on Site Visit – West Lake Landfill, St. Louis County, Missouri," RMC, 1981.

MARLAP 2004 — "Multi-Agency Radiological Laboratory Analytical Protocols Manual" (MARLAP), Part I, July 2004.

Tetra Tech 1 2015 — *Interim Data Summary of Radiological Parameters Analyzed During Ongoing Baseline Off-Site Air Monitoring*, *West Lake Landfill Site,* Tetra Tech, Inc., March 16, 2015.

Tetra Tech 2 2015 — *Interim Data Summary of Ongoing Baseline Off-Site Air Monitoring Via Sampling for Volatile Organic Compounds and Hydrogen Sulfide by Application of Passive/Diffusive Sampling Methods*, Tetra Tech, Inc., March 16, 2015.

Tetra Tech 3 2015 — *Final Summary of Baseline Off-Site Air Monitoring Via Sampling for Volatile Organic Compounds and Hydrogen Sulfide by Application of Passive/Diffusive Sampling Methods*, Tetra Tech, Inc., October, 2015.

APPENDIX A

VALIDATED GROSS ALPHA AND GROSS BETA PARTICULATE RESULTS

Validated Gross Alpha and Gross Beta Air Particulate Results										
Client ID	Sample Date	Report Units	Gross Alpha				Gross Beta			
			RESULT	Final Q	CV	CSU	RESULT	Final Q	CV	CSU
ENGWESA001	5/27/15 16:12	pCi/m^3	1.45E-03		2.84E-05	1.83E-04	1.84E-02	J+	1.33E-04	2.55E-03
ENGWESA002	5/28/15 8:30	pCi/m^3	1.54E-03		3.73E-05	1.92E-04	1.94E-02	J+	1.62E-04	2.69E-03
ENGWESA003	5/28/15 9:06	pCi/m^3	1.52E-03		3.57E-05	1.90E-04	2.05E-02	J+	1.36E-04	2.84E-03
ENGWESA004	5/28/15 9:30	pCi/m^3	1.28E-03		3.37E-05	1.62E-04	1.76E-02	J+	1.27E-04	2.44E-03
ENGWESA005	5/27/15 15:08	pCi/m^3	1.40E-03		2.80E-05	1.76E-04	1.73E-02	J+	1.31E-04	2.41E-03
ENGWESA006	5/27/15 16:50	pCi/m^3	1.75E-03		3.76E-05	2.15E-04	1.92E-02	J+	1.63E-04	2.66E-03
ENGWESA007	5/27/15 12:00	pCi/m^3	1.37E-03		1.77E-05	1.75E-04	1.74E-02	J+	1.58E-04	2.42E-03
ENGWESA008	5/27/15 15:38	pCi/m^3	1.50E-03		2.77E-05	1.88E-04	1.89E-02	J+	1.66E-04	2.62E-03
ENGWESA009	5/28/15 10:42	pCi/m^3								
ENGWESA010	5/28/15 11:06	pCi/m^3	1.09E-03		3.66E-05	1.41E-04	1.53E-02	J+	1.59E-04	2.13E-03
ENGWESA011	5/27/15 9:10	pCi/m^3	1.95E-03		1.66E-05	2.37E-04	2.16E-02	J+	1.48E-04	3.00E-03
ENGWESA012	5/27/15 10:36	pCi/m^3	1.58E-03		2.77E-05	1.97E-04	2.15E-02	J+	1.66E-04	2.99E-03
ENGWESA013	5/27/15 11:17	pCi/m^3	1.40E-03		2.93E-05	1.78E-04	1.86E-02	J+	1.37E-04	2.59E-03
ENGWESA013 FD	5/27/15 11:17	pCi/m^3	1.81E-03		1.71E-05	2.22E-04	2.07E-02	J+	1.53E-04	2.87E-03
ENGWESA001	6/24/15 12:15	pCi/m^3	2.08E-03	J+	1.21E-04	2.52E-04	1.95E-02	J+	1.79E-04	2.71E-03
ENGWESA002	6/24/15 9:40	pCi/m^3	2.42E-03	J+	1.14E-04	2.88E-04	1.95E-02	J+	1.78E-04	2.71E-03
ENGWESA003	6/24/15 10:40	pCi/m^3	2.43E-03	J+	1.17E-04	2.90E-04	2.27E-02	J+	1.76E-04	3.15E-03
ENGWESA004	6/24/15 11:40	pCi/m^3	2.34E-03	J+	1.14E-04	2.80E-04	2.20E-02	J+	1.64E-04	3.06E-03
ENGWESA005	6/23/15 10:30	pCi/m^3	2.11E-03	J+	1.20E-04	2.56E-04	1.99E-02	J+	1.45E-04	2.76E-03
ENGWESA006	6/24/15 13:00	pCi/m^3	5.27E-04	J+	1.13E-04	7.93E-05	4.06E-03	J+	1.74E-04	5.74E-04
ENGWESA007	6/23/15 9:38	pCi/m^3	2.57E-03	J+	1.23E-04	3.07E-04	2.09E-02	J+	1.88E-04	2.90E-03
ENGWESA008	6/23/15 11:25	pCi/m^3	2.45E-03	J+	1.24E-04	2.93E-04	2.56E-02	J+	1.43E-04	3.55E-03
ENGWESA009	6/23/15 13:26	pCi/m^3	2.43E-03	J+	1.80E-04	3.00E-04	2.21E-02	J+	1.96E-04	3.07E-03
ENGWESA010	6/23/15 14:10	pCi/m^3	2.41E-03	J+	1.37E-04	2.90E-04	2.13E-02	J+	2.13E-04	2.96E-03
ENGWESA011	6/23/15 8:59	pCi/m^3	2.32E-03	J+	1.35E-04	2.80E-04	2.03E-02	J+	1.42E-04	2.82E-03
ENGWESA012	6/23/15 14:50	pCi/m^3	2.54E-03	J+	1.19E-04	3.02E-04	2.19E-02	J+	1.26E-04	3.03E-03
ENGWESA012 FD	6/23/15 14:50	pCi/m^3	2.46E-03	J+	1.13E-04	2.93E-04	2.19E-02	J+	1.45E-04	3.04E-03
ENGWESA013	6/23/15 15:30	pCi/m^3	2.71E-03	J+	1.12E-04	3.21E-04	2.27E-02	J+	1.55E-04	3.15E-03
ENGWESA001	7/22/15 14:20	pCi/m^3	3.39E-03		1.20E-04	3.95E-04	2.36E-02		2.40E-04	3.27E-03
ENGWESA002										
ENGWESA003	7/23/15 7:29	pCi/m^3	3.27E-03		1.22E-04	3.81E-04	2.42E-02		2.50E-04	3.36E-03
ENGWESA004	7/23/15 8:19	pCi/m^3	3.85E-03		1.19E-04	4.44E-04	2.57E-02		2.00E-04	3.56E-03
ENGWESA005	7/22/15 11:00	pCi/m^3	4.42E-03		1.43E-04	5.08E-04	2.60E-02		2.15E-04	3.60E-03
ENGWESA006	7/22/15 13:55	pCi/m^3	3.45E-03		1.29E-04	4.02E-04	2.27E-02		2.18E-04	3.15E-03
ENGWESA007	7/22/15 10:32	pCi/m^3	2.29E-03		1.33E-04	2.75E-04	1.56E-02		1.78E-04	2.17E-03
ENGWESA008	7/22/15 11:20	pCi/m^3	4.57E-03		1.54E-04	5.27E-04	2.82E-02		2.43E-04	3.91E-03
ENGWESA009	7/23/15 8:39	pCi/m^3	3.38E-03		1.25E-04	3.94E-04	2.34E-02		2.23E-04	3.25E-03
ENGWESA010	7/22/15 10:10	pCi/m^3	3.22E-03		1.33E-04	3.78E-04	2.03E-02		2.01E-04	2.82E-03
ENGWESA011	7/22/15 7:32	pCi/m^3	4.07E-03		1.24E-04	4.69E-04	2.49E-02		1.73E-04	3.46E-03
ENGWESA011 FD	7/22/15 7:32	pCi/m^3	4.63E-03		1.26E-04	5.32E-04	2.72E-02		1.69E-04	3.77E-03
ENGWESA012	7/22/15 8:20	pCi/m^3	3.86E-03		1.21E-04	4.45E-04	2.40E-02		1.82E-04	3.33E-03
ENGWESA013	7/22/15 8:35	pCi/m^3	3.18E-03		1.23E-04	3.72E-04	2.12E-02		1.87E-04	2.94E-03

Validated Gross Alpha and Gross Beta Air Particulate Results										
Client ID	Sample Date	Report Units	Gross Alpha				Gross Beta			
			RESULT	Final Q	CV	CSU	RESULT	Final Q	CV	CSU
ENGWESA001	8/19/2015	pCi/m3	3.49E-03	J+	1.18E-04	4.05E-04	3.39E-02	J+	1.83E-04	4.70E-03
ENGWESA002										
ENGWESA003	8/19/2015	pCi/m3	3.59E-03	J+	1.42E-04	4.20E-04	3.24E-02	J+	2.33E-04	4.49E-03
ENGWESA004	8/19/2015	pCi/m3	3.59E-03	J+	1.55E-04	4.21E-04	3.31E-02	J+	2.39E-04	4.58E-03
ENGWESA005	8/19/2015	pCi/m3	4.04E-03	J+	1.37E-04	4.66E-04	3.67E-02	J+	2.02E-04	5.09E-03
ENGWESA006	8/19/2015	pCi/m3	4.27E-03	J+	1.38E-04	4.95E-04	4.00E-02	J+	1.87E-04	5.53E-03
ENGWESA007	8/19/2015	pCi/m3	4.01E-03	J+	1.22E-04	4.63E-04	3.61E-02	J+	1.28E-04	5.00E-03
ENGWESA008	8/19/2015	pCi/m3	4.52E-03	J+	1.23E-04	5.19E-04	4.36E-02	J+	1.38E-04	6.04E-03
ENGWESA009	8/19/2015	pCi/m3	3.56E-03	J+	1.51E-04	4.18E-04	3.03E-02	J+	2.25E-04	4.20E-03
ENGWESA010	8/19/2015	pCi/m3	3.80E-03	J+	1.26E-04	4.42E-04	3.27E-02	J+	1.29E-04	4.53E-03
ENGWESA010 FD	8/19/2015	pCi/m3	4.25E-03	J+	1.31E-04	4.90E-04	3.41E-02	J+	1.38E-04	4.72E-03
ENGWESA011	8/19/2015	pCi/m3	2.10E-03	J+	1.40E-04	2.54E-04	2.05E-02	J+	1.39E-04	2.85E-03
ENGWESA012	8/19/2015	pCi/m3	4.26E-03	J+	1.19E-04	4.90E-04	3.84E-02	J+	1.07E-04	5.32E-03
ENGWESA013	8/19/2015	pCi/m3	3.69E-03	J+	1.53E-04	4.32E-04	3.37E-02	J+	1.74E-04	4.67E-03
ENGWESA001	9/16/2015	pCi/m3	5.31E-03	J+	1.54E-05	6.04E-04	4.45E-02	J+	2.33E-04	6.16E-03
ENGWESA002										
ENGWESA003	9/17/2015	pCi/m3	4.78E-03	J+	2.09E-05	5.46E-04	4.37E-02	J+	2.40E-04	6.05E-03
ENGWESA004	9/17/2015	pCi/m3	6.09E-03	J+	1.77E-05	6.90E-04	4.77E-02	J+	2.51E-04	6.60E-03
ENGWESA005	9/16/2015	pCi/m3	5.38E-03	J+	3.33E-05	6.13E-04	4.31E-02	J+	2.41E-04	5.97E-03
ENGWESA006	9/16/2015	pCi/m3	5.05E-03	J+	1.82E-05	5.77E-04	4.43E-02	J+	2.27E-04	6.13E-03
ENGWESA007	9/16/2015	pCi/m3	5.70E-03	J+	2.54E-05	6.48E-04	4.34E-02	J+	1.91E-04	6.02E-03
ENGWESA008	9/16/2015	pCi/m3	5.75E-03	J+	3.57E-05	6.53E-04	4.63E-02	J+	1.64E-04	6.41E-03
ENGWESA009	9/17/2015	pCi/m3	4.37E-03	J+	1.92E-05	4.99E-04	4.01E-02	J+	1.62E-04	5.55E-03
ENGWESA009 FD	9/17/2015	pCi/m3	4.26E-03	J+	3.14E-05	5.11E-04	3.58E-02	J+	1.55E-04	4.96E-03
ENGWESA010	9/17/2015	pCi/m3	4.46E-03	J+	3.95E-05	4.87E-04	3.80E-02	J+	2.28E-04	5.26E-03
ENGWESA011	9/16/2015	pCi/m3	6.16E-03	J+	2.68E-05	7.00E-04	4.76E-02	J+	1.87E-04	6.58E-03
ENGWESA012	9/17/2015	pCi/m3	5.72E-03	J+	3.29E-05	6.50E-04	4.46E-02	J+	2.32E-04	6.17E-03
ENGWESA013	9/17/2015	pCi/m3	5.23E-03	J+	2.52E-05	5.97E-04	3.90E-02	J+	1.66E-04	5.41E-03
ENGWESA001	10/14/2015	pCi/m3	4.72E-03	J+	1.83E-05	5.39E-04	3.86E-02	J+	1.52E-04	5.35E-03
ENGWESA002										
ENGWESA003	10/15/2015	pCi/m3	3.79E-03	J+	3.58E-05	4.38E-04	3.25E-02	J+	1.84E-04	4.50E-03
ENGWESA004	10/15/2015	pCi/m3	4.55E-03	J+	1.92E-05	5.22E-04	3.49E-02	J+	1.45E-04	4.83E-03
ENGWESA005	10/14/2015	pCi/m3	4.31E-03	J+	3.27E-05	4.95E-04	3.57E-02	J+	1.87E-04	4.95E-03
ENGWESA006	10/14/2015	pCi/m3	4.67E-03	J+	3.10E-05	5.35E-04	3.74E-02	J+	2.22E-04	5.18E-03
ENGWESA007	10/14/2015	pCi/m3	4.94E-03	J+	3.69E-05	5.65E-04	3.69E-02	J+	2.14E-04	5.11E-03
ENGWESA008	10/14/2015	pCi/m3	5.46E-03	J+	2.18E-05	6.21E-04	4.25E-02	J+	2.52E-04	5.89E-03
ENGWESA009	10/15/2015	pCi/m3	4.17E-03	J+	2.97E-05	4.79E-04	3.52E-02	J+	2.12E-04	4.87E-03
ENGWESA010	10/15/2015	pCi/m3	4.18E-03	J+	4.02E-05	4.83E-04	3.41E-02	J+	2.12E-04	4.73E-03
ENGWESA011	10/14/2015	pCi/m3	4.61E-03	J+	2.27E-05	5.29E-04	3.74E-02	J+	2.22E-04	5.18E-03
ENGWESA012	10/15/2015	pCi/m3	4.86E-03	J+	3.67E-05	5.56E-04	3.98E-02	J+	2.37E-04	5.51E-03
ENGWESA013	10/15/2015	pCi/m3	3.28E-03	J+	2.73E-05	3.82E-04	3.04E-02	J+	2.36E-04	4.21E-03
ENGWESA013 FD	10/15/2015	pCi/m3	3.24E-03	J+	2.51E-05	3.79E-04	3.08E-02	J+	1.98E-04	4.27E-03

APPENDIX B

VALIDATED ISOTOPIC AIR PARTICULATE RESULTS

Validated Isotopic Air Particulate Results

Client ID	Sample Date	Report Units	Actinium-227				Actinium-2		
			RESULT	FINAL Q	CSU	CV	RESULT	FINAL Q	
ENGWESA001	5/27/15 16:12	pCi/m^3	1.46E-05	J	8.38E-06	4.53E-07	1.70E-04	J	2.
ENGWESA002	5/28/15 8:30	pCi/m^3	7.11E-06	J	6.87E-06	6.49E-07	1.66E-04	J	1.
ENGWESA003	5/28/15 9:06	pCi/m^3	6.45E-06	J	4.67E-06	7.79E-07	2.14E-04	J	1.
ENGWESA004	5/28/15 9:30	pCi/m^3	6.49E-06	J	4.64E-06	6.89E-08	1.16E-04	U	2.
ENGWESA005	5/27/15 15:08	pCi/m^3	6.78E-06	J	4.72E-06	5.47E-07	-5.33E-06	U	4.
ENGWESA006	5/27/15 16:50	pCi/m^3	1.04E-05	J	6.18E-06	1.07E-06	-2.39E-04	U	2.
ENGWESA007	5/27/15 12:00	pCi/m^3	8.20E-06	J	5.43E-06	2.17E-07	1.78E-04	J	1.
ENGWESA008	5/27/15 15:38	pCi/m^3	3.42E-06	J	3.30E-06	3.10E-07	1.63E-04	J	1.
ENGWESA009	5/28/15 10:42	pCi/m^3							
ENGWESA010	5/28/15 11:06	pCi/m^3	8.73E-06	J	5.95E-06	8.34E-08	1.14E-04	U	1.
ENGWESA011	5/27/15 9:10	pCi/m^3	6.58E-06	J	4.86E-06	5.94E-07	2.31E-04	J	1.
ENGWESA012	5/27/15 10:36	pCi/m^3	1.24E-06	J	2.68E-06	1.07E-06	-1.02E-05	U	1.
ENGWESA013	5/27/15 11:17	pCi/m^3	4.24E-06	J	4.43E-06	2.87E-07	3.27E-04	J	3.
ENGWESA001	6/24/15 12:15	pCi/m^3	-5.48E-07	U	2.20E-06	6.35E-07	1.91E-05	U	1.
ENGWESA002	6/24/15 9:40	pCi/m^3	6.41E-06	J	6.43E-06	8.40E-07	7.75E-05	U	1.
ENGWESA003	6/24/15 10:40	pCi/m^3	8.10E-07	U	2.39E-06	8.98E-07	1.15E-04	J	1.
ENGWESA004	6/24/15 11:40	pCi/m^3	1.69E-06	J	2.35E-06	3.99E-07	1.78E-04	J	1.
ENGWESA005	6/23/15 10:30	pCi/m^3	5.00E-06	J	4.52E-06	5.37E-07	1.26E-04	J	1.
ENGWESA006	6/24/15 13:00	pCi/m^3	3.69E-06	J	3.44E-06	5.23E-07	6.61E-05	U	2.
ENGWESA007	6/23/15 9:38	pCi/m^3	5.00E-06	J	4.72E-06	1.56E-06	1.81E-04	J	1.
ENGWESA008	6/23/15 11:25	pCi/m^3	3.80E-06	J	4.08E-06	1.15E-06	4.46E-05	U	1.
ENGWESA009	6/23/15 13:26	pCi/m^3	3.04E-06	J	3.71E-06	2.80E-07	-8.45E-06	U	2.
ENGWESA010	6/23/15 14:10	pCi/m^3	3.90E-06	J	4.03E-06	1.01E-06	4.61E-05	U	1.
ENGWESA011	6/23/15 8:59	pCi/m^3	1.63E-06	J	2.79E-06	4.17E-07	1.38E-04	J	1.
ENGWESA012	6/23/15 14:50	pCi/m^3	1.99E-07	U	2.79E-06	1.22E-06	9.22E-05	U	1.
ENGWESA013	6/23/15 15:30	pCi/m^3	-3.26E-06	U	2.14E-06	3.24E-06	1.33E-04	J	1.

Validated Isotopic Air Particulate Results

Client ID	Sample Date	Report Units	Actinium-227				Actinium-2		
			RESULT	FINAL Q	CSU	CV	RESULT	FINAL Q	
ENGWESA001	9/16/2015	pCi/m3	3.39E-06	J	4.73E-06	8.27E-07	1.07E-04	U	1.
ENGWESA006	9/16/2015	pCi/m3	2.75E-06	J	3.00E-06	6.21E-07	2.30E-04	J	1.
ENGWESA008	9/16/2015	pCi/m3	2.04E-06	J	2.55E-06	8.00E-07	-1.01E-05	U	1.
ENGWESA005	9/16/2015	pCi/m3	5.90E-06	J	3.91E-06	1.69E-07	-2.92E-05	U	3.
ENGWESA007	9/16/2015	pCi/m3	1.68E-06	J	2.15E-06	4.98E-07	1.77E-04	J	1.
ENGWESA011	9/16/2015	pCi/m3	2.93E-06	J	3.31E-06	1.38E-06	1.41E-04	J	1.
ENGWESA012	9/17/2015	pCi/m3	7.92E-07	J	1.51E-06	3.24E-07	1.07E-04	U	1.
ENGWESA013	9/17/2015	pCi/m3	1.67E-07	UJ	1.08E-06	4.05E-07	1.57E-04	J	1.
ENGWESA003	9/17/2015	pCi/m3	3.51E-06	J	3.68E-06	6.29E-07	1.92E-04	J	1.
ENGWESA004	9/17/2015	pCi/m3	1.24E-06	J	2.21E-06	6.94E-07	1.54E-04	J	1.
ENGWESA009	9/17/2015	pCi/m3	2.87E-06	J	4.42E-06	1.55E-06	4.02E-06	U	3.
ENGWESA010	9/17/2015	pCi/m3	4.88E-06	J	3.67E-06	8.07E-07	1.29E-04	J	1.

Client ID	Sample Date	Report Units	Bismuth-214				Lead-210		
			RESULT	FINAL Q	CSU	CV	RESULT	FINAL Q	
ENGWESA001	5/27/15 16:12	pCi/m^3	1.52E-04	U	1.06E-04	8.54E-05	8.89E-03		1.
ENGWESA002	5/28/15 8:30	pCi/m^3	1.61E-04	J	9.55E-05	7.81E-05	1.14E-02		1.
ENGWESA003	5/28/15 9:06	pCi/m^3	1.09E-04	J	1.28E-04	1.04E-04	9.09E-03		1.
ENGWESA004	5/28/15 9:30	pCi/m^3	8.94E-05	U	1.72E-04	9.25E-05	7.43E-03		1.
ENGWESA005	5/27/15 15:08	pCi/m^3	1.01E-04	J	7.62E-05	5.93E-05	9.97E-03		1.
ENGWESA006	5/27/15 16:50	pCi/m^3	4.51E-05	U	1.35E-04	9.22E-05	6.55E-03		1.
ENGWESA007	5/27/15 12:00	pCi/m^3	2.16E-04		9.75E-05	7.85E-05	7.31E-03		1.
ENGWESA008	5/27/15 15:38	pCi/m^3	5.24E-05	U	8.01E-05	6.06E-05	8.85E-03		1.
ENGWESA009	5/28/15 10:42	pCi/m^3							
ENGWESA010	5/28/15 11:06	pCi/m^3	1.13E-04	J	1.97E-04	9.34E-05	6.20E-03		1.
ENGWESA011	5/27/15 9:10	pCi/m^3	1.42E-04	J	9.24E-05	7.25E-05	8.42E-03		1.
ENGWESA012	5/27/15 10:36	pCi/m^3	3.63E-05	U	7.94E-05	5.94E-05	9.05E-03		1.
ENGWESA013	5/27/15 11:17	pCi/m^3	2.23E-05	U	2.09E-04	1.50E-04	2.02E-02		2.
ENGWESA001	6/24/15 12:15	pCi/m^3	4.71E-05	U	9.88E-05	7.33E-05	8.51E-03		1.
ENGWESA002	6/24/15 9:40	pCi/m^3	8.67E-05	J	8.36E-05	6.43E-05	9.67E-03		1.
ENGWESA003	6/24/15 10:40	pCi/m^3	5.49E-05	U	7.74E-05	5.88E-05	1.01E-02		1.
ENGWESA004	6/24/15 11:40	pCi/m^3	1.40E-04	J	8.60E-05	6.76E-05	1.03E-02		1.
ENGWESA005	6/23/15 10:30	pCi/m^3	7.55E-06	U	8.02E-05	5.77E-05	9.31E-03		1.
ENGWESA006	6/24/15 13:00	pCi/m^3	1.31E-04	J	2.15E-04	9.05E-05	1.00E-03	J	6.
ENGWESA007	6/23/15 9:38	pCi/m^3	3.74E-05	U	7.19E-05	5.38E-05	1.06E-02		1.
ENGWESA008	6/23/15 11:25	pCi/m^3	2.27E-04		9.51E-05	7.66E-05	9.34E-03		1.
ENGWESA009	6/23/15 13:26	pCi/m^3	6.98E-05	U	1.03E-04	7.83E-05	9.50E-03		1.
ENGWESA010	6/23/15 14:10	pCi/m^3	-2.02E-05	U	8.55E-05	5.99E-05	9.78E-03		1.
ENGWESA011	6/23/15 8:59	pCi/m^3	5.87E-05	U	8.87E-05	6.65E-05	1.08E-02		1.
ENGWESA012	6/23/15 14:50	pCi/m^3	5.21E-05	U	9.37E-05	7.02E-05	1.25E-02		1.
ENGWESA013	6/23/15 15:30	pCi/m^3	3.74E-05	U	8.08E-05	5.99E-05	9.92E-03		1.

Client ID	Sample Date	Report Units	Bismuth-214				Lead-210		
			RESULT	FINAL Q	CSU	CV	RESULT	FINAL Q	
ENGWESA001	9/16/2015	pCi/m3	1.39E-04	J	9.07E-05	7.60E-05	2.54E-02		3.
ENGWESA006	9/16/2015	pCi/m3	1.20E-04	J	6.43E-05	5.64E-05	2.67E-02		3.
ENGWESA008	9/16/2015	pCi/m3	6.86E-05	J	8.05E-05	6.39E-05	2.32E-02		2.
ENGWESA005	9/16/2015	pCi/m3	7.85E-05	U	2.11E-04	1.65E-04	2.41E-02		3.
ENGWESA007	9/16/2015	pCi/m3	9.27E-05	J	1.02E-04	7.89E-05	2.11E-02		2.
ENGWESA011	9/16/2015	pCi/m3	1.48E-04	J	9.35E-05	7.75E-05	2.27E-02		2.
ENGWESA012	9/17/2015	pCi/m3	1.31E-04	J	9.02E-05	7.39E-05	2.14E-02		2.
ENGWESA013	9/17/2015	pCi/m3	3.69E-05	U	7.99E-05	6.02E-05	2.23E-02		2.
ENGWESA003	9/17/2015	pCi/m3	-1.67E-05	U	8.73E-05	5.95E-05	2.45E-02		2.
ENGWESA004	9/17/2015	pCi/m3	8.37E-05	J	8.50E-05	6.70E-05	2.20E-02		2.
ENGWESA009	9/17/2015	pCi/m3	2.35E-05	U	1.72E-04	1.30E-04	2.10E-02		2.
ENGWESA010	9/17/2015	pCi/m3	8.51E-05	J	8.25E-05	6.34E-05	2.35E-02		2.

Client ID	Sample Date	Report Units	Lead-214				Potassium-		
			RESULT	FINAL Q	CSU	CV	RESULT	FINAL Q	
ENGWESA001	5/27/15 16:12	pCi/m^3	2.92E-05	U	1.11E-04	8.03E-05	9.26E-04	J	5.
ENGWESA002	5/28/15 8:30	pCi/m^3	5.73E-05	J	6.31E-05	5.14E-05	5.69E-04	J	4.
ENGWESA003	5/28/15 9:06	pCi/m^3	1.25E-04	J	8.57E-05	5.99E-05	1.31E-03		5.
ENGWESA004	5/28/15 9:30	pCi/m^3	6.76E-05	U	1.05E-04	8.16E-05	3.62E-04	U	6.
ENGWESA005	5/27/15 15:08	pCi/m^3	1.06E-04	J	5.95E-05	5.02E-05	4.23E-04	J	5.
ENGWESA006	5/27/15 16:50	pCi/m^3	-3.19E-05	U	1.08E-04	7.92E-05	3.34E-04	U	6.
ENGWESA007	5/27/15 12:00	pCi/m^3	1.68E-04	J	9.17E-05	6.53E-05	1.50E-03		5.
ENGWESA008	5/27/15 15:38	pCi/m^3	1.02E-05	U	7.67E-05	5.46E-05	4.09E-04	U	6.
ENGWESA009	5/28/15 10:42	pCi/m^3							
ENGWESA010	5/28/15 11:06	pCi/m^3	3.27E-05	U	1.03E-04	7.87E-05	4.07E-04	U	6.
ENGWESA011	5/27/15 9:10	pCi/m^3	9.75E-05	J	8.84E-05	6.00E-05	1.63E-03		6.
ENGWESA012	5/27/15 10:36	pCi/m^3	3.25E-06	U	8.12E-05	5.78E-05	8.61E-04	J	6.
ENGWESA013	5/27/15 11:17	pCi/m^3	1.22E-04	U	1.63E-04	1.33E-04	5.26E-04	U	1.
ENGWESA001	6/24/15 12:15	pCi/m^3	1.19E-04	U	1.10E-04	8.76E-05	7.48E-04	J	5.
ENGWESA002	6/24/15 9:40	pCi/m^3	1.12E-04	J	8.37E-05	5.82E-05	9.78E-04	J	5.
ENGWESA003	6/24/15 10:40	pCi/m^3	3.23E-05	U	8.19E-05	5.96E-05	7.54E-04	J	4.
ENGWESA004	6/24/15 11:40	pCi/m^3	8.59E-05	J	8.65E-05	5.86E-05	1.03E-03		5.
ENGWESA005	6/23/15 10:30	pCi/m^3	3.64E-05	U	7.88E-05	5.76E-05	7.88E-04	J	5.
ENGWESA006	6/24/15 13:00	pCi/m^3	8.47E-05	J	9.40E-05	7.42E-05	-6.94E-05	U	6.
ENGWESA007	6/23/15 9:38	pCi/m^3	3.86E-05	U	6.24E-05	5.03E-05	5.59E-04	J	4.
ENGWESA008	6/23/15 11:25	pCi/m^3	5.95E-05	J	8.84E-05	5.89E-05	7.61E-04	J	5.
ENGWESA009	6/23/15 13:26	pCi/m^3	4.63E-05	U	1.04E-04	7.50E-05	6.84E-04	J	7.
ENGWESA010	6/23/15 14:10	pCi/m^3	6.64E-05	J	5.90E-05	4.92E-05	5.16E-04	J	4.
ENGWESA011	6/23/15 8:59	pCi/m^3	7.02E-05	J	8.57E-05	5.74E-05	1.36E-03		5.
ENGWESA012	6/23/15 14:50	pCi/m^3	9.01E-05	J	7.85E-05	6.50E-05	1.12E-03	J	6.
ENGWESA013	6/23/15 15:30	pCi/m^3	1.17E-04	J	8.26E-05	5.76E-05	1.05E-03		4.

Client ID	Sample Date	Report Units	Lead-214				Potassium-		
			RESULT	FINAL Q	CSU	CV	RESULT	FINAL Q	
ENGWESA001	9/16/2015	pCi/m3	8.14E-05	J	9.83E-05	7.46E-05	8.05E-04	J	4.
ENGWESA006	9/16/2015	pCi/m3	7.62E-05	J	6.50E-05	5.53E-05	6.75E-04	J	6.
ENGWESA008	9/16/2015	pCi/m3	4.52E-05	U	8.80E-05	6.57E-05	6.55E-04	J	3.
ENGWESA005	9/16/2015	pCi/m3	1.12E-04	U	1.99E-04	1.55E-04	1.14E-03	J	1.
ENGWESA007	9/16/2015	pCi/m3	1.62E-04	J	9.30E-05	6.91E-05	1.01E-03	J	5.
ENGWESA011	9/16/2015	pCi/m3	9.31E-05	J	1.06E-04	7.09E-05	1.28E-03		5.
ENGWESA012	9/17/2015	pCi/m3	4.76E-05	U	8.91E-05	6.63E-05	7.55E-04	J	6.
ENGWESA013	9/17/2015	pCi/m3	9.00E-05	J	6.67E-05	5.65E-05	5.50E-04	J	5.
ENGWESA003	9/17/2015	pCi/m3	1.12E-05	U	6.45E-05	5.12E-05	4.33E-04	J	5.
ENGWESA004	9/17/2015	pCi/m3	-1.32E-05	U	9.98E-05	6.02E-05	7.32E-04	J	5.
ENGWESA009	9/17/2015	pCi/m3	2.65E-05	U	1.62E-04	1.24E-04	9.71E-04	J	1.
ENGWESA010	9/17/2015	pCi/m3	5.80E-05	J	6.68E-05	5.50E-05	1.87E-04	U	5.

Client ID	Sample Date	Report Units	Protactinium-231				Thorium-23		
			RESULT	FINAL Q	CSU	CV	RESULT	FINAL Q	
ENGWESA001	5/27/15 16:12	pCi/m^3	6.31E-05	U	1.78E-03	1.27E-03	2.36E-05	J	1.
ENGWESA002	5/28/15 8:30	pCi/m^3	9.50E-04	J	1.08E-03	8.63E-04	2.76E-05	J	1.
ENGWESA003	5/28/15 9:06	pCi/m^3	-2.36E-04	U	1.44E-03	8.92E-04	2.76E-05	J	1.
ENGWESA004	5/28/15 9:30	pCi/m^3	2.49E-04	U	1.46E-03	1.32E-03	3.14E-05	J	1.
ENGWESA005	5/27/15 15:08	pCi/m^3	-8.81E-04	U	1.02E-03	7.56E-04	2.93E-05	J	1.
ENGWESA006	5/27/15 16:50	pCi/m^3	2.05E-04	U	1.77E-03	1.33E-03	3.08E-05	J	1.
ENGWESA007	5/27/15 12:00	pCi/m^3	-4.21E-04	U	1.51E-03	9.26E-04	5.81E-05	J	1.
ENGWESA008	5/27/15 15:38	pCi/m^3	7.96E-04	U	1.41E-03	1.03E-03	3.17E-05	J	1.
ENGWESA009	5/28/15 10:42	pCi/m^3							
ENGWESA010	5/28/15 11:06	pCi/m^3	2.80E-03	J	1.64E-03	1.32E-03	4.14E-05	J	1.
ENGWESA011	5/27/15 9:10	pCi/m^3	8.74E-05	U	1.46E-03	9.25E-04	3.65E-05	J	1.
ENGWESA012	5/27/15 10:36	pCi/m^3	9.05E-04	J	1.08E-03	8.65E-04	3.51E-05	J	1.
ENGWESA013	5/27/15 11:17	pCi/m^3	2.16E-04	U	2.81E-03	2.20E-03	4.39E-05	J	1.
ENGWESA001	6/24/15 12:15	pCi/m^3	7.07E-04	U	1.26E-03	1.01E-03	1.75E-05	J	9.
ENGWESA002	6/24/15 9:40	pCi/m^3	-2.38E-04	U	1.24E-03	9.13E-04	8.08E-06	U	6.
ENGWESA003	6/24/15 10:40	pCi/m^3	-4.68E-04	U	1.53E-03	1.06E-03	1.90E-05		8.
ENGWESA004	6/24/15 11:40	pCi/m^3	-3.29E-04	U	1.49E-03	9.23E-04	3.87E-05		1.
ENGWESA005	6/23/15 10:30	pCi/m^3	8.39E-04	U	1.38E-03	1.01E-03	3.39E-05		1.
ENGWESA006	6/24/15 13:00	pCi/m^3	8.85E-04	U	1.45E-03	1.12E-03	1.05E-05	J	5.
ENGWESA007	6/23/15 9:38	pCi/m^3	-4.38E-04	U	1.10E-03	8.34E-04	2.93E-05		1.
ENGWESA008	6/23/15 11:25	pCi/m^3	-9.23E-04	U	1.58E-03	9.44E-04	1.93E-05		8.
ENGWESA009	6/23/15 13:26	pCi/m^3	6.21E-04	U	1.74E-03	1.26E-03	3.05E-05		1.
ENGWESA010	6/23/15 14:10	pCi/m^3	8.74E-04	U	1.11E-03	8.89E-04	2.66E-05		1.
ENGWESA011	6/23/15 8:59	pCi/m^3	1.26E-03	J	1.45E-03	9.70E-04	2.23E-05		1.
ENGWESA012	6/23/15 14:50	pCi/m^3	7.07E-04	U	1.36E-03	1.09E-03	4.96E-05		1.
ENGWESA013	6/23/15 15:30	pCi/m^3	-7.66E-04	U	1.49E-03	8.92E-04	1.78E-05		8.

Client ID	Sample Date	Report Units	Protactinium-231				Thorium-23		
			RESULT	FINAL Q	CSU	CV	RESULT	FINAL Q	
ENGWESA001	9/16/2015	pCi/m3	1.24E-03	U	1.69E-03	1.26E-03	3.45E-05	J+	1.
ENGWESA006	9/16/2015	pCi/m3	-9.83E-06	U	1.21E-03	9.42E-04	8.06E-05	J+	2.
ENGWESA008	9/16/2015	pCi/m3	1.30E-03	J	1.53E-03	1.14E-03	5.87E-05	J+	1.
ENGWESA005	9/16/2015	pCi/m3	6.49E-04	U	3.16E-03	2.39E-03	2.85E-05	J+	9.
ENGWESA007	9/16/2015	pCi/m3	-8.43E-04	U	1.72E-03	1.02E-03	3.67E-05	J+	1.
ENGWESA011	9/16/2015	pCi/m3	-2.79E-04	U	1.63E-03	9.74E-04	7.63E-05	J+	2.
ENGWESA012	9/17/2015	pCi/m3	-2.16E-03	U	1.67E-03	1.05E-03	8.64E-05	J+	2.
ENGWESA013	9/17/2015	pCi/m3	3.14E-04	U	1.19E-03	9.46E-04	2.21E-05	J+	7.
ENGWESA003	9/17/2015	pCi/m3	-2.80E-04	U	1.19E-03	9.16E-04	7.03E-05	J+	2.
ENGWESA004	9/17/2015	pCi/m3	-2.07E-04	U	1.52E-03	9.49E-04	4.82E-05	J+	1.
ENGWESA009	9/17/2015	pCi/m3	-1.52E-03	U	3.00E-03	2.16E-03	2.34E-05	J+	1.
ENGWESA010	9/17/2015	pCi/m3	3.91E-04	U	1.13E-03	9.07E-04	7.20E-05	J+	1.

Client ID	Sample Date	Report Units	Thorium-232				Uranium-2		
			RESULT	FINAL Q	CSU	CV	RESULT	FINAL Q	
ENGWESA001	5/27/15 16:12	pCi/m^3	2.75E-06	J	3.58E-06	4.28E-07	3.94E-05		1.
ENGWESA002	5/28/15 8:30	pCi/m^3	1.18E-05	J	8.92E-06	1.11E-07	3.13E-05		1.
ENGWESA003	5/28/15 9:06	pCi/m^3	8.91E-06	J	5.16E-06	1.71E-07	3.59E-05	J	1.
ENGWESA004	5/28/15 9:30	pCi/m^3	1.45E-05	J	6.76E-06	1.71E-07	4.40E-05	J	1.
ENGWESA005	5/27/15 15:08	pCi/m^3	1.16E-05	J	6.05E-06	4.11E-07	4.99E-05	J	1.
ENGWESA006	5/27/15 16:50	pCi/m^3	1.66E-05	J	7.53E-06	4.30E-07	2.81E-05	J	1.
ENGWESA007	5/27/15 12:00	pCi/m^3	1.68E-05	J	7.84E-06	1.97E-07	4.69E-05	J	1.
ENGWESA008	5/27/15 15:38	pCi/m^3	8.38E-06	J	5.03E-06	1.73E-07	2.66E-05	J	1.
ENGWESA009	5/28/15 10:42	pCi/m^3							
ENGWESA010	5/28/15 11:06	pCi/m^3	1.50E-05	J	7.56E-06	2.07E-07	5.33E-05		1.
ENGWESA011	5/27/15 9:10	pCi/m^3	1.64E-05	J	7.63E-06	4.46E-07	2.78E-05	J	1.
ENGWESA012	5/27/15 10:36	pCi/m^3	1.13E-05	J	6.10E-06	4.28E-07	3.71E-05		1.
ENGWESA013	5/27/15 11:17	pCi/m^3	1.80E-05	J	9.22E-06	2.62E-07	1.81E-05	J	1.
ENGWESA001	6/24/15 12:15	pCi/m^3	7.10E-06	J	5.56E-06	2.56E-07	3.60E-05		1.
ENGWESA002	6/24/15 9:40	pCi/m^3	6.78E-07	U	2.83E-06	8.08E-07	3.10E-05		1.
ENGWESA003	6/24/15 10:40	pCi/m^3	2.35E-06	U	4.03E-06	2.51E-06	3.73E-05	J	1.
ENGWESA004	6/24/15 11:40	pCi/m^3	1.68E-05		7.19E-06	2.72E-07	2.96E-05		1.
ENGWESA005	6/23/15 10:30	pCi/m^3	1.06E-05	J	6.59E-06	9.65E-07	2.34E-05		9.
ENGWESA006	6/24/15 13:00	pCi/m^3	5.82E-06	J	4.10E-06	2.79E-07	3.03E-05		1.
ENGWESA007	6/23/15 9:38	pCi/m^3	1.08E-05	J	6.57E-06	1.94E-06	4.42E-05		1.
ENGWESA008	6/23/15 11:25	pCi/m^3	4.32E-06	J	4.58E-06	2.08E-06	3.64E-05		1.
ENGWESA009	6/23/15 13:26	pCi/m^3	6.92E-06	J	5.56E-06	4.32E-07	4.64E-05		1.
ENGWESA010	6/23/15 14:10	pCi/m^3	7.44E-06	J	5.34E-06	1.26E-06	3.55E-05		1.
ENGWESA011	6/23/15 8:59	pCi/m^3	6.18E-06	J	5.11E-06	5.56E-07	2.52E-05		1.
ENGWESA012	6/23/15 14:50	pCi/m^3	2.12E-05	J	1.12E-05	7.52E-07	5.48E-05		1.
ENGWESA013	6/23/15 15:30	pCi/m^3	3.21E-06	J	3.49E-06	7.18E-07	2.58E-05		1.

Client ID	Sample Date	Report Units	Thorium-232				Uranium-2		
			RESULT	FINAL Q	CSU	CV	RESULT	FINAL Q	
ENGWESA001	9/16/2015	pCi/m3	1.55E-05	J+	9.37E-06	3.46E-07	4.02E-05	j	1.
ENGWESA006	9/16/2015	pCi/m3	2.74E-05	J+	9.77E-06	6.07E-08	2.77E-05		9.
ENGWESA008	9/16/2015	pCi/m3	2.23E-05	J+	7.94E-06	4.18E-07	1.92E-05		7.
ENGWESA005	9/16/2015	pCi/m3	1.25E-05	J+	5.91E-06	8.40E-07	2.92E-05		9.
ENGWESA007	9/16/2015	pCi/m3	9.39E-06	J+	4.68E-06	3.97E-07	3.48E-05		1.
ENGWESA011	9/16/2015	pCi/m3	3.07E-05	J+	1.01E-05	6.59E-07	2.55E-05		8.
ENGWESA012	9/17/2015	pCi/m3	1.79E-05	J+	6.78E-06	4.87E-08	1.77E-05		7.
ENGWESA013	9/17/2015	pCi/m3	6.96E-06	J+	3.89E-06	1.34E-07	3.29E-05		1.
ENGWESA003	9/17/2015	pCi/m3	1.79E-05	J+	8.19E-06	2.08E-07	2.98E-05		9.
ENGWESA004	9/17/2015	pCi/m3	1.22E-05	J+	5.91E-06	5.74E-07	2.42E-05		8.
ENGWESA009	9/17/2015	pCi/m3	1.32E-05	J+	8.11E-06	1.52E-06	2.11E-05	J	9.
ENGWESA010	9/17/2015	pCi/m3	2.64E-05	J+	8.85E-06	3.29E-07	4.68E-05		1.

Client ID	Sample Date	Report Units	Uranium-235				Uranium-2		
			RESULT	FINAL Q	CSU	CV	RESULT	FINAL Q	
ENGWESA001	5/27/15 16:12	pCi/m^3	5.20E-06	J	5.38E-06	2.56E-07	3.36E-05		1.
ENGWESA002	5/28/15 8:30	pCi/m^3	1.95E-06	J	3.31E-06	4.98E-08	3.43E-05		1.
ENGWESA003	5/28/15 9:06	pCi/m^3	7.24E-06	J	8.28E-06	9.63E-07	5.08E-05	J	1.
ENGWESA004	5/28/15 9:30	pCi/m^3	1.79E-06	J	4.30E-06	4.06E-07	3.65E-05	J	1.
ENGWESA005	5/27/15 15:08	pCi/m^3	7.72E-07	J	2.36E-06	3.82E-07	4.28E-05	J	1.
ENGWESA006	5/27/15 16:50	pCi/m^3	-5.84E-07	UJ	2.34E-06	5.31E-07	2.54E-05	J	1.
ENGWESA007	5/27/15 12:00	pCi/m^3	3.73E-06	J	4.91E-06	6.36E-08	4.32E-05	J	1.
ENGWESA008	5/27/15 15:38	pCi/m^3	7.87E-06	J	6.61E-06	7.48E-07	4.61E-05	J	1.
ENGWESA009	5/28/15 10:42	pCi/m^3							
ENGWESA010	5/28/15 11:06	pCi/m^3	4.63E-06	J	4.80E-06	6.44E-07	3.82E-05		1.
ENGWESA011	5/27/15 9:10	pCi/m^3	1.97E-06	J	3.02E-06	2.03E-07	2.51E-05	J	9.
ENGWESA012	5/27/15 10:36	pCi/m^3	2.06E-06	J	3.50E-06	4.06E-07	2.69E-05		1.
ENGWESA013	5/27/15 11:17	pCi/m^3	2.11E-06	J	5.06E-06	4.81E-07	1.95E-05	J	1.
ENGWESA001	6/24/15 12:15	pCi/m^3	1.95E-06	J	4.21E-06	8.89E-07	3.13E-05		1.
ENGWESA002	6/24/15 9:40	pCi/m^3	1.01E-06	J	2.43E-06	2.30E-07	3.05E-05		1.
ENGWESA003	6/24/15 10:40	pCi/m^3	2.39E-06	U	5.74E-06	5.42E-07	3.45E-05	J	1.
ENGWESA004	6/24/15 11:40	pCi/m^3	6.64E-06	J	5.81E-06	5.68E-08	3.47E-05		1.
ENGWESA005	6/23/15 10:30	pCi/m^3	2.94E-06	J	3.81E-06	3.62E-07	1.38E-05	J	7.
ENGWESA006	6/24/15 13:00	pCi/m^3	3.20E-06	J	4.07E-06	7.51E-07	3.19E-05		1.
ENGWESA007	6/23/15 9:38	pCi/m^3	9.82E-06	J	7.10E-06	2.36E-07	2.94E-05		1.
ENGWESA008	6/23/15 11:25	pCi/m^3	3.87E-06	J	5.08E-06	6.61E-08	3.39E-05		1.
ENGWESA009	6/23/15 13:26	pCi/m^3	7.54E-06	J	7.31E-06	7.71E-08	3.32E-05		1.
ENGWESA010	6/23/15 14:10	pCi/m^3	3.05E-06	J	5.20E-06	7.84E-08	3.16E-05		1.
ENGWESA011	6/23/15 8:59	pCi/m^3	3.16E-06	J	3.84E-06	2.12E-07	2.39E-05		9.
ENGWESA012	6/23/15 14:50	pCi/m^3	1.36E-05	J	9.57E-06	7.75E-08	4.13E-05		1.
ENGWESA013	6/23/15 15:30	pCi/m^3	6.83E-06	J	5.98E-06	5.83E-08	3.49E-05		1.

Client ID	Sample Date	Report Units	Uranium-235				Uranium-2		
			RESULT	FINAL Q	CSU	CV	RESULT	FINAL Q	
ENGWESA001	9/16/2015	pCi/m3	1.26E-05	J	1.01E-05	2.18E-07	2.58E-05	J+	1.
ENGWESA006	9/16/2015	pCi/m3	1.82E-06	U	3.67E-06	1.86E-06	2.09E-05	J+	8.
ENGWESA008	9/16/2015	pCi/m3	3.41E-06	J	3.54E-06	2.31E-07	2.42E-05	J+	9.
ENGWESA005	9/16/2015	pCi/m3	5.71E-07	J	1.75E-06	3.43E-07	3.81E-05	J+	1.
ENGWESA007	9/16/2015	pCi/m3	5.77E-06	J	5.06E-06	1.17E-07	2.92E-05	J+	1.
ENGWESA011	9/16/2015	pCi/m3	4.76E-06	J	4.16E-06	9.68E-08	3.96E-05	J+	1.
ENGWESA012	9/17/2015	pCi/m3	3.92E-06	J	3.74E-06	3.34E-07	2.23E-05	J+	8.
ENGWESA013	9/17/2015	pCi/m3	4.42E-06	J	4.21E-06	6.93E-07	2.67E-05	J+	9.
ENGWESA003	9/17/2015	pCi/m3	3.53E-06	J	3.37E-06	3.01E-07	2.99E-05	J+	9.
ENGWESA004	9/17/2015	pCi/m3	8.86E-06	J	5.60E-06	9.78E-08	2.73E-05	J+	9.
ENGWESA009	9/17/2015	pCi/m3	5.47E-06	J	5.44E-06	6.51E-07	3.57E-05	J+	1.
ENGWESA010	9/17/2015	pCi/m3	6.31E-06	J	5.30E-06	6.71E-07	4.34E-05	J+	1.

APPENDIX C

COMPARISON OF ISOTOPIC RESULTS TO NRC EFFLUENT LIMITS

Comparison of Isotopic Results to NRC Appendix B Effluent Limits								
Client ID	Analyte	Sample Date	uCi/ml	Sample Date	uCi/ml	Sample Date	uCi/ml	NRC Eff Limit
ENGWESA001	AC-227	5/27/2015	1.46E-17	6/24/2015	-5.48E-19	9/16/2015	3.39E-18	1.00E-15
ENGWESA002	AC-227	5/28/2015	7.11E-18	6/24/2015	6.41E-18			1.00E-15
ENGWESA003	AC-227	5/28/2015	6.45E-18	6/24/2015	8.10E-19	9/17/2015	3.51E-18	1.00E-15
ENGWESA004	AC-227	5/28/2015	6.49E-18	6/24/2015	1.69E-18	9/17/2015	1.24E-18	1.00E-15
ENGWESA005	AC-227	5/27/2015	6.78E-18	6/23/2015	5.00E-18	9/16/2015	5.90E-18	1.00E-15
ENGWESA006	AC-227	5/27/2015	1.04E-17	6/24/2015	3.69E-18	9/16/2015	2.75E-18	1.00E-15
ENGWESA007	AC-227	5/27/2015	8.20E-18	6/23/2015	5.00E-18	9/16/2015	1.68E-18	1.00E-15
ENGWESA008	AC-227	5/27/2015	3.42E-18	6/23/2015	3.80E-18	9/16/2015	2.04E-18	1.00E-15
ENGWESA009	AC-227	5/28/2015		6/23/2015	3.04E-18	9/17/2015	2.87E-18	1.00E-15
ENGWESA010	AC-227	5/28/2015	8.73E-18	6/23/2015	3.90E-18	9/17/2015	4.88E-18	1.00E-15
ENGWESA011	AC-227	5/27/2015	6.58E-18	6/23/2015	1.63E-18	9/16/2015	2.93E-18	1.00E-15
ENGWESA012	AC-227	5/27/2015	1.24E-18	6/23/2015	1.99E-19	9/17/2015	7.92E-19	1.00E-15
ENGWESA013	AC-227	5/27/2015	4.24E-18	6/23/2015	-3.26E-18	9/17/2015	1.67E-19	1.00E-15
ENGWESA001	AC-228	5/27/2015	1.70E-16	6/24/2015	1.91E-17	9/16/2015	1.07E-16	2.00E-11
ENGWESA002	AC-228	5/28/2015	1.66E-16	6/24/2015	7.75E-17			2.00E-11
ENGWESA003	AC-228	5/28/2015	2.14E-16	6/24/2015	1.15E-16	9/17/2015	1.92E-16	2.00E-11
ENGWESA004	AC-228	5/28/2015	1.16E-16	6/24/2015	1.78E-16	9/17/2015	1.54E-16	2.00E-11
ENGWESA005	AC-228	5/27/2015	-5.33E-18	6/23/2015	1.26E-16	9/16/2015	-2.92E-17	2.00E-11
ENGWESA006	AC-228	5/27/2015	-2.39E-16	6/24/2015	6.61E-17	9/16/2015	2.30E-16	2.00E-11
ENGWESA007	AC-228	5/27/2015	1.78E-16	6/23/2015	1.81E-16	9/16/2015	1.77E-16	2.00E-11
ENGWESA008	AC-228	5/27/2015	1.63E-16	6/23/2015	4.46E-17	9/16/2015	-1.01E-17	2.00E-11
ENGWESA009	AC-228	5/28/2015		6/23/2015	-8.45E-18	9/17/2015	4.02E-18	2.00E-11
ENGWESA010	AC-228	5/28/2015	1.14E-16	6/23/2015	4.61E-17	9/17/2015	1.29E-16	2.00E-11
ENGWESA011	AC-228	5/27/2015	2.31E-16	6/23/2015	1.38E-16	9/16/2015	1.41E-16	2.00E-11
ENGWESA012	AC-228	5/27/2015	-1.02E-17	6/23/2015	9.22E-17	9/17/2015	1.07E-16	2.00E-11
ENGWESA013	AC-228	5/27/2015	3.27E-16	6/23/2015	1.33E-16	9/17/2015	1.57E-16	2.00E-11
ENGWESA001	BI-214	5/27/2015	1.52E-16	6/24/2015	4.71E-17	9/16/2015	1.39E-16	2.00E-12
ENGWESA002	BI-214	5/28/2015	1.61E-16	6/24/2015	8.67E-17			2.00E-12
ENGWESA003	BI-214	5/28/2015	1.09E-16	6/24/2015	5.49E-17	9/17/2015	-1.67E-17	2.00E-12
ENGWESA004	BI-214	5/28/2015	8.94E-17	6/24/2015	1.40E-16	9/17/2015	8.37E-17	2.00E-12
ENGWESA005	BI-214	5/27/2015	1.01E-16	6/23/2015	7.55E-18	9/16/2015	7.85E-17	2.00E-12
ENGWESA006	BI-214	5/27/2015	4.51E-17	6/24/2015	1.31E-16	9/16/2015	1.20E-16	2.00E-12
ENGWESA007	BI-214	5/27/2015	2.16E-16	6/23/2015	3.74E-17	9/16/2015	9.27E-17	2.00E-12
ENGWESA008	BI-214	5/27/2015	5.24E-17	6/23/2015	2.27E-16	9/16/2015	6.86E-17	2.00E-12
ENGWESA009	BI-214	5/28/2015		6/23/2015	6.98E-17	9/17/2015	2.35E-17	2.00E-12
ENGWESA010	BI-214	5/28/2015	1.13E-16	6/23/2015	-2.02E-17	9/17/2015	8.51E-17	2.00E-12
ENGWESA011	BI-214	5/27/2015	1.42E-16	6/23/2015	5.87E-17	9/16/2015	1.48E-16	2.00E-12
ENGWESA012	BI-214	5/27/2015	3.63E-17	6/23/2015	5.21E-17	9/17/2015	1.31E-16	2.00E-12
ENGWESA013	BI-214	5/27/2015	2.23E-17	6/23/2015	3.74E-17	9/17/2015	3.69E-17	2.00E-12

Comparison of Isotopic Results to NRC Appendix B Effluent Limits								
Client ID	Analyte	Sample Date	uCi/ml	Sample Date	uCi/ml	Sample Date	uCi/ml	NRC Eff Limit
ENGWESA001	PB-210	5/27/2015	8.89E-15	6/24/2015	8.51E-15	9/16/2015	2.54E-14	6.00E-13
ENGWESA002	PB-210	5/28/2015	1.14E-14	6/24/2015	9.67E-15			6.00E-13
ENGWESA003	PB-210	5/28/2015	9.09E-15	6/24/2015	1.01E-14	9/17/2015	2.45E-14	6.00E-13
ENGWESA004	PB-210	5/28/2015	7.43E-15	6/24/2015	1.03E-14	9/17/2015	2.20E-14	6.00E-13
ENGWESA005	PB-210	5/27/2015	9.97E-15	6/23/2015	9.31E-15	9/16/2015	2.41E-14	6.00E-13
ENGWESA006	PB-210	5/27/2015	6.55E-15	6/24/2015	1.00E-15	9/16/2015	2.67E-14	6.00E-13
ENGWESA007	PB-210	5/27/2015	7.31E-15	6/23/2015	1.06E-14	9/16/2015	2.11E-14	6.00E-13
ENGWESA008	PB-210	5/27/2015	8.85E-15	6/23/2015	9.34E-15	9/16/2015	2.32E-14	6.00E-13
ENGWESA009	PB-210	5/28/2015		6/23/2015	9.50E-15	9/17/2015	2.10E-14	6.00E-13
ENGWESA010	PB-210	5/28/2015	6.20E-15	6/23/2015	9.78E-15	9/17/2015	2.35E-14	6.00E-13
ENGWESA011	PB-210	5/27/2015	8.42E-15	6/23/2015	1.08E-14	9/16/2015	2.27E-14	6.00E-13
ENGWESA012	PB-210	5/27/2015	9.05E-15	6/23/2015	1.25E-14	9/17/2015	2.14E-14	6.00E-13
ENGWESA013	PB-210	5/27/2015	2.02E-14	6/23/2015	9.92E-15	9/17/2015	2.23E-14	6.00E-13
ENGWESA001	PB-214	5/27/2015	2.92E-17	6/24/2015	1.19E-16	9/16/2015	8.14E-17	1.00E-09
ENGWESA002	PB-214	5/28/2015	5.73E-17	6/24/2015	1.12E-16			1.00E-09
ENGWESA003	PB-214	5/28/2015	1.25E-16	6/24/2015	3.23E-17	9/17/2015	1.12E-17	1.00E-09
ENGWESA004	PB-214	5/28/2015	6.76E-17	6/24/2015	8.59E-17	9/17/2015	-1.32E-17	1.00E-09
ENGWESA005	PB-214	5/27/2015	1.06E-16	6/23/2015	3.64E-17	9/16/2015	1.12E-16	1.00E-09
ENGWESA006	PB-214	5/27/2015	-3.19E-17	6/24/2015	8.47E-17	9/16/2015	7.62E-17	1.00E-09
ENGWESA007	PB-214	5/27/2015	1.68E-16	6/23/2015	3.86E-17	9/16/2015	1.62E-16	1.00E-09
ENGWESA008	PB-214	5/27/2015	1.02E-17	6/23/2015	5.95E-17	9/16/2015	4.52E-17	1.00E-09
ENGWESA009	PB-214	5/28/2015		6/23/2015	4.63E-17	9/17/2015	2.65E-17	1.00E-09
ENGWESA010	PB-214	5/28/2015	3.27E-17	6/23/2015	6.64E-17	9/17/2015	5.80E-17	1.00E-09
ENGWESA011	PB-214	5/27/2015	9.75E-17	6/23/2015	7.02E-17	9/16/2015	9.31E-17	1.00E-09
ENGWESA012	PB-214	5/27/2015	3.25E-18	6/23/2015	9.01E-17	9/17/2015	4.76E-17	1.00E-09
ENGWESA013	PB-214	5/27/2015	1.22E-16	6/23/2015	1.17E-16	9/17/2015	9.00E-17	1.00E-09
ENGWESA001	K-40	5/27/2015	9.26E-16	6/24/2015	7.48E-16	9/16/2015	8.05E-16	6.00E-10
ENGWESA002	K-40	5/28/2015	5.69E-16	6/24/2015	9.78E-16			6.00E-10
ENGWESA003	K-40	5/28/2015	1.31E-15	6/24/2015	7.54E-16	9/17/2015	4.33E-16	6.00E-10
ENGWESA004	K-40	5/28/2015	3.62E-16	6/24/2015	1.03E-15	9/17/2015	7.32E-16	6.00E-10
ENGWESA005	K-40	5/27/2015	4.23E-16	6/23/2015	7.88E-16	9/16/2015	1.14E-15	6.00E-10
ENGWESA006	K-40	5/27/2015	3.34E-16	6/24/2015	-6.94E-17	9/16/2015	6.75E-16	6.00E-10
ENGWESA007	K-40	5/27/2015	1.50E-15	6/23/2015	5.59E-16	9/16/2015	1.01E-15	6.00E-10
ENGWESA008	K-40	5/27/2015	4.09E-16	6/23/2015	7.61E-16	9/16/2015	6.55E-16	6.00E-10
ENGWESA009	K-40	5/28/2015		6/23/2015	6.84E-16	9/17/2015	9.71E-16	6.00E-10
ENGWESA010	K-40	5/28/2015	4.07E-16	6/23/2015	5.16E-16	9/17/2015	1.87E-16	6.00E-10
ENGWESA011	K-40	5/27/2015	1.63E-15	6/23/2015	1.36E-15	9/16/2015	1.28E-15	6.00E-10
ENGWESA012	K-40	5/27/2015	8.61E-16	6/23/2015	1.12E-15	9/17/2015	7.55E-16	6.00E-10
ENGWESA013	K-40	5/27/2015	5.26E-16	6/23/2015	1.05E-15	9/17/2015	5.50E-16	6.00E-10

Comparison of Isotopic Results to NRC Appendix B Effluent Limits								
Client ID	Analyte	Sample Date	uCi/ml	Sample Date	uCi/ml	Sample Date	uCi/ml	NRC Eff Limit
ENGWESA001	PA-231	5/27/2015	6.31E-17	6/24/2015	7.07E-16	9/16/2015	1.24E-15	8.00E-15
ENGWESA002	PA-231	5/28/2015	9.50E-16	6/24/2015	-2.38E-16			8.00E-15
ENGWESA003	PA-231	5/28/2015	-2.36E-16	6/24/2015	-4.68E-16	9/17/2015	-2.80E-16	8.00E-15
ENGWESA004	PA-231	5/28/2015	2.49E-16	6/24/2015	-3.29E-16	9/17/2015	-2.07E-16	8.00E-15
ENGWESA005	PA-231	5/27/2015	-8.81E-16	6/23/2015	8.39E-16	9/16/2015	6.49E-16	8.00E-15
ENGWESA006	PA-231	5/27/2015	2.05E-16	6/24/2015	8.85E-16	9/16/2015	-9.83E-18	8.00E-15
ENGWESA007	PA-231	5/27/2015	-4.21E-16	6/23/2015	-4.38E-16	9/16/2015	-8.43E-16	8.00E-15
ENGWESA008	PA-231	5/27/2015	7.96E-16	6/23/2015	-9.23E-16	9/16/2015	1.30E-15	8.00E-15
ENGWESA009	PA-231	5/28/2015		6/23/2015	6.21E-16	9/17/2015	-1.52E-15	8.00E-15
ENGWESA010	PA-231	5/28/2015	2.80E-15	6/23/2015	8.74E-16	9/17/2015	3.91E-16	8.00E-15
ENGWESA011	PA-231	5/27/2015	8.74E-17	6/23/2015	1.26E-15	9/16/2015	-2.79E-16	8.00E-15
ENGWESA012	PA-231	5/27/2015	9.05E-16	6/23/2015	7.07E-16	9/17/2015	-2.16E-15	8.00E-15
ENGWESA013	PA-231	5/27/2015	2.16E-16	6/23/2015	-7.66E-16	9/17/2015	3.14E-16	8.00E-15
ENGWESA001	TH-230	5/27/2015	2.36E-17	6/24/2015	1.75E-17	9/16/2015	3.45E-17	3.00E-14
ENGWESA002	TH-230	5/28/2015	2.76E-17	6/24/2015	8.08E-18			3.00E-14
ENGWESA003	TH-230	5/28/2015	2.76E-17	6/24/2015	1.90E-17	9/17/2015	7.03E-17	3.00E-14
ENGWESA004	TH-230	5/28/2015	3.14E-17	6/24/2015	3.87E-17	9/17/2015	4.82E-17	3.00E-14
ENGWESA005	TH-230	5/27/2015	2.93E-17	6/23/2015	3.39E-17	9/16/2015	2.85E-17	3.00E-14
ENGWESA006	TH-230	5/27/2015	3.08E-17	6/24/2015	1.05E-17	9/16/2015	8.06E-17	3.00E-14
ENGWESA007	TH-230	5/27/2015	5.81E-17	6/23/2015	2.93E-17	9/16/2015	3.67E-17	3.00E-14
ENGWESA008	TH-230	5/27/2015	3.17E-17	6/23/2015	1.93E-17	9/16/2015	5.87E-17	3.00E-14
ENGWESA009	TH-230	5/28/2015		6/23/2015	3.05E-17	9/17/2015	2.34E-17	3.00E-14
ENGWESA010	TH-230	5/28/2015	4.14E-17	6/23/2015	2.66E-17	9/17/2015	7.20E-17	3.00E-14
ENGWESA011	TH-230	5/27/2015	3.65E-17	6/23/2015	2.23E-17	9/16/2015	7.63E-17	3.00E-14
ENGWESA012	TH-230	5/27/2015	3.51E-17	6/23/2015	4.96E-17	9/17/2015	8.64E-17	3.00E-14
ENGWESA013	TH-230	5/27/2015	4.39E-17	6/23/2015	1.78E-17	9/17/2015	2.21E-17	3.00E-14
ENGWESA001	TH-232	5/27/2015	2.75E-18	6/24/2015	7.10E-18	9/16/2015	1.55E-17	5.00E-14
ENGWESA002	TH-232	5/28/2015	1.18E-17	6/24/2015	6.78E-19			5.00E-14
ENGWESA003	TH-232	5/28/2015	8.91E-18	6/24/2015	2.35E-18	9/17/2015	1.79E-17	5.00E-14
ENGWESA004	TH-232	5/28/2015	1.45E-17	6/24/2015	1.68E-17	9/17/2015	1.22E-17	5.00E-14
ENGWESA005	TH-232	5/27/2015	1.16E-17	6/23/2015	1.06E-17	9/16/2015	1.25E-17	5.00E-14
ENGWESA006	TH-232	5/27/2015	1.66E-17	6/24/2015	5.82E-18	9/16/2015	2.74E-17	5.00E-14
ENGWESA007	TH-232	5/27/2015	1.68E-17	6/23/2015	1.08E-17	9/16/2015	9.39E-18	5.00E-14
ENGWESA008	TH-232	5/27/2015	8.38E-18	6/23/2015	4.32E-18	9/16/2015	2.23E-17	5.00E-14
ENGWESA009	TH-232	5/28/2015		6/23/2015	6.92E-18	9/17/2015	1.32E-17	5.00E-14
ENGWESA010	TH-232	5/28/2015	1.50E-17	6/23/2015	7.44E-18	9/17/2015	2.64E-17	5.00E-14
ENGWESA011	TH-232	5/27/2015	1.64E-17	6/23/2015	6.18E-18	9/16/2015	3.07E-17	5.00E-14
ENGWESA012	TH-232	5/27/2015	1.13E-17	6/23/2015	2.12E-17	9/17/2015	1.79E-17	5.00E-14
ENGWESA013	TH-232	5/27/2015	1.80E-17	6/23/2015	3.21E-18	9/17/2015	6.96E-18	5.00E-14

Comparison of Isotopic Results to NRC Appendix B Effluent Limits								
Client ID	Analyte	Sample Date	uCi/ml	Sample Date	uCi/ml	Sample Date	uCi/ml	NRC Eff Limit
ENGWESA001	U-234	5/27/2015	3.94E-17	6/24/2015	3.60E-17	9/16/2015	4.02E-17	6.00E-14
ENGWESA002	U-234	5/28/2015	3.13E-17	6/24/2015	3.10E-17			6.00E-14
ENGWESA003	U-234	5/28/2015	3.59E-17	6/24/2015	3.73E-17	9/17/2015	2.98E-17	6.00E-14
ENGWESA004	U-234	5/28/2015	4.40E-17	6/24/2015	2.96E-17	9/17/2015	2.42E-17	6.00E-14
ENGWESA005	U-234	5/27/2015	4.99E-17	6/23/2015	2.34E-17	9/16/2015	2.92E-17	6.00E-14
ENGWESA006	U-234	5/27/2015	2.81E-17	6/24/2015	3.03E-17	9/16/2015	2.77E-17	6.00E-14
ENGWESA007	U-234	5/27/2015	4.69E-17	6/23/2015	4.42E-17	9/16/2015	3.48E-17	6.00E-14
ENGWESA008	U-234	5/27/2015	2.66E-17	6/23/2015	3.64E-17	9/16/2015	1.92E-17	6.00E-14
ENGWESA009	U-234	5/28/2015		6/23/2015	4.64E-17	9/17/2015	2.11E-17	6.00E-14
ENGWESA010	U-234	5/28/2015	5.33E-17	6/23/2015	3.55E-17	9/17/2015	4.68E-17	6.00E-14
ENGWESA011	U-234	5/27/2015	2.78E-17	6/23/2015	2.52E-17	9/16/2015	2.55E-17	6.00E-14
ENGWESA012	U-234	5/27/2015	3.71E-17	6/23/2015	5.48E-17	9/17/2015	1.77E-17	6.00E-14
ENGWESA013	U-234	5/27/2015	1.81E-17	6/23/2015	2.58E-17	9/17/2015	3.29E-17	6.00E-14
ENGWESA001	U-235	5/27/2015	5.20E-18	6/24/2015	1.95E-18	9/16/2015	1.26E-17	6.00E-14
ENGWESA002	U-235	5/28/2015	1.95E-18	6/24/2015	1.01E-18			6.00E-14
ENGWESA003	U-235	5/28/2015	7.24E-18	6/24/2015	2.39E-18	9/17/2015	3.53E-18	6.00E-14
ENGWESA004	U-235	5/28/2015	1.79E-18	6/24/2015	6.64E-18	9/17/2015	8.86E-18	6.00E-14
ENGWESA005	U-235	5/27/2015	7.72E-19	6/23/2015	2.94E-18	9/16/2015	5.71E-19	6.00E-14
ENGWESA006	U-235	5/27/2015	-5.84E-19	6/24/2015	3.20E-18	9/16/2015	1.82E-18	6.00E-14
ENGWESA007	U-235	5/27/2015	3.73E-18	6/23/2015	9.82E-18	9/16/2015	5.77E-18	6.00E-14
ENGWESA008	U-235	5/27/2015	7.87E-18	6/23/2015	3.87E-18	9/16/2015	3.41E-18	6.00E-14
ENGWESA009	U-235	5/28/2015		6/23/2015	7.54E-18	9/17/2015	5.47E-18	6.00E-14
ENGWESA010	U-235	5/28/2015	4.63E-18	6/23/2015	3.05E-18	9/17/2015	6.31E-18	6.00E-14
ENGWESA011	U-235	5/27/2015	1.97E-18	6/23/2015	3.16E-18	9/16/2015	4.76E-18	6.00E-14
ENGWESA012	U-235	5/27/2015	2.06E-18	6/23/2015	1.36E-17	9/17/2015	3.92E-18	6.00E-14
ENGWESA013	U-235	5/27/2015	2.11E-18	6/23/2015	6.83E-18	9/17/2015	4.42E-18	6.00E-14
ENGWESA001	U-238	5/27/2015	3.36E-17	6/24/2015	3.13E-17	9/16/2015	2.58E-17	6.00E-14
ENGWESA002	U-238	5/28/2015	3.43E-17	6/24/2015	3.05E-17			6.00E-14
ENGWESA003	U-238	5/28/2015	5.08E-17	6/24/2015	3.45E-17	9/17/2015	2.99E-17	6.00E-14
ENGWESA004	U-238	5/28/2015	3.65E-17	6/24/2015	3.47E-17	9/17/2015	2.73E-17	6.00E-14
ENGWESA005	U-238	5/27/2015	4.28E-17	6/23/2015	1.38E-17	9/16/2015	3.81E-17	6.00E-14
ENGWESA006	U-238	5/27/2015	2.54E-17	6/24/2015	3.19E-17	9/16/2015	2.09E-17	6.00E-14
ENGWESA007	U-238	5/27/2015	4.32E-17	6/23/2015	2.94E-17	9/16/2015	2.92E-17	6.00E-14
ENGWESA008	U-238	5/27/2015	4.61E-17	6/23/2015	3.39E-17	9/16/2015	2.42E-17	6.00E-14
ENGWESA009	U-238	5/28/2015		6/23/2015	3.32E-17	9/17/2015	3.57E-17	6.00E-14
ENGWESA010	U-238	5/28/2015	3.82E-17	6/23/2015	3.16E-17	9/17/2015	4.34E-17	6.00E-14
ENGWESA011	U-238	5/27/2015	2.51E-17	6/23/2015	2.39E-17	9/16/2015	3.96E-17	6.00E-14
ENGWESA012	U-238	5/27/2015	2.69E-17	6/23/2015	4.13E-17	9/17/2015	2.23E-17	6.00E-14
ENGWESA013	U-238	5/27/2015	1.95E-17	6/23/2015	3.49E-17	9/17/2015	2.67E-17	6.00E-14

APPENDIX D

VALIDATED VOLATILE ORGANIC COMPOUND RESULTS

CLIENTSAMPID	SAMPDATETIME	UNITS (ug/m3)	1,1,1-Trichloroethane			1,2-Dichloroethane			1,4-Dichlorobenzene			2-Butanone (Methyl Ethyl Ketone)			4-Methyl-2-pentanone	
			Result	Final Q	RL	Result	Final Q	RL	Result	Final Q	RL	Result	Final Q	RL	Result	Final Q
ENGWESA001	5/13/2015 11:05:00 AM	UG/M3	ND	U	0.094	ND	U	0.076	ND	U	0.11	0.2		0.074	ND	U
ENGWESA001	5/27/2015 4:33:00 PM	UG/M3	ND	U	0.079	ND	U	0.063	ND	U	0.096	0.13		0.062	ND	U
ENGWESA001	6/10/2015 11:01:00 AM	UG/M3	ND	U	0.081	ND	U	0.065	ND	U	0.099	0.17		0.064	ND	U
ENGWESA001 FD	6/10/2015 11:08:00 AM	UG/M3	ND	U	0.081	ND	U	0.065	ND	U	0.099	0.13		0.064	ND	U
ENGWESA001	6/24/2015 12:00:00 PM	UG/M3	ND	U	0.08	ND	U	0.064	ND	U	0.097	0.16		0.063	ND	U
ENGWESA001	7/8/15 3:33 PM	UG/M3	ND	U	0.079	ND	U	0.064	ND	U	0.096	0.18		0.062	ND	U
ENGWESA001	7/22/15 2:24 PM	UG/M3	ND	U	0.08	ND	U	0.065	ND	U	0.098	0.18		0.063	ND	U
ENGWESA001	8/5/15 9:17 AM	UG/M3	ND	U	0.081	ND	U	0.065	ND	U	0.099	0.18		0.064	ND	U
ENGWESA001	8/19/15 11:15 AM	UG/M3	ND	U	0.08	ND	U	0.064	ND	U	0.097	0.18		0.062	ND	U
ENGWESA001	9/2/15 9:50 AM	UG/M3	ND	U	0.08	ND	U	0.065	ND	U	0.098	0.18		0.063	ND	U
ENGWESA001 FD	9/2/15 9:50 AM	UG/M3	ND	U	0.08	ND	U	0.065	ND	U	0.098	0.16		0.063	ND	U
ENGWESA001	9/16/15 11:18 AM	UG/M3	ND	U	0.08	ND	U	0.064	ND	U	0.097	0.12		0.062	ND	U
ENGWESA001	9/30/15 12:03 PM	UG/M3	ND	U	0.08	ND	U	0.064	ND	U	0.097	0.22		0.063	ND	U
ENGWESA001	10/14/15 1:56 PM	UG/M3	ND	U	0.08	ND	U	0.064	ND	U	0.097	0.087		0.062	ND	U
ENGWESA001	10/27/15 3:33 PM	UG/M3	ND	U	0.086	ND	U	0.069	ND	U	0.1	0.17		0.067	ND	U
ENGWESA005	5/13/2015 11:35:00 AM	UG/M3	ND	U	0.093	ND	U	0.075	ND	U	0.11	0.27		0.073	ND	U
ENGWESA005	5/27/2015 3:14:00 PM	UG/M3	ND	U	0.079	ND	U	0.064	ND	U	0.096	0.14		0.062	ND	U
ENGWESA005	6/10/2015 10:13:00 AM	UG/M3	ND	U	0.081	ND	U	0.065	ND	U	0.099	0.22		0.064	ND	U
ENGWESA005	6/23/2015 10:50:00 AM	UG/M3	ND	U	0.086	ND	U	0.069	ND	U	0.1	0.19		0.068	ND	U
ENGWESA005 FD	6/23/2015 10:50:00 AM	UG/M3	ND	U	0.086	ND	U	0.069	ND	U	0.1	0.17		0.068	ND	U
ENGWESA005	7/8/15 3:33 PM	UG/M3	ND	U	0.074	ND	U	0.059	ND	U	0.09	0.2		0.058	ND	U
ENGWESA005	7/22/15 11:04 AM	UG/M3	ND	U	0.081	ND	U	0.065	ND	U	0.098	0.16		0.064	ND	U
ENGWESA005	8/5/15 9:30 AM	UG/M3	ND	U	0.08	ND	U	0.065	ND	U	0.098	0.18		0.063	ND	U
ENGWESA005 FD	8/5/15 9:30 AM	UG/M3	ND	U	0.08	ND	U	0.065	ND	U	0.098	0.14		0.063	ND	U
ENGWESA005	8/19/15 10:00 AM	UG/M3	ND	U	0.08	ND	U	0.064	ND	U	0.097	0.18		0.063	ND	U
ENGWESA005	9/2/15 10:15 AM	UG/M3	ND	U	0.08	ND	U	0.064	ND	U	0.097	0.19		0.063	ND	U
ENGWESA005	9/16/15 1:07 PM	UG/M3	ND	U	0.079	ND	U	0.064	ND	U	0.096	0.2		0.062	ND	U
ENGWESA005	9/30/15 10:11 AM	UG/M3	ND	U	0.081	ND	U	0.065	ND	U	0.098	0.26		0.063	ND	U
ENGWESA005	10/14/15 3:25 PM	UG/M3	ND	U	0.079	ND	U	0.063	ND	U	0.096	0.12		0.062	ND	U
ENGWESA005 FD	10/14/15 3:25 PM	UG/M3	ND	U	0.079	ND	U	0.063	ND	U	0.096	0.11		0.062	ND	U
ENGWESA005	10/27/15 3:10 PM	UG/M3	ND	U	0.086	ND	U	0.069	ND	U	0.1	0.26		0.068	ND	U

CLIENTSAMPID	SAMPDATETIME	UNITS (ug/m3)	1,1,1-Trichloroethane			1,2-Dichloroethane			1,4-Dichlorobenzene			2-Butanone (Methyl Ethyl Ketone)			4-Methyl-2-pentanone		
ENGWESA007	5/13/2015 11:25:00 AM	UG/M3	ND	U	0.093	ND	U	0.075	ND	U	0.11	0.27		0.073	ND	U	
ENGWESA007	5/27/2015 12:32:00 PM	UG/M3	ND	U	0.08	ND	U	0.064	ND	U	0.097	0.17		0.062	ND	U	
ENGWESA007	6/10/2015 10:03:00 AM	UG/M3	ND	U	0.081	ND	U	0.065	ND	U	0.098	0.22		0.063	ND	U	
ENGWESA007	6/23/2015 10:05:00 AM	UG/M3	ND	U	0.086	ND	U	0.069	ND	U	0.1	0.25		0.068	ND	U	
ENGWESA007	7/8/15 3:33 PM	UG/M3	ND	U	0.074	ND	U	0.059	ND	U	0.09	0.21		0.058	ND	U	
ENGWESA007 FD	7/8/15 3:33 PM	UG/M3	ND	U	0.081	ND	U	0.065	ND	U	0.098	0.21		0.064	ND	U	
ENGWESA007	7/22/15 10:40 AM	UG/M3	ND	U	0.081	ND	U	0.065	ND	U	0.098	0.17		0.064	ND	U	
ENGWESA007	7/22/15 10:40 AM	UG/M3	ND	U	0.074	ND	U	0.06	ND	U	0.09	0.23		0.058	ND	U	
ENGWESA007	8/5/15 9:29 AM	UG/M3	ND	U	0.08	ND	U	0.065	ND	U	0.098	0.17		0.063	ND	U	
ENGWESA007	8/19/15 7:45 PM	UG/M3	ND	U	0.08	ND	U	0.064	ND	U	0.097	0.16		0.063	ND	U	
ENGWESA007	9/2/15 10:05 AM	UG/M3	ND	U	0.08	ND	U	0.064	ND	U	0.097	0.2		0.063	ND	U	
ENGWESA007	9/16/15 1:22 PM	UG/M3	ND	U	0.079	ND	U	0.064	ND	U	0.096	0.13		0.062	ND	U	
ENGWESA007 FD	9/16/15 1:22 PM	UG/M3	ND	U	0.079	ND	U	0.064	ND	U	0.096	0.19		0.062	ND	U	
ENGWESA007	9/30/15 10:19 AM	UG/M3	ND	U	0.081	ND	U	0.065	ND	U	0.098	0.21		0.063	ND	U	
ENGWESA007	10/14/15 3:00 PM	UG/M3	ND	U	0.079	ND	U	0.064	ND	U	0.096	0.096		0.062	ND	U	
ENGWESA007	10/27/15 3:00 PM	UG/M3	ND	U	0.086	ND	U	0.069	ND	U	0.1	0.24		0.068	ND	U	
ENGWESA008	5/13/2015 12:05:00 PM	UG/M3	ND	U	0.094	ND	U	0.076	ND	U	0.11	0.24		0.074	ND	U	
ENGWESA008	5/27/2015 4:00:00 PM	UG/M3	ND	U	0.079	ND	U	0.064	ND	U	0.096	0.15		0.062	ND	U	
ENGWESA008 FD	5/27/2015 4:00:00 PM	UG/M3	ND	U	0.079	ND	U	0.064	ND	U	0.096	0.14		0.062	ND	U	
ENGWESA008	6/10/2015 10:40:00 AM	UG/M3	ND	U	0.081	ND	U	0.065	ND	U	0.099	0.24		0.064	ND	U	
ENGWESA008	6/23/2015 11:45:00 AM	UG/M3	ND	U	0.086	ND	U	0.069	ND	U	0.1	0.17		0.067	ND	U	
ENGWESA008	07/22/2015 11:29	UG/M3	ND	U	0.081	ND	U	0.065	ND	U	0.098	0.19		0.064	ND	U	
ENGWESA008	8/5/15 9:36 AM	UG/M3	ND	U	0.08	ND	U	0.065	ND	U	0.098	0.16		0.063	ND	U	
ENGWESA008	8/19/15 10:18 AM	UG/M3	ND	U	0.08	ND	U	0.064	ND	U	0.097	0.16		0.063	ND	U	
ENGWESA008 FD	8/19/15 10:18 AM	UG/M3	ND	U	0.08	ND	U	0.064	ND	U	0.097	0.18		0.063	ND	U	
ENGWESA008	9/2/15 10:26 AM	UG/M3	ND	U	0.08	ND	U	0.064	ND	U	0.097	0.16		0.063	ND	U	
ENGWESA008	9/16/15 12:51 PM	UG/M3	ND	U	0.079	ND	U	0.064	ND	U	0.096	0.16		0.062	ND	U	
ENGWESA008	9/30/15 10:04 AM	UG/M3	ND	U	0.081	ND	U	0.065	ND	U	0.098	0.2		0.063	ND	U	
ENGWESA008	10/14/15 4:24 PM	UG/M3	ND	U	0.078	ND	U	0.063	ND	U	0.095	0.096		0.062	ND	U	
ENGWESA008	10/27/15 3:19 PM	UG/M3	ND	U	0.086	ND	U	0.07	ND	U	0.1	0.26		0.068	ND	U	
ENGWESA008 FD	10/27/15 3:19 PM	UG/M3	ND	U	0.086	ND	U	0.07	ND	U	0.1	0.23		0.068	ND	U	

CLIENTSAMPID	SAMPDATETIME	UNITS (ug/m3)	1,1,1-Trichloroethane			1,2-Dichloroethane			1,4-Dichlorobenzene			2-Butanone (Methyl Ethyl Ketone)			4-Methyl-2-pentanone		
ENGWESA011	5/13/2015 11:45:00 AM	UG/M3	ND	U	0.092	ND	U	0.074	ND	U	0.11	0.27		0.072	ND	U	
ENGWESA011 FD	5/13/2015 11:45:00 AM	UG/M3	ND	U	0.092	ND	U	0.074	ND	U	0.11	0.28		0.072	ND	U	
ENGWESA011	5/27/2015 10:30:00 AM	UG/M3	ND	U	0.08	ND	U	0.065	ND	U	0.098	0.18		0.063	ND	U	
ENGWESA011	6/10/2015 11:23:00 AM	UG/M3	ND	U	0.08	ND	U	0.064	ND	U	0.097	0.24		0.063	ND	U	
ENGWESA011	6/23/2015 12:00:00 PM	UG/M3	ND	U	0.086	ND	U	0.069	ND	U	0.1	0.18		0.067	ND	U	
ENGWESA011	07/08/2015 14:44	UG/M3	ND	U	0.074	ND	U	0.06	ND	U	0.09	0.22		0.058	ND	U	
ENGWESA011 FD	07/08/2015 14:44	UG/M3	ND	U	0.074	ND	U	0.06	ND	U	0.09	0.24		0.058	ND	U	
ENGWESA011	07/22/2015 07:40	UG/M3	ND	U	0.082	ND	U	0.066	ND	U	0.099	0.18		0.064	ND	U	
ENGWESA011	8/5/15 9:43 AM	UG/M3	ND	U	0.08	ND	U	0.064	ND	U	0.097	0.15		0.062	ND	U	
ENGWESA011	8/19/15 10:36 AM	UG/M3	ND	U	0.08	ND	U	0.064	ND	U	0.097	0.14		0.063	ND	U	
ENGWESA011	9/2/15 10:33 AM	UG/M3	ND	U	0.08	ND	U	0.064	ND	U	0.097	0.15		0.063	ND	U	
ENGWESA011	9/16/15 1:37 PM	UG/M3	ND	U	0.079	ND	U	0.064	ND	U	0.096	0.19		0.062	ND	U	
ENGWESA011	9/30/15 10:28 AM	UG/M3	ND	U	0.081	ND	U	0.065	ND	U	0.098	0.2		0.063	ND	U	
ENGWESA011 FD	9/30/15 10:28 AM	UG/M3	ND	U	0.081	ND	U	0.065	ND	U	0.098	0.21		0.063	ND	U	
ENGWESA011	10/14/15 2:30 PM	UG/M3	ND	U	0.079	ND	U	0.064	ND	U	0.096	ND	U	0.062	ND	U	
ENGWESA011	10/27/15 3:47 PM	UG/M3	ND	U	0.086	ND	U	0.069	ND	U	0.1	0.22		0.067	ND	U	

CLIENTSAMPID	SAMPDATETIME	UNITS (ug/m3)	Benzene			Carbon Tetrachloride			Chlorobenzene			Chloroform			Cyclohexane		
			Result	Final Q	RL	Result	Final Q	RL	Result	Final Q	RL	Result	Final Q	RL	Result	Final Q	
ENGWESA001	5/13/2015 11:05:00 AM	UG/M3	ND	U	0.29	0.32		0.087	ND	U	0.086	ND	U	0.078	ND	U	
ENGWESA001	5/27/2015 4:33:00 PM	UG/M3	ND	U	0.24	0.26		0.073	ND	U	0.072	ND	U	0.065	ND	U	
ENGWESA001	6/10/2015 11:01:00 AM	UG/M3	ND	U	0.25	0.23		0.075	ND	U	0.074	ND	U	0.067	ND	U	0
ENGWESA001 FD	6/10/2015 11:08:00 AM	UG/M3	ND	U	0.25	0.24		0.075	ND	U	0.074	ND	U	0.067	ND	U	0
ENGWESA001	6/24/2015 12:00:00 PM	UG/M3	ND	U	0.25	0.24		0.074	ND	U	0.073	ND	U	0.066	ND	U	0
ENGWESA001	7/8/15 3:33 PM	UG/M3	0.28		0.24	0.26		0.073	ND	U	0.072	ND	U	0.065	ND	U	0
ENGWESA001	7/22/15 2:24 PM	UG/M3	0.36		0.25	0.33		0.074	ND	U	0.073	ND	U	0.066	ND	U	0
ENGWESA001	8/5/15 9:17 AM	UG/M3	0.28		0.25	0.35		0.075	ND	U	0.074	0.073		0.067	0.1		0
ENGWESA001	8/19/15 11:15 AM	UG/M3	0.26		0.25	0.34		0.074	ND	U	0.072	ND	U	0.066	ND	U	0
ENGWESA001	9/2/15 9:50 AM	UG/M3	0.32		0.25	0.33		0.074	ND	U	0.073	ND	U	0.066	0.14		0
ENGWESA001 FD	9/2/15 9:50 AM	UG/M3	0.27		0.25	0.27		0.074	ND	U	0.073	ND	U	0.066	0.12		0
ENGWESA001	9/16/15 11:18 AM	UG/M3	0.25		0.25	0.33		0.074	ND	U	0.073	ND	U	0.066	ND	U	0
ENGWESA001	9/30/15 12:03 PM	UG/M3	0.41		0.25	0.34		0.074	ND	U	0.073	0.11		0.066	0.13		0
ENGWESA001	10/14/15 1:56 PM	UG/M3	0.26		0.25	0.29		0.074	ND	U	0.072	0.069		0.066	0.096		0
ENGWESA001	10/27/15 3:33 PM	UG/M3	0.37		0.26	0.29		0.079	ND	U	0.078	ND	U	0.071	0.12		0
ENGWESA005	5/13/2015 11:35:00 AM	UG/M3	ND	U	0.29	0.32		0.086	ND	U	0.085	ND	U	0.077	ND	U	
ENGWESA005	5/27/2015 3:14:00 PM	UG/M3	ND	U	0.24	0.25		0.073	ND	U	0.072	ND	U	0.065	ND	U	0
ENGWESA005	6/10/2015 10:13:00 AM	UG/M3	ND	U	0.25	0.3		0.075	ND	U	0.074	ND	U	0.067	ND	U	0
ENGWESA005	6/23/2015 10:50:00 AM	UG/M3	ND	U	0.27	0.22		0.08	ND	U	0.078	ND	U	0.071	ND	U	0
ENGWESA005 FD	6/23/2015 10:50:00 AM	UG/M3	ND	U	0.27	0.19		0.08	ND	U	0.078	ND	U	0.071	ND	U	0
ENGWESA005	7/8/15 3:33 PM	UG/M3	0.29		0.23	0.2		0.068	ND	U	0.067	ND	U	0.061	0.1		0
ENGWESA005	7/22/15 11:04 AM	UG/M3	0.28		0.25	0.25		0.075	ND	U	0.074	ND	U	0.067	0.1		0
ENGWESA005	8/5/15 9:30 AM	UG/M3	0.27		0.25	0.32		0.074	ND	U	0.073	0.077		0.066	0.13		0
ENGWESA005 FD	8/5/15 9:30 AM	UG/M3	0.26		0.25	0.3		0.074	ND	U	0.073	ND	U	0.066	0.12		0
ENGWESA005	8/19/15 10:00 AM	UG/M3	0.33		0.25	0.33		0.074	ND	U	0.073	ND	U	0.066	ND	U	0
ENGWESA005	9/2/15 10:15 AM	UG/M3	0.3		0.25	0.34		0.074	ND	U	0.073	0.076		0.066	0.11		0
ENGWESA005	9/16/15 1:07 PM	UG/M3	0.42		0.24	0.39		0.073	ND	U	0.072	0.069		0.066	0.097		0
ENGWESA005	9/30/15 10:11 AM	UG/M3	0.39		0.25	0.31		0.075	ND	U	0.074	0.1		0.067	0.14		0
ENGWESA005	10/14/15 3:25 PM	UG/M3	0.26		0.24	0.29		0.073	ND	U	0.072	0.07		0.065	0.098		0
ENGWESA005 FD	10/14/15 3:25 PM	UG/M3	0.24		0.24	0.26		0.073	ND	U	0.072	ND	U	0.065	0.093		0
ENGWESA005	10/27/15 3:10 PM	UG/M3	0.4		0.27	0.28		0.08	ND	U	0.079	0.083		0.071	0.14		0

CLIENTSAMPID	SAMPDATETIME	UNITS (ug/m3)	Benzene			Carbon Tetrachloride			Chlorobenzene			Chloroform			Cyclohexane		
ENGWESA007	5/13/2015 11:25:00 AM	UG/M3	0.31		0.29	0.35		0.086	ND	U	0.085	ND	U	0.077	ND	U	
ENGWESA007	5/27/2015 12:32:00 PM	UG/M3	ND	U	0.25	0.28		0.074	ND	U	0.073	ND	U	0.066	ND	U	
ENGWESA007	6/10/2015 10:03:00 AM	UG/M3	ND	U	0.25	0.27		0.074	ND	U	0.073	ND	U	0.067	0.11		
ENGWESA007	6/23/2015 10:05:00 AM	UG/M3	ND	U	0.27	0.24		0.08	ND	U	0.078	ND	U	0.071	0.12		
ENGWESA007	7/8/15 3:33 PM	UG/M3	0.32		0.23	0.22		0.068	ND	U	0.067	ND	U	0.061	0.094		
ENGWESA007 FD	7/8/15 3:33 PM	UG/M3	0.3		0.25	0.31		0.075	ND	U	0.074	ND	U	0.067	0.12		
ENGWESA007	7/22/15 10:40 AM	UG/M3	0.26		0.25	0.26		0.075	ND	U	0.074	ND	U	0.067	0.13		
ENGWESA007	7/22/15 10:40 AM	UG/M3	0.37		0.23	0.25		0.068	ND	U	0.067	ND	U	0.061	ND	U	
ENGWESA007	8/5/15 9:29 AM	UG/M3	0.26		0.25	0.28		0.074	ND	U	0.073	0.072		0.066	0.15		
ENGWESA007	8/19/15 7:45 PM	UG/M3	0.27		0.25	0.3		0.074	ND	U	0.073	ND	U	0.066	0.11		
ENGWESA007	9/2/15 10:05 AM	UG/M3	0.35		0.25	0.34		0.074	ND	U	0.073	ND	U	0.066	0.14		
ENGWESA007	9/16/15 1:22 PM	UG/M3	0.28		0.24	0.28	J	0.073	ND	U	0.072	ND	U	0.066	0.1		
ENGWESA007 FD	9/16/15 1:22 PM	UG/M3	0.39		0.24	0.47	J	0.073	ND	U	0.072	0.072		0.066	0.13		
ENGWESA007	9/30/15 10:19 AM	UG/M3	0.42		0.25	0.41		0.075	ND	U	0.074	0.11		0.067	0.15		
ENGWESA007	10/14/15 3:00 PM	UG/M3	0.3		0.24	0.3		0.073	ND	U	0.072	ND	U	0.065	0.11		
ENGWESA007	10/27/15 3:00 PM	UG/M3	0.41		0.27	0.26		0.08	ND	U	0.078	0.077		0.071	0.14		
ENGWESA008	5/13/2015 12:05:00 PM	UG/M3	0.33		0.29	0.38		0.087	ND	U	0.086	ND	U	0.078	ND	U	
ENGWESA008	5/27/2015 4:00:00 PM	UG/M3	ND	U	0.24	0.28		0.073	ND	U	0.072	ND	U	0.065	ND	U	
ENGWESA008 FD	5/27/2015 4:00:00 PM	UG/M3	ND	U	0.24	0.27		0.073	ND	U	0.072	ND	U	0.065	ND	U	
ENGWESA008	6/10/2015 10:40:00 AM	UG/M3	ND	U	0.25	0.28		0.075	ND	U	0.074	0.085		0.067	ND	U	
ENGWESA008	6/23/2015 11:45:00 AM	UG/M3	ND	U	0.27	0.22		0.079	ND	U	0.078	ND	U	0.071	ND	U	
ENGWESA008	07/22/2015 11:29	UG/M3	0.27		0.25	0.29		0.075	ND	U	0.074	ND	U	0.067	0.1		
ENGWESA008	8/5/15 9:36 AM	UG/M3	0.32		0.25	0.32		0.074	ND	U	0.073	0.078		0.066	ND	U	
ENGWESA008	8/19/15 10:18 AM	UG/M3	0.26		0.25	0.28		0.074	ND	U	0.073	ND	U	0.066	ND	U	
ENGWESA008 FD	8/19/15 10:18 AM	UG/M3	0.26		0.25	0.23		0.074	ND	U	0.073	ND	U	0.066	ND	U	
ENGWESA008	9/2/15 10:26 AM	UG/M3	0.31		0.25	0.32		0.074	ND	U	0.073	ND	U	0.066	ND	U	
ENGWESA008	9/16/15 12:51 PM	UG/M3	0.29		0.25	0.35		0.074	ND	U	0.072	ND	U	0.066	ND	U	
ENGWESA008	9/30/15 10:04 AM	UG/M3	0.32		0.25	0.27		0.075	ND	U	0.074	0.086		0.067	0.11		
ENGWESA008	10/14/15 4:24 PM	UG/M3	0.28		0.24	0.31		0.073	ND	U	0.072	0.073		0.065	ND	U	
ENGWESA008	10/27/15 3:19 PM	UG/M3	0.48		0.27	0.33		0.08	ND	U	0.079	0.079		0.071	0.15		
ENGWESA008 FD	10/27/15 3:19 PM	UG/M3	0.42		0.27	0.29		0.08	ND	U	0.079	0.082		0.071	0.12		

CLIENTSAMPID	SAMPDATETIME	UNITS (ug/m3)	Benzene			Carbon Tetrachloride			Chlorobenzene			Chloroform			Cyclohexane		
ENGWESA011	5/13/2015 11:45:00 AM	UG/M3	0.3		0.28	0.34		0.085	ND	U	0.084	ND	U	0.076	ND	U	
ENGWESA011 FD	5/13/2015 11:45:00 AM	UG/M3	0.31		0.28	0.35		0.085	ND	U	0.084	ND	U	0.076	ND	U	
ENGWESA011	5/27/2015 10:30:00 AM	UG/M3	ND	U	0.25	0.26		0.074	ND	U	0.073	ND	U	0.066	ND	U	0
ENGWESA011	6/10/2015 11:23:00 AM	UG/M3	ND	U	0.25	0.27		0.074	ND	U	0.073	ND	U	0.066	ND	U	0
ENGWESA011	6/23/2015 12:00:00 PM	UG/M3	ND	U	0.27	0.19		0.08	ND	U	0.078	ND	U	0.071	ND	U	0
ENGWESA011	07/08/2015 14:44	UG/M3	0.29		0.23	0.21		0.068	ND	U	0.068	ND	U	0.061	ND	U	0
ENGWESA011 FD	07/08/2015 14:44	UG/M3	0.29		0.23	0.19		0.068	ND	U	0.068	ND	U	0.061	ND	U	0
ENGWESA011	07/22/2015 07:40	UG/M3	ND	U	0.25	0.25		0.076	ND	U	0.074	ND	U	0.068	ND	U	0
ENGWESA011	8/5/15 9:43 AM	UG/M3	0.29		0.25	0.32		0.074	ND	U	0.072	0.067		0.066	0.1		0
ENGWESA011	8/19/15 10:36 AM	UG/M3	0.43		0.25	0.27		0.074	ND	U	0.073	ND	U	0.066	0.12		0
ENGWESA011	9/2/15 10:33 AM	UG/M3	0.28		0.25	0.26		0.074	ND	U	0.073	ND	U	0.066	ND	U	0
ENGWESA011	9/16/15 1:37 PM	UG/M3	0.32		0.24	0.32		0.073	ND	U	0.072	ND	U	0.066	0.12		0
ENGWESA011	9/30/15 10:28 AM	UG/M3	0.39		0.25	0.32		0.075	ND	U	0.074	0.097		0.067	0.15		0
ENGWESA011 FD	9/30/15 10:28 AM	UG/M3	0.45		0.25	0.38		0.075	ND	U	0.074	0.12		0.067	0.1		0
ENGWESA011	10/14/15 2:30 PM	UG/M3	0.28		0.24	0.28		0.073	ND	U	0.072	ND	U	0.065	ND	U	0
ENGWESA011	10/27/15 3:47 PM	UG/M3	0.48		0.27	0.29		0.079	ND	U	0.078	ND	U	0.071	0.13		0

CLIENTSAMPID	SAMPDATETIME	UNITS (ug/m3)	Ethyl Acetate			Ethyl Benzene			Heptane			Hexane			m,p-Xylene		
			Result	Final Q	RL	Result	Final Q	RL	Result	Final Q	RL	Result	Final Q	RL	Result	Final Q	
ENGWESA001	5/13/2015 11:05:00 AM	UG/M3	ND	U	0.3	ND	U	0.086	0.18		0.1	0.16		0.088	0.21		0
ENGWESA001	5/27/2015 4:33:00 PM	UG/M3	ND	U	0.25	0.076		0.072	0.22		0.084	0.13		0.074	0.23		0
ENGWESA001	6/10/2015 11:01:00 AM	UG/M3	ND	U	0.26	0.083		0.074	0.26		0.087	0.21		0.076	0.25		0
ENGWESA001 FD	6/10/2015 11:08:00 AM	UG/M3	ND	U	0.26	ND	U	0.074	0.24		0.087	0.21		0.076	0.2		0
ENGWESA001	6/24/2015 12:00:00 PM	UG/M3	ND	U	0.25	0.085		0.073	0.19		0.085	0.27		0.075	0.28		0
ENGWESA001	7/8/15 3:33 PM	UG/M3	ND	U	0.25	0.088		0.072	0.28		0.084	0.34		0.074	0.25		0
ENGWESA001	7/22/15 2:24 PM	UG/M3	ND	U	0.26	0.096		0.073	0.42		0.086	0.68		0.075	0.3		0
ENGWESA001	8/5/15 9:17 AM	UG/M3	ND	U	0.26	0.1		0.074	0.28		0.087	0.49		0.076	0.31		0
ENGWESA001	8/19/15 11:15 AM	UG/M3	ND	U	0.25	0.099		0.072	0.24	J+	0.085	0.47		0.075	0.3		0
ENGWESA001	9/2/15 9:50 AM	UG/M3	ND	U	0.26	0.13		0.073	0.31		0.086	0.42	J+	0.075	0.37		0
ENGWESA001 FD	9/2/15 9:50 AM	UG/M3	ND	U	0.26	0.12		0.073	0.27		0.086	0.33	J+	0.075	0.32		0
ENGWESA001	9/16/15 11:18 AM	UG/M3	ND	U	0.25	0.092		0.073	0.26		0.085	0.55		0.075	0.3		0
ENGWESA001	9/30/15 12:03 PM	UG/M3	0.33		0.25	0.12		0.073	0.61	J+	0.085	0.52	J+	0.075	0.39		0
ENGWESA001	10/14/15 1:56 PM	UG/M3	ND	U	0.25	0.082		0.072	0.26		0.085	0.2		0.075	0.23		0
ENGWESA001	10/27/15 3:33 PM	UG/M3	ND	U	0.27	0.11		0.078	0.32		0.092	0.36		0.08	0.31		0
ENGWESA005	5/13/2015 11:35:00 AM	UG/M3	ND	U	0.3	0.094		0.085	0.21		0.1	0.22		0.088	0.27		0
ENGWESA005	5/27/2015 3:14:00 PM	UG/M3	ND	U	0.25	0.079		0.072	0.13		0.085	0.15		0.074	0.22		0
ENGWESA005	6/10/2015 10:13:00 AM	UG/M3	ND	U	0.26	0.1		0.074	0.17		0.087	0.33		0.076	0.3		0
ENGWESA005	6/23/2015 10:50:00 AM	UG/M3	ND	U	0.27	0.097		0.078	0.17	0	0.092	0.23		0.081	0.28		0
ENGWESA005 FD	6/23/2015 10:50:00 AM	UG/M3	ND	U	0.27	0.081		0.078	0.14		0.092	0.25		0.081	0.24		0
ENGWESA005	7/8/15 3:33 PM	UG/M3	ND	U	0.23	0.14		0.067	0.19		0.079	2		0.069	0.38		0
ENGWESA005	7/22/15 11:04 AM	UG/M3	ND	U	0.26	0.1		0.074	0.2		0.086	0.84		0.076	0.32		0
ENGWESA005	8/5/15 9:30 AM	UG/M3	0.28		0.26	0.14		0.073	0.21		0.086	0.32		0.076	0.42		0
ENGWESA005 FD	8/5/15 9:30 AM	UG/M3	0.27		0.26	0.12		0.073	0.19		0.086	0.34		0.076	0.36		0
ENGWESA005	8/19/15 10:00 AM	UG/M3	ND	U	0.25	0.12		0.073	0.22	J+	0.085	0.45		0.075	0.37		0
ENGWESA005	9/2/15 10:15 AM	UG/M3	ND	U	0.25	0.14		0.073	0.25		0.085	0.51	J+	0.075	0.39		0
ENGWESA005	9/16/15 1:07 PM	UG/M3	0.28		0.25	0.11		0.072	0.24		0.085	0.6		0.074	0.35		0
ENGWESA005	9/30/15 10:11 AM	UG/M3	ND	U	0.26	0.13		0.074	0.34	J+	0.086	0.66	J+	0.076	0.45		0
ENGWESA005	10/14/15 3:25 PM	UG/M3	0.35		0.25	0.091		0.072	0.22		0.084	0.29		0.074	0.26		0
ENGWESA005 FD	10/14/15 3:25 PM	UG/M3	0.34		0.25	0.083		0.072	0.2		0.084	0.21		0.074	0.23		0
ENGWESA005	10/27/15 3:10 PM	UG/M3	0.28		0.27	0.13		0.079	0.25		0.092	0.32		0.081	0.37		0

CLIENTSAMPID	SAMPDATETIME	UNITS (ug/m3)	Ethyl Acetate			Ethyl Benzene			Heptane			Hexane			m,p-Xylene		
ENGWESA007	5/13/2015 11:25:00 AM	UG/M3	0.41		0.3	0.14		0.085	0.25		0.1	0.35		0.088	0.42		0
ENGWESA007	5/27/2015 12:32:00 PM	UG/M3	0.31		0.25	0.093		0.073	0.15		0.085	0.31		0.075	0.27		0
ENGWESA007	6/10/2015 10:03:00 AM	UG/M3	0.35		0.26	0.14		0.073	0.22		0.086	0.41		0.076	0.43		0
ENGWESA007	6/23/2015 10:05:00 AM	UG/M3	0.51		0.27	0.17		0.078	0.25		0.092	0.33		0.081	0.52		0
ENGWESA007	7/8/15 3:33 PM	UG/M3	0.29		0.23	0.13		0.067	0.24		0.079	0.27		0.069	0.38		0
ENGWESA007 FD	7/8/15 3:33 PM	UG/M3	0.49		0.26	0.12		0.074	0.24		0.086	0.48	J	0.076	0.37		0
ENGWESA007	7/22/15 10:40 AM	UG/M3	0.41		0.26	0.12		0.074	0.21		0.087	0.31	J	0.076	0.36		0
ENGWESA007	7/22/15 10:40 AM	UG/M3	ND	U	0.24	0.14		0.067	0.23		0.079	0.29		0.069	0.37		0
ENGWESA007	8/5/15 9:29 AM	UG/M3	0.39		0.26	0.16		0.073	0.28		0.086	0.43		0.075	0.45		0
ENGWESA007	8/19/15 7:45 PM	UG/M3	0.35		0.25	0.12		0.073	0.22	J+	0.085	0.55		0.075	0.41		0
ENGWESA007	9/2/15 10:05 AM	UG/M3	0.45		0.25	0.16		0.073	0.28		0.085	0.62	J+	0.075	0.46		0
ENGWESA007	9/16/15 1:22 PM	UG/M3	0.34		0.25	0.12		0.072	0.26		0.085	0.44		0.074	0.41		0
ENGWESA007 FD	9/16/15 1:22 PM	UG/M3	0.49		0.25	0.15		0.072	0.27		0.085	0.45		0.074	0.51		0
ENGWESA007	9/30/15 10:19 AM	UG/M3	0.43		0.26	0.17		0.074	0.35	J+	0.086	0.64	J+	0.076	0.58		0
ENGWESA007	10/14/15 3:00 PM	UG/M3	0.39		0.25	0.12		0.072	0.23		0.084	0.3		0.074	0.34		0
ENGWESA007	10/27/15 3:00 PM	UG/M3	0.43		0.27	0.16		0.078	0.29		0.092	0.37		0.081	0.47		0
ENGWESA008	5/13/2015 12:05:00 PM	UG/M3	ND	U	0.3	0.088		0.086	0.23		0.1	0.3		0.088	0.26		0
ENGWESA008	5/27/2015 4:00:00 PM	UG/M3	ND	U	0.25	0.074		0.072	0.12		0.084	0.19		0.074	0.22		0
ENGWESA008 FD	5/27/2015 4:00:00 PM	UG/M3	ND	U	0.25	0.073		0.072	0.11		0.084	0.21		0.074	0.2		0
ENGWESA008	6/10/2015 10:40:00 AM	UG/M3	ND	U	0.26	0.11		0.074	0.19		0.087	0.3		0.076	0.36		0
ENGWESA008	6/23/2015 11:45:00 AM	UG/M3	ND	U	0.27	0.08		0.078	0.13		0.092	0.27		0.081	0.22		0
ENGWESA008	07/22/2015 11:29	UG/M3	ND	U	0.26	0.094		0.074	0.18		0.086	0.34		0.076	0.29		0
ENGWESA008	8/5/15 9:36 AM	UG/M3	ND	U	0.26	0.12		0.073	0.2		0.086	0.27		0.076	0.36		0
ENGWESA008	8/19/15 10:18 AM	UG/M3	ND	U	0.25	0.11		0.073	0.2	J+	0.085	0.43		0.075	0.37		0
ENGWESA008 FD	8/19/15 10:18 AM	UG/M3	ND	U	0.25	0.11		0.073	0.24	J+	0.085	0.42		0.075	0.34		0
ENGWESA008	9/2/15 10:26 AM	UG/M3	ND	U	0.25	0.12		0.073	0.19		0.085	0.4	J+	0.075	0.34		0
ENGWESA008	9/16/15 12:51 PM	UG/M3	ND	U	0.25	0.096		0.072	0.18		0.085	0.48		0.075	0.32		0
ENGWESA008	9/30/15 10:04 AM	UG/M3	ND	U	0.26	0.11		0.074	0.29	J+	0.086	0.43	J+	0.076	0.38		0
ENGWESA008	10/14/15 4:24 PM	UG/M3	0.25		0.25	0.085		0.072	0.2		0.084	0.29		0.074	0.23		0
ENGWESA008	10/27/15 3:19 PM	UG/M3	ND	U	0.27	0.14		0.079	0.26		0.092	0.3		0.081	0.38		0
ENGWESA008 FD	10/27/15 3:19 PM	UG/M3	ND	U	0.27	0.12		0.079	0.25		0.092	0.34		0.081	0.34		0

CLIENTSAMPID	SAMPDATETIME	UNITS (ug/m3)	Ethyl Acetate			Ethyl Benzene			Heptane			Hexane			m,p-Xylene		
ENGWESA011	5/13/2015 11:45:00 AM	UG/M3	ND	U	0.29	0.085		0.084	0.2		0.098	0.21		0.086	0.23		0
ENGWESA011 FD	5/13/2015 11:45:00 AM	UG/M3	ND	U	0.29	0.086		0.084	0.2		0.098	0.26		0.086	0.23		0
ENGWESA011	5/27/2015 10:30:00 AM	UG/M3	ND	U	0.26	ND	U	0.073	0.12		0.086	0.23		0.075	0.18		0
ENGWESA011	6/10/2015 11:23:00 AM	UG/M3	ND	U	0.25	0.12		0.073	0.17		0.085	0.32		0.075	0.35		0
ENGWESA011	6/23/2015 12:00:00 PM	UG/M3	ND	U	0.27	0.082		0.078	0.14		0.092	0.23		0.081	0.23		0
ENGWESA011	07/08/2015 14:44	UG/M3	ND	U	0.24	0.11		0.068	0.14		0.079	0.24		0.07	0.31		0
ENGWESA011 FD	07/08/2015 14:44	UG/M3	ND	U	0.24	0.12		0.068	0.16		0.079	0.34		0.07	0.3		0
ENGWESA011	07/22/2015 07:40	UG/M3	ND	U	0.26	0.081		0.074	0.17		0.087	0.24		0.077	0.25		0
ENGWESA011	8/5/15 9:43 AM	UG/M3	ND	U	0.25	0.11		0.072	0.18		0.085	0.38		0.075	0.35		0
ENGWESA011	8/19/15 10:36 AM	UG/M3	ND	U	0.25	0.12		0.073	0.41	J+	0.085	1.2		0.075	0.37		0
ENGWESA011	9/2/15 10:33 AM	UG/M3	ND	U	0.25	0.096		0.073	0.17		0.086	0.47	J+	0.075	0.26		0
ENGWESA011	9/16/15 1:37 PM	UG/M3	0.25		0.25	0.11		0.072	0.23		0.085	0.46		0.074	0.34		0
ENGWESA011	9/30/15 10:28 AM	UG/M3	0.26		0.26	0.15		0.074	0.35	J+	0.086	0.54	J+	0.076	0.49		0
ENGWESA011 FD	9/30/15 10:28 AM	UG/M3	ND	U	0.26	0.13		0.074	0.26	J+	0.086	0.78	J+	0.076	0.41		0
ENGWESA011	10/14/15 2:30 PM	UG/M3	ND	U	0.25	0.082		0.072	0.18		0.084	0.22		0.074	0.22		0
ENGWESA011	10/27/15 3:47 PM	UG/M3	ND	U	0.27	0.14		0.078	0.28		0.092	0.32		0.081	0.39		0

CLIENTSAMPID	SAMPDATETIME	UNITS (ug/m3)	Naphthalene			o-Xylene			Propylbenzene			Styrene			Tetrachloroethene		
			Result	Final Q	RL	Result	Final Q	RL	Result	Final Q	RL	Result	Final Q	RL	Result	Final Q	RL
ENGWESA001	5/13/2015 11:05:00 AM	UG/M3	ND	U	0.23	ND	U	0.089	ND	U	0.1	ND	U	0.095	ND	U	0.098
ENGWESA001	5/27/2015 4:33:00 PM	UG/M3	ND	U	0.2	0.082		0.075	ND	U	0.086	ND	U	0.08	0.18		0.083
ENGWESA001	6/10/2015 11:01:00 AM	UG/M3	ND	U	0.2	0.081		0.078	ND	U	0.088	ND	U	0.083	0.14		0.085
ENGWESA001 FD	6/10/2015 11:08:00 AM	UG/M3	ND	U	0.2	ND	U	0.078	ND	U	0.088	ND	U	0.083	0.12		0.085
ENGWESA001	6/24/2015 12:00:00 PM	UG/M3	ND	U	0.2	0.077		0.076	ND	U	0.087	ND	U	0.081	0.24		0.084
ENGWESA001	7/8/15 3:33 PM	UG/M3	ND	U	0.2	0.082		0.075	ND	U	0.086	ND	U	0.08	0.24		0.083
ENGWESA001	7/22/15 2:24 PM	UG/M3	ND	U	0.2	0.09		0.076	ND	U	0.087	ND	U	0.082	0.15		0.084
ENGWESA001	8/5/15 9:17 AM	UG/M3	ND	U	0.2	0.1		0.078	ND	U	0.088	ND	U	0.082	0.28		0.085
ENGWESA001	8/19/15 11:15 AM	UG/M3	ND	U	0.2	0.095		0.076	ND	U	0.086	ND	U	0.081	0.47		0.084
ENGWESA001	9/2/15 9:50 AM	UG/M3	ND	U	0.2	0.15		0.077	ND	U	0.087	ND	U	0.082	0.2		0.084
ENGWESA001 FD	9/2/15 9:50 AM	UG/M3	ND	U	0.2	0.13		0.077	ND	U	0.087	ND	U	0.082	0.17		0.084
ENGWESA001	9/16/15 11:18 AM	UG/M3	ND	U	0.2	0.095		0.076	ND	U	0.087	ND	U	0.081	0.2		0.084
ENGWESA001	9/30/15 12:03 PM	UG/M3	ND	U	0.2	0.13		0.076	ND	U	0.087	ND	U	0.081	0.37		0.084
ENGWESA001	10/14/15 1:56 PM	UG/M3	ND	U	0.2	0.086		0.076	ND	U	0.086	ND	U	0.081	0.45		0.084
ENGWESA001	10/27/15 3:33 PM	UG/M3	ND	U	0.21	0.11		0.082	ND	U	0.093	ND	U	0.087	0.15		0.09
ENGWESA005	5/13/2015 11:35:00 AM	UG/M3	ND	U	0.23	ND	U	0.089	ND	U	0.1	ND	U	0.095	ND	U	0.098
ENGWESA005	5/27/2015 3:14:00 PM	UG/M3	ND	U	0.2	ND	U	0.075	ND	U	0.086	ND	U	0.08	ND	U	0.083
ENGWESA005	6/10/2015 10:13:00 AM	UG/M3	ND	U	0.2	0.092		0.077	ND	U	0.088	ND	U	0.082	ND	U	0.085
ENGWESA005	6/23/2015 10:50:00 AM	UG/M3	ND	U	0.21	0.087		0.082	ND	U	0.094	ND	U	0.087	ND	U	0.09
ENGWESA005 FD	6/23/2015 10:50:00 AM	UG/M3	ND	U	0.21	ND	U	0.082	ND	U	0.094	ND	U	0.087	ND	U	0.09
ENGWESA005	7/8/15 3:33 PM	UG/M3	ND	U	0.18	0.12		0.07	ND	U	0.08	ND	U	0.075	ND	U	0.078
ENGWESA005	7/22/15 11:04 AM	UG/M3	ND	U	0.2	0.099		0.077	ND	U	0.088	ND	U	0.082	0.088		0.085
ENGWESA005	8/5/15 9:30 AM	UG/M3	ND	U	0.2	0.12		0.077	ND	U	0.087	ND	U	0.082	ND	U	0.084
ENGWESA005 FD	8/5/15 9:30 AM	UG/M3	ND	U	0.2	0.11		0.077	ND	U	0.087	ND	U	0.082	ND	U	0.084
ENGWESA005	8/19/15 10:00 AM	UG/M3	ND	U	0.2	0.12		0.076	ND	U	0.087	ND	U	0.081	0.094		0.084
ENGWESA005	9/2/15 10:15 AM	UG/M3	ND	U	0.2	0.15		0.076	ND	U	0.087	ND	U	0.081	0.1		0.084
ENGWESA005	9/16/15 1:07 PM	UG/M3	ND	U	0.2	0.12		0.076	ND	U	0.086	ND	U	0.081	0.098		0.083
ENGWESA005	9/30/15 10:11 AM	UG/M3	ND	U	0.2	0.15		0.077	ND	U	0.088	ND	U	0.082	0.14		0.085
ENGWESA005	10/14/15 3:25 PM	UG/M3	ND	U	0.2	0.09		0.075	ND	U	0.086	ND	U	0.08	ND	U	0.083
ENGWESA005 FD	10/14/15 3:25 PM	UG/M3	ND	U	0.2	0.081		0.075	ND	U	0.086	ND	U	0.08	ND	U	0.083
ENGWESA005	10/27/15 3:10 PM	UG/M3	ND	U	0.21	0.13		0.082	ND	U	0.094	ND	U	0.088	0.099		0.091

CLIENTSAMPID	SAMPDATETIME	UNITS (ug/m3)	Naphthalene			o-Xylene			Propylbenzene			Styrene			Tetrachloroethene		
ENGWESA007	5/13/2015 11:25:00 AM	UG/M3	ND	U	0.23	0.13		0.089	ND	U	0.1	ND	U	0.095	ND	U	0.098
ENGWESA007	5/27/2015 12:32:00 PM	UG/M3	ND	U	0.2	0.085		0.076	ND	U	0.087	ND	U	0.081	ND	U	0.084
ENGWESA007	6/10/2015 10:03:00 AM	UG/M3	ND	U	0.2	0.14		0.077	ND	U	0.088	ND	U	0.082	0.093		0.085
ENGWESA007	6/23/2015 10:05:00 AM	UG/M3	ND	U	0.21	0.16		0.082	ND	U	0.094	ND	U	0.088	0.1		0.09
ENGWESA007	7/8/15 3:33 PM	UG/M3	ND	U	0.18	0.13		0.07	ND	U	0.08	ND	U	0.075	0.086		0.077
ENGWESA007 FD	7/8/15 3:33 PM	UG/M3	ND	U	0.2	0.11		0.077	ND	U	0.088	ND	U	0.082	0.1		0.085
ENGWESA007	7/22/15 10:40 AM	UG/M3	ND	U	0.2	0.11		0.077	ND	U	0.088	ND	U	0.082	0.1		0.085
ENGWESA007	7/22/15 10:40 AM	UG/M3	ND	U	0.18	0.12		0.07	ND	U	0.08	ND	U	0.075	ND	U	0.078
ENGWESA007	8/5/15 9:29 AM	UG/M3	ND	U	0.2	0.14		0.077	ND	U	0.087	ND	U	0.082	0.11		0.084
ENGWESA007	8/19/15 7:45 PM	UG/M3	ND	U	0.2	0.13		0.076	ND	U	0.087	ND	U	0.081	0.097		0.084
ENGWESA007	9/2/15 10:05 AM	UG/M3	ND	U	0.2	0.18		0.076	ND	U	0.087	ND	U	0.081	0.12		0.084
ENGWESA007	9/16/15 1:22 PM	UG/M3	ND	U	0.2	0.12		0.076	ND	U	0.086	ND	U	0.08	0.12		0.083
ENGWESA007 FD	9/16/15 1:22 PM	UG/M3	ND	U	0.2	0.16		0.076	ND	U	0.086	ND	U	0.08	0.15		0.083
ENGWESA007	9/30/15 10:19 AM	UG/M3	ND	U	0.2	0.19		0.077	ND	U	0.088	ND	U	0.082	0.17		0.085
ENGWESA007	10/14/15 3:00 PM	UG/M3	ND	U	0.2	0.11		0.075	ND	U	0.086	ND	U	0.08	ND	U	0.083
ENGWESA007	10/27/15 3:00 PM	UG/M3	ND	U	0.21	0.15		0.082	ND	U	0.094	ND	U	0.088	0.1		0.09
ENGWESA008	5/13/2015 12:05:00 PM	UG/M3	ND	U	0.23	ND	U	0.09	ND	U	0.1	ND	U	0.096	ND	U	0.099
ENGWESA008	5/27/2015 4:00:00 PM	UG/M3	ND	U	0.2	ND	U	0.075	ND	U	0.086	ND	U	0.08	ND	U	0.083
ENGWESA008 FD	5/27/2015 4:00:00 PM	UG/M3	ND	U	0.2	ND	U	0.075	ND	U	0.086	ND	U	0.08	ND	U	0.083
ENGWESA008	6/10/2015 10:40:00 AM	UG/M3	ND	U	0.2	0.11		0.078	ND	U	0.088	ND	U	0.083	ND	U	0.085
ENGWESA008	6/23/2015 11:45:00 AM	UG/M3	ND	U	0.21	ND	U	0.082	ND	U	0.093	ND	U	0.087	ND	U	0.09
ENGWESA008	07/22/2015 11:29	UG/M3	ND	U	0.2	0.092		0.077	ND	U	0.088	ND	U	0.082	0.1		0.085
ENGWESA008	8/5/15 9:36 AM	UG/M3	ND	U	0.2	0.11		0.077	ND	U	0.088	ND	U	0.082	ND	U	0.084
ENGWESA008	8/19/15 10:18 AM	UG/M3	ND	U	0.2	0.12		0.076	ND	U	0.087	ND	U	0.081	ND	U	0.084
ENGWESA008 FD	8/19/15 10:18 AM	UG/M3	ND	U	0.2	0.11		0.076	ND	U	0.087	ND	U	0.081	ND	U	0.084
ENGWESA008	9/2/15 10:26 AM	UG/M3	ND	U	0.2	0.13		0.076	ND	U	0.087	ND	U	0.081	ND	U	0.084
ENGWESA008	9/16/15 12:51 PM	UG/M3	ND	U	0.2	0.1		0.076	ND	U	0.086	ND	U	0.081	0.1		0.083
ENGWESA008	9/30/15 10:04 AM	UG/M3	ND	U	0.2	0.13		0.077	ND	U	0.088	ND	U	0.082	0.15		0.085
ENGWESA008	10/14/15 4:24 PM	UG/M3	ND	U	0.19	0.086		0.075	ND	U	0.085	ND	U	0.08	ND	U	0.082
ENGWESA008	10/27/15 3:19 PM	UG/M3	ND	U	0.21	0.13		0.082	ND	U	0.094	ND	U	0.088	0.1		0.091
ENGWESA008 FD	10/27/15 3:19 PM	UG/M3	ND	U	0.21	0.12		0.082	ND	U	0.094	ND	U	0.088	0.094		0.091

CLIENTSAMPID	SAMPDATETIME	UNITS (ug/m3)	Naphthalene			o-Xylene			Propylbenzene			Styrene			Tetrachloroethene		
ENGWESA011	5/13/2015 11:45:00 AM	UG/M3	ND	U	0.23	ND	U	0.088	ND	U	0.1	ND	U	0.094	ND	U	0.097
ENGWESA011 FD	5/13/2015 11:45:00 AM	UG/M3	ND	U	0.23	ND	U	0.088	ND	U	0.1	ND	U	0.094	ND	U	0.097
ENGWESA011	5/27/2015 10:30:00 AM	UG/M3	ND	U	0.2	ND	U	0.076	ND	U	0.087	ND	U	0.082	ND	U	0.084
ENGWESA011	6/10/2015 11:23:00 AM	UG/M3	ND	U	0.2	0.11		0.076	ND	U	0.087	ND	U	0.081	ND	U	0.084
ENGWESA011	6/23/2015 12:00:00 PM	UG/M3	ND	U	0.21	ND	U	0.082	ND	U	0.094	ND	U	0.087	ND	U	0.09
ENGWESA011	07/08/2015 14:44	UG/M3	ND	U	0.18	0.098		0.071	ND	U	0.081	ND	U	0.075	ND	U	0.078
ENGWESA011 FD	07/08/2015 14:44	UG/M3	ND	U	0.18	0.1		0.071	ND	U	0.081	ND	U	0.075	ND	U	0.078
ENGWESA011	07/22/2015 07:40	UG/M3	ND	U	0.2	ND	U	0.078	ND	U	0.089	ND	U	0.083	0.12		0.086
ENGWESA011	8/5/15 9:43 AM	UG/M3	ND	U	0.2	0.1		0.076	ND	U	0.086	ND	U	0.081	ND	U	0.084
ENGWESA011	8/19/15 10:36 AM	UG/M3	ND	U	0.2	0.11		0.076	ND	U	0.087	ND	U	0.081	ND	U	0.084
ENGWESA011	9/2/15 10:33 AM	UG/M3	ND	U	0.2	0.1		0.076	ND	U	0.087	ND	U	0.081	ND	U	0.084
ENGWESA011	9/16/15 1:37 PM	UG/M3	ND	U	0.2	0.1		0.076	ND	U	0.086	ND	U	0.08	0.1		0.083
ENGWESA011	9/30/15 10:28 AM	UG/M3	ND	U	0.2	0.17		0.077	ND	U	0.088	ND	U	0.082	0.2		0.085
ENGWESA011 FD	9/30/15 10:28 AM	UG/M3	ND	U	0.2	0.14		0.077	ND	U	0.088	ND	U	0.082	0.17		0.085
ENGWESA011	10/14/15 2:30 PM	UG/M3	ND	U	0.2	0.082		0.075	ND	U	0.086	ND	U	0.08	ND	U	0.083
ENGWESA011	10/27/15 3:47 PM	UG/M3	ND	U	0.21	0.14		0.082	ND	U	0.093	ND	U	0.087	ND	U	0.09

APPENDIX E

GAMMA DOSIMETRY RESULTS

Occupational Radiation Exposure Report

Accredited by the "National Institute of Standards and Technology through NVLAP for the specific scope of accreditation under lab code 100555-0"

REPORT NO: 15012 **ACCOUNT NO:** 79807 **LOCATION:** 00003LOC

DATE BADGES RECEIVED:	10/16/2015
DATE BADGES REPORTED:	FEB 17, 2016
PAGE: 1 OF: 1	
LICENSE NO:	
PURCHASE ORDER	

NOTIFICATION LEVELS		
DEEP	SHALLOW	EXTREMITY

REPORT TO:
AUXIER AND ASSOCIATES INC
13570 ST CHARLES ROCK RD

BRIDGETON, MO 63044

BILL ABERNATHY

SHIP TO:
AUXIER AND ASSOCIATES INC
13570 ST CHARLES ROCK RD

BRIDGETON, MO 63044

BILL ABERNATHY

WEARER NUMBER	SLOT NUMBER	PROCESS CONTROL NUMBER	NAME (LAST) OR OTHER DESIGNATION	FI	MI	ID TYPE	SSN/ID	BIRTH DATE	SEX	BT	BR	BP	SERVICE	DOSE EQUIVALENT IN MILLIREMS FOR PERIODS INDICATED BELOW																
														MONITORING PERIOD		CURRENT					QUARTER TO DATE			YEAR TO DATE				LIFETIME TO DATE		
														FIRST DAY	LAST DAY	DEEP	EYE	SHALL.	NEUT	PROC. NOTES	DEEP	EYE	SHALL.	DEEP	EYE	SHALL.	NO. RPTS	DEEP	DOSE HISTORY ADJUSTMENT	INCEPTION DATE LIFETIME TOTAL
5		0227053	AMBIENT DETECTOR 1			1				14	WB		Q	07/15/2015	10/14/2015	25	25	25			25	25	25	53	53	53	2	53		04/01/2015
6		0227053	AMBIENT DETECTOR 2			1				14	WB		Q	07/15/2015	10/14/2015	34	34	34			34	34	34	57	57	57	2	57		04/01/2015
7		0227053	AMBIENT DETECTOR 3			1				14	WB		Q	07/15/2015	10/14/2015	30	30	31			30	30	31	54	54	55	2	54		04/01/2015
8		0227053	AMBIENT DETECTOR 4			1				14	WB		Q	07/15/2015	10/14/2015	31	31	33			31	31	33	59	59	62	2	59		04/01/2015
9		0227053	AMBIENT DETECTOR 5			1				14	WB		Q	07/15/2015	10/14/2015	29	29	29			29	29	29	52	52	52	2	52		04/01/2015
10		0227053	AMBIENT DETECTOR 6			1				14	WB		Q	07/15/2015	10/14/2015	31	31	31			31	31	31	55	55	56	2	55		04/01/2015
11		0227053	AMBIENT DETECTOR 7			1				14	WB		Q	07/15/2015	10/14/2015	26	27	27			26	27	27	61	62	62	2	61		04/01/2015
12		0227053	AMBIENT DETECTOR 8			1				14	WB		Q	07/15/2015	10/14/2015	32	32	37			32	32	37	57	57	62	2	57		04/01/2015
13		0227053	AMBIENT DETECTOR 9			1				14	WB		Q	07/15/2015	10/14/2015	35	35	35			35	35	35	61	61	61	2	61		04/01/2015
14		0227053	AMBIENT DETECTOR 10			1				14	WB		Q	07/15/2015	10/14/2015	31	32	32			31	32	32	101	102	102	2	101		04/01/2015
15		0227053	AMBIENT DETECTOR 11			1				14	WB		Q	07/15/2015	10/14/2015	25	25	25			25	25	25	59	59	59	2	59		04/01/2015
16		0227053	AMBIENT DETECTOR 12			1				14	WB		Q	07/15/2015	10/14/2015	35	36	41			35	36	41	60	61	67	2	60		04/01/2015
17		0227053	AMBIENT DETECTOR 13			1				14	WB		Q	07/15/2015	10/14/2015	27	27	27			27	27	27	54	54	54	2	54		04/01/2015
57		0227053	AMBIENT DETECTOR 11A			1				14	WB		Q	07/15/2015	10/14/2015	25	25	25			25	25	25	50	50	50	2	50		04/01/2016
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31

SEE LAST PAGE FOR COMPLETE REPORT DETAILS BY COLUMN NUMBER

IT IS RECOMMENDED THAT YOU KEEP THIS REPORT FOR YOUR RECORDS

MIRION TECHNOLOGIES (GDS) INC.
2652 McGaw Avenue, Irvine, CA 92614
U.S./Canada: (800)251-3331
www.mirion.com

APPENDIX F

ALPHA TRACK ETCH DETECTOR RESULTS

AccuStar
Professional Radon Laboratory Services Since 1984

Radon in Air

NELAC NY 11769
NRPP 101193 AL
NRSB ARL0017

EPA Method #402-R-92-004
Alpha Track
NRPP Device Code 8205
NRSB Device Code 12001

Laboratory Report for:

Auxier & Associates, Inc.-C. Greene
9821 Cogdill Road Suite 1
Knoxville TN 37932

Property Tested:

Westlake Landfill
13570 St. Charles Rock Road
Bridgeton MO 63044

Log Number	Device Number	Test Exposure Duration:		Area Tested	Result (pCi/L)
1849876	2850705	07/23/2015	10/14/2015	Room 1	< 0.4
1849877	2850703	07/23/2015	10/15/2015	Room 3	< 0.4
1849878	2850706	07/24/2015	10/15/2015	Room 2	0.7
1849879	2850711	07/23/2015	10/15/2015	Room 4	0.4
1849880	2850709	07/23/2015	10/14/2015	Room 5	< 0.4
1849881	2850712	07/23/2015	10/14/2015	Room 6	0.5
1849882	2850713	07/23/2015	10/14/2015	Room 7	0.7
1849883	2850704	07/23/2015	10/14/2015	Room 8	0.5
1849884	2850710	07/23/2015	10/15/2015	Room 9	< 0.4
1849885	2850702	07/23/2015	10/15/2015	Room 10	0.5

Comment: Your Alpha Track results are for informational purposes only. EPA protocol for long term testing of 91 to 365 days has not been met. A copy of this report was emailed to cgreene@auxier.com.

Distributed by: National Safety Products

Date Received: 10/16/2015 Date Logged: 10/16/2015 Date Analyzed: 10/22/2015 Date Reported: 10/23/2015

Report Reviewed By: M. Gray Report Approved By: Carolyn K. Allen

Carolyn K. Allen, President, AccuStar Labs

Disclaimer:

The uncertainty of this radon measurement is ~+/- 15 %. Factors contributing to uncertainty include statistical variations, daily and seasonal variations in radon concentrations, sample collection techniques, and operation of the dwelling. Interference with test conditions may influence the test results.

This report may only be transferred to a third party in its entirety. Analytical results relate to the samples AS RECEIVED BY THE LABORATORY. Results shown on this report represent levels of radon gas measured between the dates shown in the room or area of the site identified above as "Property Tested". Incorrect information will affect results. The results may not be construed as either predictive or supportive of measurements conducted in any area of this structure at any other time. AccuStar Labs, its employees and agents are not responsible for the consequences of any action taken or not taken based upon the results reported or any verbal or written interpretation of the results.

11 Awl Street Medway MA 02053 888-480-8812 FAX 508-533-8831

AccuStar
Professional Radon Laboratory Services Since 1984

Radon in Air

NELAC NY 11769
NRPP 101193 AL
NRSB ARL0017

EPA Method #402-R-92-004
Alpha Track
NRPP Device Code 8205
NRSB Device Code 12001

Laboratory Report for:

Auxier & Associates, Inc.-C. Greene
9821 Cogdill Road Suite 1
Knoxville TN 37932

Property Tested:

Westlake Landfill
13570 St. Charles Rock Road
Bridgeton MO 63044

Log Number	Device Number	Test Exposure Duration:		Area Tested	Result (pCi/L)
1849886	2850714	07/23/2015	10/14/2015	Room 11	< 0.4
1849887	2850708	07/23/2015	10/15/2015	Room 12	< 0.4
1849888	2850715	07/23/2015	10/15/2015	Room 13	< 0.4
1849889	2850707	07/23/2015	10/14/2015	Duplicate	0.4

Comment: Your Alpha Track results are for informational purposes only. EPA protocol for long term testing of 91 to 365 days has not been met. A copy of this report was emailed to cgreene@auxier.com.

Distributed by: National Safety Products

Date Received: 10/16/2015 Date Logged: 10/16/2015 Date Analyzed: 10/22/2015 Date Reported: 10/23/2015

Report Reviewed By: M. Thayer Report Approved By: Carolyn K. Allen

Carolyn K. Allen, President, AccuStar Labs

Disclaimer:

The uncertainty of this radon measurement is ~+/- 15 %. Factors contributing to uncertainty include statistical variations, daily and seasonal variations in radon concentrations, sample collection techniques, and operation of the dwelling. Interference with test conditions may influence the test results.

This report may only be transferred to a third party in its entirety. Analytical results relate to the samples AS RECEIVED BY THE LABORATORY. Results shown on this report represent levels of radon gas measured between the dates shown in the room or area of the site identified above as "Property Tested". Incorrect information will affect results. The results may not be construed as either predictive or supportive of measurements conducted in any area of this structure at any other time. AccuStar Labs, its employees and agents are not responsible for the consequences of any action taken or not taken based upon the results reported or any verbal or written interpretation of the results.

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APPENDIX G

METEOROLOGICAL STATION DATA

Date Time	WS(MPH)	WD(DEG)	AT(C)	RH(%)	BP(InH)	Status
7/24/2015 0:00	3.2	78	24.1	1.5	30.8	
7/24/2015 1:00	3	88	23.6	1.5	30.8	
7/24/2015 2:00	2.1	72	23	1.8	30.8	
7/24/2015 3:00	2.2	64	22.6	71.5	30.8	
7/24/2015 4:00	1.9	40	22	72.8	30.8	
7/24/2015 5:00	1.7	67	21.8	74	30.8	
7/24/2015 6:00	1.9	59	21.5	75.4	30.8	
7/24/2015 7:00	1.7	66	21.9	63.3	30.8	
7/24/2015 8:00	2.4	97	24.3	1.5	30.8	
7/24/2015 9:00	2.1	122	25.3	5.8	30.8	
7/24/2015 10:00	4	134	28	3.5	30.8	
7/24/2015 11:00	5	146	28.9	1.6	30.8	
7/24/2015 12:00	4.9	146	30	8.3	30.8	
7/24/2015 13:00	4.2	135	31.3	14.7	30.8	
7/24/2015 14:00	4.4	153	31.4	7	30.8	
7/24/2015 15:00	3.8	150	32	27.9	30.8	
7/24/2015 16:00	3.6	235	32.7	26.5	30.8	
7/24/2015 17:00	8.9	354	31.3	1.6	30.8	
7/24/2015 18:00	4.5	37	31.5	2.5	30.7	
7/24/2015 19:00	2.8	138	31.7	4.2	30.8	
7/24/2015 20:00	4	170	30.1	1.5	30.7	
7/24/2015 21:00	3.1	159	29.3	1.5	30.7	
7/24/2015 22:00	1.4	122	28.1	1.5	30.8	
7/24/2015 23:00	2	109	27.7	1.5	30.8	
7/25/2015 0:00	1.8	126	27.2	1.5	30.8	
7/25/2015 1:00	2	112	26.6	1.5	30.8	
7/25/2015 2:00	2	131	26.2	1.5	30.8	
7/25/2015 3:00	2.6	148	26.1	1.5	30.8	
7/25/2015 4:00	4	147	25.9	1.5	30.8	
7/25/2015 5:00	4.8	161	25.6	1.5	30.7	
7/25/2015 6:00	5.8	198	25.9	1.5	30.8	
7/25/2015 7:00	2.2	99	25.5	1.5	30.8	
7/25/2015 8:00	5.1	175	25.6	1.5	30.7	
7/25/2015 9:00	8.5	236	25.6	1.5	30.8	
7/25/2015 10:00	6.4	301	26.3	1.5	30.8	
7/25/2015 11:00	6.2	351	26	1.5	30.8	
7/25/2015 12:00	4.1	88	27	1.5	30.8	
7/25/2015 13:00	3.4	111	28.6	1.5	30.7	
7/25/2015 14:00	5.1	140	29.9	1.6	30.7	
7/25/2015 15:00	4.1	193	30.9	15.7	30.7	
7/25/2015 16:00	5.8	355	31.6	13.3	30.7	
7/25/2015 17:00	5.8	5	31.7	1.6	30.8	
7/25/2015 18:00	6.4	352	31.4	1.6	30.8	
7/25/2015 19:00	3.9	5	31.5	4.5	30.7	
7/25/2015 20:00	1.5	18	31	18.5	30.8	
7/25/2015 21:00	2	25	28.9	1.5	30.7	

Date Time	WS(MPH)	WD(DEG)	AT(C)	RH(%)	BP(InH)	Status
7/25/2015 22:00	2.1	29	28.1	1.5	30.8	
7/25/2015 23:00	1.1	37	27.1	1.5	30.8	
7/26/2015 0:00	0.9	96	26.8	1.5	30.7	
7/26/2015 1:00	1.4	7	26.3	1.5	30.7	
7/26/2015 2:00	0.9	142	26.5	1.5	30.7	
7/26/2015 3:00	1.9	170	26.9	1.5	30.7	
7/26/2015 4:00	3.1	180	26.8	1.5	30.7	
7/26/2015 5:00	5.6	187	26.8	1.5	30.7	
7/26/2015 6:00	13.3	268	22.9	39.7	30.8	
7/26/2015 7:00	3.2	170	21.7	90.6	30.8	
7/26/2015 8:00	3.1	140	22.2	92.1	30.8	
7/26/2015 9:00	6	189	22.5	11.9	30.8	
7/26/2015 10:00	6	164	22.6	1.5	30.8	
7/26/2015 11:00	5.4	183	24.4	1.5	30.8	
7/26/2015 12:00	4.7	185	26.5	12.2	30.8	
7/26/2015 13:00	3.7	193	27.2	16.9	30.8	
7/26/2015 14:00	3.6	16	28.6	38.7	30.7	
7/26/2015 15:00	5	182	29.8	67.3	30.8	
7/26/2015 16:00	5.5	163	29.8	69.5	30.7	
7/26/2015 17:00	6.6	167	30.5	68.6	30.7	
7/26/2015 18:00	5.7	166	30.5	64.2	30.7	
7/26/2015 19:00	5	173	31.1	26.2	30.7	
7/26/2015 20:00	5.5	185	30.1	7	30.7	
7/26/2015 21:00	3.5	191	28.7	6.7	30.7	
7/26/2015 22:00	3.3	243	27.9	1.5	30.8	
7/26/2015 23:00	1.7	10	27.2	1.5	30.7	
7/27/2015 0:00	1.3	82	26.6	1.5	30.7	
7/27/2015 1:00	1.5	32	26.1	1.5	30.7	
7/27/2015 2:00	1.1	339	26.2	1.5	30.7	
7/27/2015 3:00	3.5	180	26.7	1.5	30.8	
7/27/2015 4:00	1.7	169	26.5	1.5	30.7	
7/27/2015 5:00	2.3	140	26.2	1.5	30.7	
7/27/2015 6:00	1.6	127	25.7	1.5	30.7	
7/27/2015 7:00	2.3	156	25.8	1.5	30.7	
7/27/2015 8:00	3.7	192	26.9	13.9	30.7	
7/27/2015 9:00	3.4	195	28.3	1.5	30.7	
7/27/2015 10:00	3.6	289	30.3	1.6	30.7	
7/27/2015 11:00	4.7	323	31.1	20.6	30.8	
7/27/2015 12:00	5.3	359	31.2	34.1	30.7	
7/27/2015 13:00	4.5	2	32.8	35.3	30.8	
7/27/2015 14:00	5.5	359	33.3	21.3	30.7	
7/27/2015 15:00	7.6	352	33.3	21	30.7	
7/27/2015 16:00	6.4	3	33.9	40.8	30.8	
7/27/2015 17:00	6.6	6	33.4	12.8	30.7	
7/27/2015 18:00	4.5	86	30.9	19.5	30.7	
7/27/2015 19:00	7.8	234	25.6	5.2	30.7	

Date Time	WS(MPH)	WD(DEG)	AT(C)	RH(%)	BP(InH)	Status
7/27/2015 20:00	3	336	25.3	1.5	30.7	
7/27/2015 21:00	9.2	344	25.2	1.5	30.8	
7/27/2015 22:00	5.1	5	24.2	1.5	30.8	
7/27/2015 23:00	1.9	115	23.8	1.5	30.8	
7/28/2015 0:00	2.1	133	24.2	1.5	30.8	
7/28/2015 1:00	2.5	158	24.1	1.5	30.8	
7/28/2015 2:00	1.3	54	23.9	1.5	30.8	
7/28/2015 3:00	1.7	43	23.5	1.5	30.8	
7/28/2015 4:00	1.2	48	23.3	1.5	30.8	
7/28/2015 5:00	1.1	21	23.1	1.5	30.8	
7/28/2015 6:00	1.4	39	23	1.5	30.8	
7/28/2015 7:00	1.2	22	23.7	1.5	30.8	
7/28/2015 8:00	2	128	26.7	1.5	30.8	
7/28/2015 9:00	3.7	170	28.3	1.6	30.8	
7/28/2015 10:00	4	181	29.9	1.6	30.8	
7/28/2015 11:00	4.6	185	31.2	3.4	30.8	
7/28/2015 12:00	3.7	203	33.3	53.2	30.8	
7/28/2015 13:00	3.7	192	34.4	56.1	30.8	
7/28/2015 14:00	4.8	223	35.4	48	30.8	
7/28/2015 15:00	6.2	209	35.5	49.8	30.7	
7/28/2015 16:00	7.6	201	35.4	50.5	30.7	
7/28/2015 17:00	8	207	35.6	51.2	30.7	
7/28/2015 18:00	6.5	201	35.6	52	30.7	
7/28/2015 19:00	4.5	185	35.4	54.1	30.7	
7/28/2015 20:00	5.8	193	34.4	57.8	30.7	
7/28/2015 21:00	3.6	176	33.1	31.4	30.7	
7/28/2015 22:00	1.5	127	31.6	21.9	30.7	
7/28/2015 23:00	1.5	132	30.6	73	30.8	
7/29/2015 0:00	1.4	154	30.1	76.9	30.8	
7/29/2015 1:00	3.3	164	29.8	78.1	30.8	
7/29/2015 2:00	3.8	183	29.2	79.9	30.8	
7/29/2015 3:00	4.9	204	28.5	82.4	30.8	
7/29/2015 4:00	3.4	190	28	83.8	30.8	
7/29/2015 5:00	4.4	198	27.5	34	30.8	
7/29/2015 6:00	3.8	190	27.3	1.5	30.7	
7/29/2015 7:00	4.7	235	27.4	1.5	30.8	
7/29/2015 8:00	6.9	324	27.1	1.5	30.8	
7/29/2015 9:00	6.7	337	26.9	24.6	30.8	
7/29/2015 10:00	5.4	339	27.9	1.6	30.8	
7/29/2015 11:00	8.7	319	27.8	1.6	30.8	
7/29/2015 12:00	9.8	317	28.2	30.5	30.8	
7/29/2015 13:00	7.6	326	29.4	14.2	30.8	
7/29/2015 14:00	8.7	316	29.9	1.6	30.8	
7/29/2015 15:00	9	302	29.8	1.6	30.8	
7/29/2015 16:00	8.4	324	30	1.6	30.8	
7/29/2015 17:00	10.5	328	30.3	1.6	30.8	

Date Time	WS(MPH)	WD(DEG)	AT(C)	RH(%)	BP(InH)	Status
7/29/2015 18:00	10.6	327	30.4	1.6	30.8	
7/29/2015 19:00	9.1	322	29.8	1.5	30.8	
7/29/2015 20:00	6.9	332	28.6	3.8	30.8	
7/29/2015 21:00	5	333	26.7	25.6	30.8	
7/29/2015 22:00	5.4	322	25.4	60.2	30.8	
7/29/2015 23:00	3	343	24.4	62.2	30.8	
7/30/2015 0:00	1.7	12	23	53.7	30.8	
7/30/2015 1:00	1.5	60	22.1	70.2	30.8	
7/30/2015 2:00	1.2	40	21.3	77.9	30.8	
7/30/2015 3:00	1.8	38	21.2	80.7	30.8	
7/30/2015 4:00	1.3	71	20.8	80.2	30.8	
7/30/2015 5:00	1	96	20.5	80.3	30.8	
7/30/2015 6:00	1.9	208	20.6	81	30.8	
7/30/2015 7:00	2	189	20.4	85.7	30.9	
7/30/2015 8:00	2.8	192	22.5	3.6	30.8	
7/30/2015 9:00	3	291	25.3	14.8	30.8	
7/30/2015 10:00	3.1	325	27.7	1.6	30.8	
7/30/2015 11:00	3.5	324	29.6	16.4	30.8	
7/30/2015 12:00	4.9	315	30	1.6	30.8	
7/30/2015 13:00	5.7	276	30.3	1.6	30.9	
7/30/2015 14:00	5.2	252	31.1	23.2	30.8	
7/30/2015 15:00	6.3	290	31.1	2.3	30.8	
7/30/2015 16:00	6.1	301	31.7	28.8	30.8	
7/30/2015 17:00	6.6	289	31.1	1.6	30.8	
7/30/2015 18:00	5.9	292	30.2	3.7	30.8	
7/30/2015 19:00	5.1	293	30.4	3.8	30.8	
7/30/2015 20:00	4.4	281	29.3	1.5	30.8	
7/30/2015 21:00	2.8	249	28.2	6.8	30.8	
7/30/2015 22:00	3.3	195	26.6	1.5	30.8	
7/30/2015 23:00	3.6	192	25.5	62.6	30.8	
7/31/2015 0:00	2.6	184	24.5	75.4	30.8	
7/31/2015 1:00	3.5	204	24.6	34.1	30.8	
7/31/2015 2:00	2.6	197	23.4	71.3	30.8	
7/31/2015 3:00	1.7	170	22.2	84.6	30.8	
7/31/2015 4:00	1.7	165	21.7	87.7	30.8	
7/31/2015 5:00	3.1	197	21.6	87.1	30.9	
7/31/2015 6:00	3.3	218	22	81.9	30.8	
7/31/2015 7:00	2.9	189	22.1	81	30.8	
7/31/2015 8:00	2.8	195	24.1	50.9	30.8	
7/31/2015 9:00	4.6	265	25.9	62	30.8	
7/31/2015 10:00	6.3	275	27	1.6	30.8	
7/31/2015 11:00	6.6	285	28.7	13.9	30.8	
7/31/2015 12:00	6.1	286	30	30	30.8	
7/31/2015 13:00	5.4	292	31.3	47.3	30.8	
7/31/2015 14:00	8.7	328	31.8	41.1	30.8	
7/31/2015 15:00	7.6	313	32.3	37.6	30.8	

Date Time	WS(MPH)	WD(DEG)	AT(C)	RH(%)	BP(InH)	Status
7/31/2015 16:00	6.6	283	32.9	10.3	30.8	
7/31/2015 17:00	6.5	288	33	1.6	30.8	
7/31/2015 18:00	6.1	292	33.1	1.6	30.8	
7/31/2015 19:00	4.6	329	32.6	1.6	30.8	
7/31/2015 20:00	2.6	7	31.2	39.7	30.8	
7/31/2015 21:00	1.1	38	28.4	1.5	30.8	
7/31/2015 22:00	1.3	64	26.6	1.5	30.8	
7/31/2015 23:00	0.9	145	25.6	1.5	30.8	
8/1/2015 0:00	1.9	175	25.5	1.5	30.8	
8/1/2015 1:00	1.4	151	24.7	1.5	30.8	
8/1/2015 2:00	1.3	150	23.6	46.2	30.8	
8/1/2015 3:00	2.9	186	23.2	85.5	30.8	
8/1/2015 4:00	2.1	167	22.7	83.9	30.8	
8/1/2015 5:00	1.1	150	22.2	79.4	30.8	
8/1/2015 6:00	0.7	112	21.6	43.1	30.8	
8/1/2015 7:00	0.8	115	21.8	1.5	30.8	
8/1/2015 8:00	1.4	79	23.2	39.4	30.8	
8/1/2015 9:00	3.5	30	25	68.6	30.8	
8/1/2015 10:00	3	32	25.5	61.8	30.8	
8/1/2015 11:00	3.5	85	27.7	19.7	30.8	
8/1/2015 12:00	4.2	67	29.6	14.3	30.8	
8/1/2015 13:00	3.8	146	30.9	24.3	30.8	
8/1/2015 14:00	3.7	154	31.8	29.4	30.8	
8/1/2015 15:00	3.4	179	31.8	3.9	30.8	
8/1/2015 16:00	4.9	199	31.8	4.2	30.8	
8/1/2015 17:00	5.6	198	31.8	1.6	30.8	
8/1/2015 18:00	5.1	202	31.6	1.6	30.8	
8/1/2015 19:00	4	204	30.5	1.5	30.8	
8/1/2015 20:00	3.1	187	29.8	1.5	30.8	
8/1/2015 21:00	1.9	166	28.9	1.5	30.8	
8/1/2015 22:00	2.7	179	28.1	1.5	30.8	
8/1/2015 23:00	1.9	149	27.5	1.5	30.8	
8/2/2015 0:00	2.5	156	26.8	1.5	30.8	
8/2/2015 1:00	3.2	146	26.2	1.5	30.8	
8/2/2015 2:00	3.2	148	25.8	1.5	30.8	
8/2/2015 3:00	3.8	153	25.4	1.5	30.8	
8/2/2015 4:00	4.3	186	24.9	1.5	30.8	
8/2/2015 5:00	3.8	181	24	39.2	30.7	
8/2/2015 6:00	2.9	179	23.4	66.4	30.8	
8/2/2015 7:00	2.1	146	23.4	55.5	30.8	
8/2/2015 8:00	4.1	174	24.6	26.2	30.7	
8/2/2015 9:00	4.8	181	26.4	46.7	30.8	
8/2/2015 10:00	7.9	195	28.3	5	30.8	
8/2/2015 11:00	7.8	200	29.8	1.6	30.8	
8/2/2015 12:00	7	191	31	33.6	30.8	
8/2/2015 13:00	7.8	187	32.1	46.7	30.7	

Date Time	WS(MPH)	WD(DEG)	AT(C)	RH(%)	BP(InH)	Status
8/2/2015 14:00	10.3	199	32.5	48.9	30.7	
8/2/2015 15:00	11	213	33	36.8	30.7	
8/2/2015 16:00	10.4	207	33.3	44.8	30.7	
8/2/2015 17:00	10.2	204	33.5	10.7	30.7	
8/2/2015 18:00	11	212	33.1	1.6	30.7	
8/2/2015 19:00	9.1	206	32.5	1.5	30.7	
8/2/2015 20:00	6.9	200	31.7	1.5	30.7	
8/2/2015 21:00	4.2	181	30.1	1.5	30.7	
8/2/2015 22:00	4.3	184	29.1	1.5	30.7	
8/2/2015 23:00	4.5	198	28.1	1.5	30.7	
8/3/2015 0:00	4.6	184	27.4	1.5	30.7	
8/3/2015 1:00	5.3	190	27	1.5	30.7	
8/3/2015 2:00	6.2	194	26.6	1.5	30.7	
8/3/2015 3:00	9.1	197	26.1	1.5	30.7	
8/3/2015 4:00	6.6	190	25.8	1.5	30.7	
8/3/2015 5:00	5	225	25.8	1.5	30.7	
8/3/2015 6:00	3.2	290	25.6	1.5	30.7	
8/3/2015 7:00	2.9	329	24.9	1.5	30.7	
8/3/2015 8:00	3	227	25.6	1.5	30.7	
8/3/2015 9:00	5	212	27.2	1.5	30.7	
8/3/2015 10:00	4.1	231	29.3	1.6	30.8	
8/3/2015 11:00	6.3	296	30	1.6	30.7	
8/3/2015 12:00	5.1	293	30.6	1.6	30.8	
8/3/2015 13:00	7.1	302	31	1.6	30.7	
8/3/2015 14:00	7.1	295	31.6	1.6	30.8	
8/3/2015 15:00	6.3	272	31.9	1.6	30.7	
8/3/2015 16:00	7.2	284	32.2	1.6	30.7	
8/3/2015 17:00	6.5	323	31.4	1.9	30.7	
8/3/2015 18:00	6.7	359	31.2	1.6	30.7	
8/3/2015 19:00	5.9	360	30.7	1.5	30.7	
8/3/2015 20:00	4.3	343	29.5	1.5	30.7	
8/3/2015 21:00	2.1	3	28.1	1.5	30.7	
8/3/2015 22:00	2.3	1	27	1.5	30.7	
8/3/2015 23:00	2.3	20	26.2	1.5	30.8	
8/4/2015 0:00	3.1	18	25.7	1.5	30.7	
8/4/2015 1:00	2.1	22	25.1	48.9	30.8	
8/4/2015 2:00	2.3	28	24.8	75.5	30.8	
8/4/2015 3:00	2.1	24	24.4	72.3	30.7	
8/4/2015 4:00	3.2	8	24	75.9	30.7	
8/4/2015 5:00	2.9	12	23.6	80.3	30.8	
8/4/2015 6:00	5.1	359	23	61.3	30.8	
8/4/2015 7:00	3	19	22.9	45.2	30.8	
8/4/2015 8:00	3.3	22	23.3	20.9	30.8	
8/4/2015 9:00	3.7	9	24.7	35.3	30.8	
8/4/2015 10:00	3.3	51	27	6.4	30.8	
8/4/2015 11:00	4.1	88	28.7	2.1	30.8	

Date Time	WS(MPH)	WD(DEG)	AT(C)	RH(%)	BP(InH)	Status
8/4/2015 12:00	3.5	65	30.4	1.6	30.8	
8/4/2015 13:00	4.5	276	31.1	1.6	30.8	
8/4/2015 14:00	4.8	314	31.4	1.6	30.8	
8/4/2015 15:00	7.7	332	31.4	1.6	30.8	
8/4/2015 16:00	10.3	353	30	3.7	30.8	
8/4/2015 17:00	7.8	5	29	8.2	30.8	
8/4/2015 18:00	5.2	13	28.7	1.5	30.7	
8/4/2015 19:00	3.7	66	28.6	1.5	30.8	
8/4/2015 20:00	3.5	71	28.1	1.5	30.8	
8/4/2015 21:00	2.7	48	27.4	1.5	30.8	
8/4/2015 22:00	2.1	50	26.9	1.5	30.8	
8/4/2015 23:00	3.1	13	25.9	1.5	30.8	
8/5/2015 0:00	3.2	0	24.8	1.5	30.8	
8/5/2015 1:00	3.3	33	24.4	1.5	30.8	
8/5/2015 2:00	3.9	33	23.8	57.2	30.8	
8/5/2015 3:00	3.5	30	23.7	1.5	30.8	
8/5/2015 4:00	5	37	23.6	57.9	30.8	
8/5/2015 5:00	4.9	69	23.7	45.4	30.8	
8/5/2015 6:00	5.8	129	23.7	1.5	30.8	
8/5/2015 7:00	3.3	2	22.4	52.8	30.8	
8/5/2015 8:00	3.6	38	21.5	59.5	30.8	
8/5/2015 9:00	4.8	41	21.2	96.5	30.8	
8/5/2015 10:00	3.7	102	21.8	19	30.8	
8/5/2015 11:00	3.7	118	24.1	1.5	30.8	
8/5/2015 12:00	4.6	131	26.1	8.5	30.8	
8/5/2015 13:00	4.7	134	28.2	8.5	30.8	
8/5/2015 14:00	5.2	143	28.4	1.5	30.8	
8/5/2015 15:00	6	145	27	1.5	30.8	
8/5/2015 16:00	3.7	130	25.9	1.5	30.7	
8/5/2015 17:00	3.3	120	25.7	1.5	30.7	
8/5/2015 18:00	3.6	100	25.6	1.5	30.7	
8/5/2015 19:00	3.8	82	24.7	1.5	30.8	
8/5/2015 20:00	4.3	93	23.9	1.5	30.7	
8/5/2015 21:00	4	50	21.8	1.5	30.8	
8/5/2015 22:00	5.7	338	21.4	32.4	30.7	
8/5/2015 23:00	8.2	18	21.1	41.8	30.7	
8/6/2015 0:00	5	24	21.4	1.5	30.7	
8/6/2015 1:00	4.8	22	21.5	1.5	30.7	
8/6/2015 2:00	3.3	19	21.5	1.5	30.7	
8/6/2015 3:00	4.7	334	21.5	1.5	30.7	
8/6/2015 4:00	5.2	318	21.3	1.5	30.7	
8/6/2015 5:00	6.9	330	21.5	1.5	30.7	
8/6/2015 6:00	8.6	342	21.2	1.5	30.7	
8/6/2015 7:00	6.7	344	21	1.5	30.7	
8/6/2015 8:00	6.8	340	21	1.5	30.7	
8/6/2015 9:00	6.8	332	21.3	2.7	30.7	

Date Time	WS(MPH)	WD(DEG)	AT(C)	RH(%)	BP(InH)	Status
8/6/2015 10:00	8.3	341	21.6	1.5	30.8	
8/6/2015 11:00	6.8	346	22.3	10.1	30.8	
8/6/2015 12:00	7.1	333	22.9	60.2	30.8	
8/6/2015 13:00	7.1	333	24.1	19.3	30.7	
8/6/2015 14:00	6.3	339	26	1.5	30.7	
8/6/2015 15:00	7.3	339	27.7	1.6	30.7	
8/6/2015 16:00	7.2	345	28.4	1.6	30.7	
8/6/2015 17:00	6.3	340	28.4	1.5	30.7	
8/6/2015 18:00	5.7	348	28.3	1.5	30.7	
8/6/2015 19:00	5.4	358	28	1.5	30.7	
8/6/2015 20:00	4	17	26.9	1.5	30.7	
8/6/2015 21:00	2	8	25.5	1.5	30.7	
8/6/2015 22:00	1.5	39	24.2	1.5	30.7	
8/6/2015 23:00	2.2	21	23.5	1.5	30.7	
8/7/2015 0:00	2.8	39	23.2	1.5	30.8	
8/7/2015 1:00	4.3	77	23	1.5	30.7	
8/7/2015 2:00	3.1	62	22.2	1.5	30.8	
8/7/2015 3:00	2.1	68	21.5	1.5	30.7	
8/7/2015 4:00	2.9	67	20.8	47.9	30.7	
8/7/2015 5:00	2.5	54	20.1	70.4	30.7	
8/7/2015 6:00	2.1	74	19.6	60.7	30.7	
8/7/2015 7:00	2.2	85	19.6	73	30.7	
8/7/2015 8:00	3.5	61	21.1	1.5	30.7	
8/7/2015 9:00	3.3	162	22.7	1.5	30.7	
8/7/2015 10:00	2.5	224	24.7	1.5	30.7	
8/7/2015 11:00	3.8	24	26.3	1.6	30.8	
8/7/2015 12:00	3.3	51	28.3	1.6	30.7	
8/7/2015 13:00	3.8	54	29.2	1.6	30.7	
8/7/2015 14:00	4.8	82	29.2	1.6	30.7	
8/7/2015 15:00	3.7	52	30.1	1.6	30.7	
8/7/2015 16:00	3.3	96	30.8	1.6	30.7	
8/7/2015 17:00	3.7	163	30.2	1.6	30.7	
8/7/2015 18:00	5.7	16	29.5	1.6	30.7	
8/7/2015 19:00	4.4	30	29.1	1.5	30.7	
8/7/2015 20:00	2.6	53	27.6	1.5	30.7	
8/7/2015 21:00	2.7	73	26.5	1.5	30.7	
8/7/2015 22:00	2.4	91	26	1.5	30.7	
8/7/2015 23:00	1.2	96	25.4	1.5	30.7	
8/8/2015 0:00	1.3	17	24.4	1.5	30.7	
8/8/2015 1:00	0.9	74	23.8	1.5	30.7	
8/8/2015 2:00	1.2	46	23.4	1.5	30.7	
8/8/2015 3:00	0.8	83	22.8	1.5	30.7	
8/8/2015 4:00	1.1	118	22.7	1.5	30.7	
8/8/2015 5:00	0.9	94	22.4	1.5	30.7	
8/8/2015 6:00	1.1	141	22.4	1.5	30.7	
8/8/2015 7:00	2.5	192	22.5	1.5	30.8	

Date Time	WS(MPH)	WD(DEG)	AT(C)	RH(%)	BP(InH)	Status
8/8/2015 8:00	1.8	207	23.6	1.5	30.8	
8/8/2015 9:00	3.8	220	24.8	1.5	30.8	
8/8/2015 10:00	4.6	243	26.7	1.5	30.8	
8/8/2015 11:00	4.8	295	27.7	1.5	30.8	
8/8/2015 12:00	4.6	270	28.9	1.6	30.8	
8/8/2015 13:00	3.6	213	30.7	6.6	30.8	
8/8/2015 14:00	4.1	124	31.1	28.7	30.8	
8/8/2015 15:00	3.2	96	30.5	1.5	30.7	
8/8/2015 16:00	4.1	121	30.7	1.6	30.7	
8/8/2015 17:00	3.4	128	30.4	1.5	30.7	
8/8/2015 18:00	2.9	128	29.6	1.5	30.7	
8/8/2015 19:00	3.3	149	29.7	3.6	30.7	
8/8/2015 20:00	4.2	171	28.6	1.5	30.8	
8/8/2015 21:00	2.9	148	28	1.5	30.8	
8/8/2015 22:00	1.8	124	27.4	1.5	30.8	
8/8/2015 23:00	1.7	110	27.1	1.5	30.8	
8/9/2015 0:00	2.1	123	26.6	1.5	30.8	
8/9/2015 1:00	3.1	132	26.4	1.5	30.8	
8/9/2015 2:00	3.9	137	25.9	1.5	30.8	
8/9/2015 3:00	5.7	147	25.7	1.5	30.8	
8/9/2015 4:00	4.7	151	25.5	1.5	30.7	
8/9/2015 5:00	4.1	159	24.8	1.5	30.7	
8/9/2015 6:00	4.2	159	24.3	1.5	30.8	
8/9/2015 7:00	2.5	124	24.2	1.5	30.7	
8/9/2015 8:00	2.3	116	24.6	1.5	30.8	
8/9/2015 9:00	2.7	121	25.2	1.5	30.8	
8/9/2015 10:00	2.9	149	25.4	1.5	30.8	
8/9/2015 11:00	2.8	127	26.6	1.5	30.8	
8/9/2015 12:00	4	133	28.3	1.5	30.8	
8/9/2015 13:00	5.8	147	29.1	1.6	30.7	
8/9/2015 14:00	7.6	158	29.6	2	30.7	
8/9/2015 15:00	7.8	159	29.9	1.6	30.7	
8/9/2015 16:00	8.3	166	31.1	1.6	30.7	
8/9/2015 17:00	6	191	31.6	1.6	30.7	
8/9/2015 18:00	2.8	164	31.8	3.7	30.7	
8/9/2015 19:00	2.6	94	31.3	1.5	30.7	
8/9/2015 20:00	3.8	88	29.7	19.5	30.7	
8/9/2015 21:00	11.2	270	24.6	1.5	30.7	
8/9/2015 22:00	3.5	152	22.5	1.5	30.7	
8/9/2015 23:00	4.6	174	23	1.5	30.7	
8/10/2015 0:00	2.2	114	23.2	1.5	30.7	
8/10/2015 1:00	1.9	105	23.3	1.5	30.7	
8/10/2015 2:00	2.8	139	23.3	1.5	30.7	
8/10/2015 3:00	3.2	148	23.2	1.5	30.7	
8/10/2015 4:00	3.4	189	23.1	1.5	30.7	
8/10/2015 5:00	1.9	336	22.8	1.5	30.7	

Date Time	WS(MPH)	WD(DEG)	AT(C)	RH(%)	BP(InH)	Status
8/10/2015 6:00	2	258	22.8	1.5	30.7	
8/10/2015 7:00	3.6	177	23	1.5	30.7	
8/10/2015 8:00	5.5	190	23.5	1.5	30.7	
8/10/2015 9:00	5.9	185	24	1.5	30.7	
8/10/2015 10:00	6.6	217	25	1.5	30.7	
8/10/2015 11:00	7.2	285	26.5	1.5	30.8	
8/10/2015 12:00	6.6	262	27.1	1.5	30.8	
8/10/2015 13:00	7.1	261	28.4	1.5	30.7	
8/10/2015 14:00	7.9	284	28.8	1.5	30.7	
8/10/2015 15:00	6.1	223	25.6	1.5	30.7	
8/10/2015 16:00	7.6	280	29.4	1.6	30.7	
8/10/2015 17:00	8.9	308	30.7	1.6	30.7	
8/10/2015 18:00	9.9	316	30.4	1.5	30.7	
8/10/2015 19:00	7.6	315	30	1.5	30.7	
8/10/2015 20:00	4.7	320	28.9	1.5	30.7	
8/10/2015 21:00	4.3	333	27.4	1.5	30.7	
8/10/2015 22:00	2.4	336	26.2	1.5	30.8	
8/10/2015 23:00	2	348	25.3	1.5	30.8	
8/11/2015 0:00	3.5	325	25.3	1.5	30.8	
8/11/2015 1:00	2.3	338	24.5	1.5	30.8	
8/11/2015 2:00	3.9	315	24.2	1.5	30.8	
8/11/2015 3:00	2.7	289	23.7	1.5	30.8	
8/11/2015 4:00	3	285	23.1	1.5	30.8	
8/11/2015 5:00	3.2	286	22.7	11	30.8	
8/11/2015 6:00	3.3	282	22.5	50.5	30.8	
8/11/2015 7:00	3.5	275	22.1	1.5	30.8	
8/11/2015 8:00	4.5	304	22.8	33	30.8	
8/11/2015 9:00	6.1	314	23.4	1.5	30.8	
8/11/2015 10:00	6	304	24.5	1.6	30.8	
8/11/2015 11:00	7.6	317	25.3	1.6	30.8	
8/11/2015 12:00	8.3	319	26.5	1.6	30.8	
8/11/2015 13:00	9.9	333	27.7	1.6	30.8	
8/11/2015 14:00	10.5	327	28.2	1.6	30.8	
8/11/2015 15:00	10.7	333	28.6	1.6	30.8	
8/11/2015 16:00	9.5	334	28.9	1.6	30.8	
8/11/2015 17:00	9.8	337	28.8	1.5	30.8	
8/11/2015 18:00	9.2	332	28.6	1.5	30.8	
8/11/2015 19:00	7.8	335	28.1	1.5	30.8	
8/11/2015 20:00	6.1	326	26.9	1.5	30.8	
8/11/2015 21:00	4.8	320	25.2	1.5	30.8	
8/11/2015 22:00	4.5	320	24.6	1.5	30.8	
8/11/2015 23:00	1.9	23	23.3	23.4	30.8	
8/12/2015 0:00	1.1	4	22.1	1.5	30.8	
8/12/2015 1:00	0.9	47	21.5	23.5	30.8	
8/12/2015 2:00	1.4	237	21.1	41	30.8	
8/12/2015 3:00	1.7	262	20.8	1.5	30.8	

Date Time	WS(MPH)	WD(DEG)	AT(C)	RH(%)	BP(InH)	Status
8/12/2015 4:00	1.2	286	20.2	56.8	30.8	
8/12/2015 5:00	1.1	301	19.6	79.8	30.9	
8/12/2015 6:00	1.2	219	19.1	90.5	30.8	
8/12/2015 7:00	1.5	237	19.6	59.1	30.9	
8/12/2015 8:00	2.3	269	21.8	1.5	30.9	
8/12/2015 9:00	4	331	23.1	4.6	30.8	
8/12/2015 10:00	3.5	343	24.7	1.6	30.8	
8/12/2015 11:00	4.2	348	26.3	1.6	30.9	
8/12/2015 12:00	4.6	3	27.5	1.6	30.9	
8/12/2015 13:00	5.4	336	28.2	5.2	30.9	
8/12/2015 14:00	5.8	347	28.6	1.6	30.8	
8/12/2015 15:00	5.6	323	29	1.6	30.8	
8/12/2015 16:00	5.5	328	29.1	6.5	30.8	
8/12/2015 17:00	6.8	337	29.4	1.6	30.8	
8/12/2015 18:00	6.7	336	29.1	1.5	30.8	
8/12/2015 19:00	7	351	28.4	1.5	30.8	
8/12/2015 20:00	4.3	357	27.3	1.5	30.8	
8/12/2015 21:00	2.2	37	24.9	1.5	30.8	
8/12/2015 22:00	1.7	7	23.8	1.5	30.8	
8/12/2015 23:00	1.1	23	22.5	1.5	30.8	
8/13/2015 0:00	1	57	21.6	48.8	30.8	
8/13/2015 1:00	0.7	91	20.9	47.2	30.8	
8/13/2015 2:00	0.6	97	20.3	90.3	30.8	
8/13/2015 3:00	0.7	117	20.2	93.7	30.8	
8/13/2015 4:00	0.9	166	19.8	95.9	30.8	
8/13/2015 5:00	0.9	159	19.5	94.3	30.9	
8/13/2015 6:00	1.6	169	19.5	96.8	30.8	
8/13/2015 7:00	1.1	77	19.4	94.5	30.8	
8/13/2015 8:00	1.2	179	22.5	3.5	30.8	
8/13/2015 9:00	2.4	239	23.7	1.5	30.8	
8/13/2015 10:00	2.4	272	26.1	1.6	30.8	
8/13/2015 11:00	4.4	215	27	1.6	30.8	
8/13/2015 12:00	3.2	194	28.5	1.6	30.8	
8/13/2015 13:00	4.3	314	28.1	1.6	30.8	
8/13/2015 14:00	4	292	29.3	9.8	30.8	
8/13/2015 15:00	3.8	345	30	8.2	30.8	
8/13/2015 16:00	4	45	29.7	1.6	30.8	
8/13/2015 17:00	5.8	330	29.8	1.6	30.8	
8/13/2015 18:00	5.8	350	29.6	1.6	30.8	
8/13/2015 19:00	5.7	1	28.8	1.5	30.8	
8/13/2015 20:00	3.5	31	27.1	1.5	30.8	
8/13/2015 21:00	2.2	41	26.1	1.5	30.8	
8/13/2015 22:00	2.1	44	25.2	1.5	30.8	
8/13/2015 23:00	1.8	95	24.9	1.5	30.8	
8/14/2015 0:00	0.9	105	24	21.5	30.8	
8/14/2015 1:00	0.8	85	23.3	1.5	30.8	

Date Time	WS(MPH)	WD(DEG)	AT(C)	RH(%)	BP(InH)	Status
8/14/2015 2:00	0.7	108	23	1.5	30.8	
8/14/2015 3:00	1.6	185	23.6	1.5	30.8	
8/14/2015 4:00	2.8	186	23.3	1.5	30.8	
8/14/2015 5:00	2	189	22.9	1.5	30.8	
8/14/2015 6:00	1.5	172	22.6	1.5	30.8	
8/14/2015 7:00	1.3	49	22	1.5	30.9	
8/14/2015 8:00	1.7	27	22.7	8	30.9	
8/14/2015 9:00	1.8	15	24.9	1.5	30.8	
8/14/2015 10:00	1.5	133	26.6	1.5	30.9	
8/14/2015 11:00	1.7	230	26.7	1.5	30.9	
8/14/2015 12:00	2.3	296	27.5	1.5	30.9	
8/14/2015 13:00	3.3	197	28.3	1.5	30.8	
8/14/2015 14:00	3.6	9	29.8	3.7	30.8	
8/14/2015 15:00	4.6	4	29.8	1.6	30.8	
8/14/2015 16:00	4	354	30.8	12.5	30.8	
8/14/2015 17:00	4.6	9	31	1.6	30.8	
8/14/2015 18:00	4.6	360	30.8	1.6	30.8	
8/14/2015 19:00	4.1	359	30.1	1.5	30.8	
8/14/2015 20:00	2.8	9	28.6	1.5	30.8	
8/14/2015 21:00	1.9	30	26.4	1.5	30.8	
8/14/2015 22:00	1.3	101	25.8	1.5	30.8	
8/14/2015 23:00	1.5	117	25.2	1.5	30.8	
8/15/2015 0:00	0.8	103	23.9	1.5	30.8	
8/15/2015 1:00	1.6	181	23.8	1.5	30.8	
8/15/2015 2:00	1.4	20	22.8	1.5	30.8	
8/15/2015 3:00	0.7	72	21.7	10.8	30.8	
8/15/2015 4:00	0.7	105	21.6	1.5	30.8	
8/15/2015 5:00	1.1	26	21.2	37.8	30.8	
8/15/2015 6:00	1	98	21.2	85.4	30.8	
8/15/2015 7:00	0.8	92	21.3	73.2	30.8	
8/15/2015 8:00	3.4	191	22.9	1.5	30.8	
8/15/2015 9:00	4.5	211	24.4	1.5	30.8	
8/15/2015 10:00	3.6	213	26.7	7.2	30.8	
8/15/2015 11:00	3	206	28.7	1.6	30.9	
8/15/2015 12:00	3.1	271	29.6	1.6	30.8	
8/15/2015 13:00	3.1	349	30.5	1.6	30.8	
8/15/2015 14:00	3.2	211	30.7	1.6	30.8	
8/15/2015 15:00	3.5	225	32.1	1.6	30.8	
8/15/2015 16:00	5.6	6	31.4	1.6	30.8	
8/15/2015 17:00	4.4	27	30.9	1.6	30.8	
8/15/2015 18:00	3.3	94	31.9	1.6	30.8	
8/15/2015 19:00	3.5	92	31.1	1.5	30.8	
8/15/2015 20:00	2.2	119	29.7	1.5	30.8	
8/15/2015 21:00	2	139	27.8	1.5	30.8	
8/15/2015 22:00	1.2	117	26.8	1.5	30.8	
8/15/2015 23:00	1.2	122	26.1	1.5	30.8	

Date Time	WS(MPH)	WD(DEG)	AT(C)	RH(%)	BP(InH)	Status
8/16/2015 0:00	1.4	119	25.7	1.5	30.8	
8/16/2015 1:00	1.4	121	25.1	1.5	30.8	
8/16/2015 2:00	1.1	146	24.2	1.5	30.8	
8/16/2015 3:00	1	165	23.2	1.5	30.8	
8/16/2015 4:00	1.3	187	22.7	1.5	30.8	
8/16/2015 5:00	2.1	169	22.4	1.5	30.8	
8/16/2015 6:00	1.2	151	21.7	1.5	30.8	
8/16/2015 7:00	0.9	44	21.4	2.1	30.8	
8/16/2015 8:00	1.4	189	23.9	1.5	30.8	
8/16/2015 9:00	2.2	216	25.8	1.5	30.8	
8/16/2015 10:00	3.4	195	27.1	1.6	30.8	
8/16/2015 11:00	3.5	171	29.7	1.6	30.8	
8/16/2015 12:00	4.5	143	31.1	1.6	30.8	
8/16/2015 13:00	5.9	149	30.9	1.6	30.8	
8/16/2015 14:00	5.2	165	31.4	1.6	30.8	
8/16/2015 15:00	4.5	131	32.6	7.1	30.8	
8/16/2015 16:00	3.8	142	32.9	15.4	30.8	
8/16/2015 17:00	3.3	117	33.2	4.6	30.8	
8/16/2015 18:00	3.2	109	32.7	1.6	30.8	
8/16/2015 19:00	3.3	106	31.8	1.5	30.8	
8/16/2015 20:00	2.3	123	30.1	8.2	30.8	
8/16/2015 21:00	1.7	111	28.2	1.5	30.8	
8/16/2015 22:00	2.2	128	27.4	1.5	30.8	
8/16/2015 23:00	3.4	134	27	1.5	30.8	
8/17/2015 0:00	3.5	139	26.4	1.5	30.8	
8/17/2015 1:00	2.8	145	25.7	1.5	30.8	
8/17/2015 2:00	2.4	144	25	1.5	30.8	
8/17/2015 3:00	2.8	161	24.8	1.5	30.8	
8/17/2015 4:00	2.4	149	24.3	1.5	30.8	
8/17/2015 5:00	2.3	138	23.9	1.5	30.8	
8/17/2015 6:00	3.5	163	23.7	1.5	30.8	
8/17/2015 7:00	3.9	164	23.4	1.5	30.8	
8/17/2015 8:00	2.7	147	24.8	1.5	30.8	
8/17/2015 9:00	4.1	165	26.4	1.5	30.8	
8/17/2015 10:00	5.4	193	27.5	1.6	30.8	
8/17/2015 11:00	4.9	217	28.7	1.6	30.8	
8/17/2015 12:00	4.5	197	30.2	1.6	30.8	
8/17/2015 13:00	3.5	161	31.2	6.3	30.8	
8/17/2015 14:00	4.3	165	32	12.4	30.8	
8/17/2015 15:00	4.2	99	32.2	2.6	30.8	
8/17/2015 16:00	3.8	120	32.7	6.3	30.8	
8/17/2015 17:00	4.4	132	31.9	2	30.8	
8/17/2015 18:00	3.9	134	30.6	1.5	30.7	
8/17/2015 19:00	4.6	161	30	20.1	30.8	
8/17/2015 20:00	6.7	178	27.8	21.8	30.7	
8/17/2015 21:00	1.8	83	24.7	1.5	30.7	

Date Time	WS(MPH)	WD(DEG)	AT(C)	RH(%)	BP(InH)	Status
8/17/2015 22:00	2	65	24.7	1.5	30.7	
8/17/2015 23:00	1.9	95	24.9	1.5	30.8	
8/18/2015 0:00	4.1	166	25.4	1.5	30.8	
8/18/2015 1:00	3.1	167	25.1	1.5	30.7	
8/18/2015 2:00	3.4	157	25	1.5	30.7	
8/18/2015 3:00	3.2	178	24.4	1.5	30.8	
8/18/2015 4:00	3.5	176	23.9	1.5	30.8	
8/18/2015 5:00	1.7	122	23.3	1.5	30.7	
8/18/2015 6:00	2.2	132	23.2	1.5	30.7	
8/18/2015 7:00	3.3	140	23.4	1.5	30.7	
8/18/2015 8:00	6.3	161	24.6	1.5	30.7	
8/18/2015 9:00	6.4	167	26.1	1.5	30.7	
8/18/2015 10:00	6.9	169	27.6	1.6	30.7	
8/18/2015 11:00	8	185	28.9	4.5	30.7	
8/18/2015 12:00	7.4	167	30.1	1.6	30.7	
8/18/2015 13:00	7.3	167	31.5	1.6	30.7	
8/18/2015 14:00	8	165	30.2	2	30.7	
8/18/2015 15:00	5.8	150	29.5	1.5	30.7	
8/18/2015 16:00	10.8	191	27.4	5.1	30.7	
8/18/2015 17:00	11.3	173	21.5	32.5	30.7	
8/18/2015 18:00	6.6	176	22.6	51.2	30.7	
8/18/2015 19:00	5.7	167	22.9	69.6	30.7	
8/18/2015 20:00	3.8	150	22.6	58.6	30.7	
8/18/2015 21:00	6.1	154	23.1	1.5	30.7	
8/18/2015 22:00	5.6	163	23.1	1.5	30.7	
8/18/2015 23:00	6.6	152	22.8	1.5	30.7	
8/19/2015 0:00	5.9	156	22.9	1.5	30.7	
8/19/2015 1:00	6.8	49	21.5	49.1	30.7	
8/19/2015 2:00	6.8	203	19.7	87.3	30.7	
8/19/2015 3:00	5.5	157	19.6	93.4	30.7	
8/19/2015 4:00	3.1	125	19.4	94.9	30.7	
8/19/2015 5:00	3.1	174	19.3	88.6	30.7	
8/19/2015 6:00	4.3	176	19.8	33.8	30.7	
8/19/2015 7:00	5.3	203	20.3	1.5	30.7	
8/19/2015 8:00	7	218	21	1.5	30.7	
8/19/2015 9:00	8	235	21.9	1.5	30.7	
8/19/2015 10:00	9.8	244	21.8	1.5	30.7	
8/19/2015 11:00	10.1	243	21.1	1.5	30.7	
8/19/2015 12:00	8.2	214	19.7	62.4	30.7	
8/19/2015 13:00	8.1	199	20.1	31.2	30.7	
8/19/2015 14:00	8.5	196	20.9	16.6	30.7	
8/19/2015 15:00	7.6	187	20.6	1.5	30.7	
8/19/2015 16:00	9	205	20.3	1.5	30.7	
8/19/2015 17:00	8.7	203	20.3	1.5	30.7	
8/19/2015 18:00	9.4	223	20.6	1.5	30.7	
8/19/2015 19:00	8.7	249	20.8	1.5	30.7	

Date Time	WS(MPH)	WD(DEG)	AT(C)	RH(%)	BP(InH)	Status
8/19/2015 20:00	10	267	19.5	43	30.7	
8/19/2015 21:00	6.5	239	18.7	71.2	30.7	
8/19/2015 22:00	7.1	211	18.1	77.8	30.7	
8/19/2015 23:00	6.6	204	17.4	81.6	30.7	
8/20/2015 0:00	5.7	194	16.8	87.1	30.8	
8/20/2015 1:00	6.1	197	16.6	89.7	30.7	
8/20/2015 2:00	6.4	203	16.4	88.3	30.7	
8/20/2015 3:00	5.8	205	16.3	86.9	30.8	
8/20/2015 4:00	4.7	188	15.6	92.2	30.8	
8/20/2015 5:00	4.6	182	15.5	92.5	30.8	
8/20/2015 6:00	4.3	179	15.3	92.2	30.8	
8/20/2015 7:00	6.3	191	15.2	90.9	30.8	
8/20/2015 8:00	7.5	198	16.2	86.9	30.8	
8/20/2015 9:00	5.3	203	18.2	70.4	30.8	
8/20/2015 10:00	6.4	215	19.8	34.2	30.8	
8/20/2015 11:00	5.3	203	22	25.5	30.8	
8/20/2015 12:00	6.1	197	23.4	51.1	30.8	
8/20/2015 13:00	6.3	206	24.5	46.3	30.8	
8/20/2015 14:00	7.1	238	25.6	40	30.8	
8/20/2015 15:00	7.4	262	26.1	37.7	30.8	
8/20/2015 16:00	8.3	270	26.6	37.1	30.8	
8/20/2015 17:00	6.7	270	26.8	26.8	30.8	
8/20/2015 18:00	6.2	256	26.8	24.4	30.8	
8/20/2015 19:00	7.4	204	26	41.3	30.8	
8/20/2015 20:00	3.3	177	25	29.3	30.8	
8/20/2015 21:00	1.7	156	23.1	15.1	30.8	
8/20/2015 22:00	1.2	148	21.9	1.5	30.8	
8/20/2015 23:00	1.4	170	20.8	17	30.8	
8/21/2015 0:00	2.6	172	20.5	62.6	30.8	
8/21/2015 1:00	2.8	170	20.1	68	30.8	
8/21/2015 2:00	2.9	170	19.5	67.1	30.8	
8/21/2015 3:00	2.5	171	18.8	74.1	30.8	
8/21/2015 4:00	2.4	163	18.3	77.8	30.8	
8/21/2015 5:00	0.7	132	17.1	84.4	30.8	
8/21/2015 6:00	0.8	109	16.4	88.2	30.8	
8/21/2015 7:00	1	137	16.9	86.4	30.8	
8/21/2015 8:00	2.4	174	19.3	47.6	30.8	
8/21/2015 9:00	4.4	192	20.8	1.5	30.8	
8/21/2015 10:00	4.2	190	22.9	7	30.8	
8/21/2015 11:00	4.9	189	25.4	39.3	30.8	
8/21/2015 12:00	5.9	166	26.6	46.1	30.8	
8/21/2015 13:00	5.2	132	27.5	28.3	30.8	
8/21/2015 14:00	5	122	27.6	4.2	30.8	
8/21/2015 15:00	5.4	133	28.1	1.6	30.8	
8/21/2015 16:00	5.5	134	28.7	1.6	30.8	
8/21/2015 17:00	5.9	142	27.7	7	30.8	

Date Time	WS(MPH)	WD(DEG)	AT(C)	RH(%)	BP(InH)	Status
8/21/2015 18:00	5.2	138	27.7	1.5	30.8	
8/21/2015 19:00	4.4	135	26.9	34.7	30.8	
8/21/2015 20:00	2.2	122	25.4	36.1	30.8	
8/21/2015 21:00	1.9	120	23.5	33	30.8	
8/21/2015 22:00	1.8	101	22.7	55.6	30.8	
8/21/2015 23:00	1.4	113	21.7	4.5	30.8	
8/22/2015 0:00	1.7	106	20.9	66.5	30.8	
8/22/2015 1:00	2.5	98	20.7	39.6	30.8	
8/22/2015 2:00	2.5	86	20.3	58	30.8	
8/22/2015 3:00	2.8	82	19.5	74.6	30.8	
8/22/2015 4:00	2.9	91	19.4	64.7	30.8	
8/22/2015 5:00	2.7	86	20.2	55	30.8	
8/22/2015 6:00	2.7	94	20.5	20.7	30.8	
8/22/2015 7:00	3.2	102	21	1.5	30.8	
8/22/2015 8:00	3.3	108	21.5	1.5	30.8	
8/22/2015 9:00	3.4	108	21.8	36.4	30.8	
8/22/2015 10:00	4.3	60	20.4	72.7	30.8	
8/22/2015 11:00	6.2	334	18.3	96.7	30.8	
8/22/2015 12:00	3.9	116	19.1	79.2	30.8	
8/22/2015 13:00	4.3	110	21.3	79.6	30.8	
8/22/2015 14:00	4.7	110	22.7	81.9	30.8	
8/22/2015 15:00	3.6	115	23.7	77.7	30.8	
8/22/2015 16:00	4	124	25.9	1.5	30.8	
8/22/2015 17:00	3.2	123	25.9	1.5	30.8	
8/22/2015 18:00	4.8	132	24.5	5.2	30.8	
8/22/2015 19:00	3.7	133	23	1.5	30.8	
8/22/2015 20:00	4	138	22.7	1.5	30.7	
8/22/2015 21:00	1.9	120	21.7	64.4	30.8	
8/22/2015 22:00	2.2	81	21.2	91.3	30.8	
8/22/2015 23:00	2	89	20.9	92.4	30.8	
8/23/2015 0:00	1.4	116	20.6	94.4	30.8	
8/23/2015 1:00	1.3	70	20.3	95.1	30.8	
8/23/2015 2:00	2.4	135	20.3	80.7	30.7	
8/23/2015 3:00	3.1	143	20.6	1.5	30.7	
8/23/2015 4:00	3.8	152	20.7	67.8	30.8	
8/23/2015 5:00	3.2	182	21	46	30.8	
8/23/2015 6:00	2.5	168	21.1	1.5	30.8	
8/23/2015 7:00	4.2	154	21.4	1.5	30.8	
8/23/2015 8:00	4.7	154	21.8	1.5	30.8	
8/23/2015 9:00	5.2	172	22.5	1.5	30.8	
8/23/2015 10:00	7.1	199	22.7	1.5	30.8	
8/23/2015 11:00	9	259	21.7	24.7	30.8	
8/23/2015 12:00	8.1	302	19.9	76.6	30.8	
8/23/2015 13:00	7.4	299	21.6	8.9	30.8	
8/23/2015 14:00	8.4	303	23.3	2.2	30.8	
8/23/2015 15:00	8.4	274	24.6	11	30.8	

Date Time	WS(MPH)	WD(DEG)	AT(C)	RH(%)	BP(InH)	Status
8/23/2015 16:00	9.1	282	25.5	4.9	30.8	
8/23/2015 17:00	8.6	262	25.8	1.5	30.8	
8/23/2015 18:00	8.9	276	25.2	1.5	30.8	
8/23/2015 19:00	6.2	269	25.2	1.5	30.8	
8/23/2015 20:00	4.9	271	24	8.9	30.8	
8/23/2015 21:00	3	248	22.5	1.5	30.8	
8/23/2015 22:00	4.1	257	21.9	1.5	30.8	
8/23/2015 23:00	4.3	245	21.1	23.9	30.8	
8/24/2015 0:00	5.2	272	20	66.1	30.8	
8/24/2015 1:00	4.9	287	18.8	27.5	30.8	
8/24/2015 2:00	3.3	284	18.1	55.9	30.8	
8/24/2015 3:00	2.1	225	16.6	84.5	30.8	
8/24/2015 4:00	3	244	16.3	84.3	30.8	
8/24/2015 5:00	3.4	254	15.6	84.7	30.8	
8/24/2015 6:00	4	228	15	86.4	30.8	
8/24/2015 7:00	3.5	219	14.8	84.9	30.8	
8/24/2015 8:00	3	210	16.5	77.3	30.8	
8/24/2015 9:00	5.9	254	17.8	64.2	30.8	
8/24/2015 10:00	7.4	253	19.5	34.8	30.8	
8/24/2015 11:00	8.6	268	21.3	31.9	30.8	
8/24/2015 12:00	9.7	276	22.5	2	30.8	
8/24/2015 13:00	10	281	23.5	1.5	30.8	
8/24/2015 14:00	9.6	281	24.3	25.5	30.8	
8/24/2015 15:00	9.4	274	25.1	34.3	30.8	
8/24/2015 16:00	9.6	260	25.6	31.6	30.8	
8/24/2015 17:00	10.3	261	25.7	34.1	30.8	
8/24/2015 18:00	9.6	266	25.8	29.4	30.8	
8/24/2015 19:00	7.8	266	25.4	1.5	30.8	
8/24/2015 20:00	4.8	267	24.2	1.5	30.8	
8/24/2015 21:00	3.2	253	22.7	1.5	30.8	
8/24/2015 22:00	3.8	212	21.3	40.6	30.8	
8/24/2015 23:00	3.3	224	20.2	25.7	30.8	
8/25/2015 0:00	4.4	275	20	52.5	30.8	
8/25/2015 1:00	2.7	258	18.5	68.3	30.8	
8/25/2015 2:00	1.3	248	16.8	79	30.8	
8/25/2015 3:00	1.8	212	16.2	82	30.8	
8/25/2015 4:00	2	207	15.7	83.9	30.8	
8/25/2015 5:00	1.9	180	15	87.9	30.8	
8/25/2015 6:00	3	180	14.2	92.7	30.8	
8/25/2015 7:00	3.2	194	14.1	91.8	30.8	
8/25/2015 8:00	3	205	15.8	82.8	30.8	
8/25/2015 9:00	3.6	209	17.8	72	30.8	
8/25/2015 10:00	5.7	253	20.2	57.7	30.8	
8/25/2015 11:00	7.6	268	21.3	48.1	30.8	
8/25/2015 12:00	8.5	282	22	44.1	30.8	
8/25/2015 13:00	8.1	281	22.7	44.9	30.8	

Date Time	WS(MPH)	WD(DEG)	AT(C)	RH(%)	BP(InH)	Status
8/25/2015 14:00	8.5	285	23.8	42.8	30.8	
8/25/2015 15:00	8.8	277	24.6	38.3	30.8	
8/25/2015 16:00	10.1	284	25.1	35.1	30.8	
8/25/2015 17:00	8.8	293	25.6	11.3	30.8	
8/25/2015 18:00	9	284	25.7	1.5	30.8	
8/25/2015 19:00	7.5	290	25.3	1.5	30.8	
8/25/2015 20:00	4.4	314	23.9	32.6	30.8	
8/25/2015 21:00	2	353	21.6	51.9	30.8	
8/25/2015 22:00	1	155	19.3	64.5	30.8	
8/25/2015 23:00	1	55	17.9	74.2	30.8	
8/26/2015 0:00	1.1	72	16.6	83.5	30.8	
8/26/2015 1:00	0.8	149	16.1	86.2	30.8	
8/26/2015 2:00	1.8	175	16.1	88.8	30.8	
8/26/2015 3:00	2.3	182	15.6	91.8	30.8	
8/26/2015 4:00	2.2	181	15.1	94	30.8	
8/26/2015 5:00	2.5	184	14.7	94.8	30.8	
8/26/2015 6:00	2.5	190	14.3	93.9	30.8	
8/26/2015 7:00	2.3	193	14.1	91.5	30.8	
8/26/2015 8:00	3.1	224	15.9	80.9	30.9	
8/26/2015 9:00	3.1	271	18.2	57.2	30.9	
8/26/2015 10:00	4.5	325	19.9	68.3	30.9	
8/26/2015 11:00	4.6	324	21.7	63.1	30.9	
8/26/2015 12:00	5.9	322	23.2	30.4	30.8	
8/26/2015 13:00	6.4	328	23.9	11.4	30.9	
8/26/2015 14:00	6.4	326	24.4	8.4	30.8	
8/26/2015 15:00	5.8	334	25.4	47	30.9	
8/26/2015 16:00	5.8	338	25.8	42.5	30.8	
8/26/2015 17:00	5.6	336	25.9	5.6	30.8	
8/26/2015 18:00	6	341	25.4	1.5	30.8	
8/26/2015 19:00	2.8	2	24.8	1.5	30.8	
8/26/2015 20:00	2.5	24	23.2	26.7	30.8	
8/26/2015 21:00	2.1	10	20.9	68.3	30.8	
8/26/2015 22:00	1.4	30	19.3	80.7	30.8	
8/26/2015 23:00	2.1	2	18.3	86.6	30.9	
8/27/2015 0:00	2.4	23	18	84.6	30.8	
8/27/2015 1:00	2.2	26	17.7	80.9	30.9	
8/27/2015 2:00	2.5	57	17	81.8	30.8	
8/27/2015 3:00	1.9	78	16.4	84.6	30.9	
8/27/2015 4:00	2.1	67	15.9	86.7	30.8	
8/27/2015 5:00	1.6	32	15.3	89.9	30.8	
8/27/2015 6:00	1.7	17	14.8	92.9	30.8	
8/27/2015 7:00	1.8	18	14.4	96	30.9	
8/27/2015 8:00	2.9	55	15.8	86.8	30.8	
8/27/2015 9:00	3	68	18.2	69	30.9	
8/27/2015 10:00	3.7	60	20.2	64.5	30.8	
8/27/2015 11:00	3.4	91	22.3	37.4	30.8	

Date Time	WS(MPH)	WD(DEG)	AT(C)	RH(%)	BP(InH)	Status
8/27/2015 12:00	3.9	319	23.4	10	30.8	
8/27/2015 13:00	5.2	257	24.1	14.3	30.9	
8/27/2015 14:00	5.5	308	24.4	1.5	30.8	
8/27/2015 15:00	5.1	11	24.8	1.5	30.8	
8/27/2015 16:00	5.2	356	25.2	1.5	30.8	
8/27/2015 17:00	3.7	356	25.1	1.5	30.8	
8/27/2015 18:00	3	26	24.8	1.5	30.8	
8/27/2015 19:00	3	28	24.3	1.5	30.8	
8/27/2015 20:00	2.9	77	22.8	28.5	30.8	
8/27/2015 21:00	2.7	84	21.6	3.6	30.8	
8/27/2015 22:00	1.3	82	21	7	30.8	
8/27/2015 23:00	1.8	80	19.5	58.6	30.8	
8/28/2015 0:00	1.3	66	19.1	48.5	30.8	
8/28/2015 1:00	1.3	51	18.1	56.3	30.8	
8/28/2015 2:00	1.6	88	18.1	1.5	30.8	
8/28/2015 3:00	1	88	17.5	62.3	30.8	
8/28/2015 4:00	0.8	100	17.6	14.3	30.8	
8/28/2015 5:00	0.9	83	17.3	86.7	30.8	
8/28/2015 6:00	0.8	143	17.4	86.4	30.8	
8/28/2015 7:00	1.4	84	17	81.1	30.8	
8/28/2015 8:00	1.5	147	18.7	56.1	30.8	
8/28/2015 9:00	2	125	20.9	30	30.8	
8/28/2015 10:00	5.1	143	22.7	66	30.8	
8/28/2015 11:00	4.4	132	24.9	16	30.8	
8/28/2015 12:00	5.5	132	26.3	1.6	30.8	
8/28/2015 13:00	5.6	135	26	13.6	30.8	
8/28/2015 14:00	4.9	129	27	1.5	30.8	
8/28/2015 15:00	5	130	27.3	1.5	30.8	
8/28/2015 16:00	5	129	27.2	5.3	30.8	
8/28/2015 17:00	5.2	134	27.3	1.5	30.8	
8/28/2015 18:00	4	128	26.6	1.5	30.8	
8/28/2015 19:00	4.7	139	25.9	1.5	30.8	
8/28/2015 20:00	2.8	117	24.9	1.5	30.8	
8/28/2015 21:00	2.9	126	24.4	1.5	30.8	
8/28/2015 22:00	4.5	139	24	1.5	30.8	
8/28/2015 23:00	3.2	129	23.6	1.5	30.8	
8/29/2015 0:00	3.4	138	23.5	1.5	30.8	
8/29/2015 1:00	3.2	133	23.2	1.5	30.8	
8/29/2015 2:00	2	141	22.6	42.7	30.8	
8/29/2015 3:00	1.4	124	22.1	75.6	30.8	
8/29/2015 4:00	1.9	130	22.2	73.6	30.8	
8/29/2015 5:00	2	122	22.3	72.2	30.8	
8/29/2015 6:00	1.9	119	22.3	73.5	30.8	
8/29/2015 7:00	1.9	113	22	75.9	30.8	
8/29/2015 8:00	2.1	119	22.5	46.1	30.8	
8/29/2015 9:00	3.9	143	23.1	1.5	30.8	

Date Time	WS(MPH)	WD(DEG)	AT(C)	RH(%)	BP(InH)	Status
8/29/2015 10:00	6.5	163	24	1.5	30.8	
8/29/2015 11:00	6.5	181	25	2.7	30.8	
8/29/2015 12:00	6.6	179	26.2	13.4	30.8	
8/29/2015 13:00	5.7	159	26.8	1.5	30.8	
8/29/2015 14:00	6.9	185	27	1.5	30.8	
8/29/2015 15:00	5.9	179	26.9	1.5	30.8	
8/29/2015 16:00	4.8	164	27.7	60	30.8	
8/29/2015 17:00	4.3	153	28.6	15.2	30.8	
8/29/2015 18:00	4.8	178	28.6	1.5	30.8	
8/29/2015 19:00	3.4	153	27.9	6.3	30.8	
8/29/2015 20:00	2.7	135	26.4	2.2	30.8	
8/29/2015 21:00	2.8	133	26.1	1.5	30.8	
8/29/2015 22:00	2.8	138	25.2	1.5	30.8	
8/29/2015 23:00	2	139	24.9	1.5	30.8	
8/30/2015 0:00	2.3	149	24.5	1.5	30.8	
8/30/2015 1:00	3	164	24.4	1.5	30.8	
8/30/2015 2:00	3.6	158	24.1	1.5	30.8	
8/30/2015 3:00	3.2	171	23.5	1.5	30.8	
8/30/2015 4:00	1.8	162	22.6	1.5	30.8	
8/30/2015 5:00	2.3	171	22	1.5	30.8	
8/30/2015 6:00	2.3	176	21.8	1.5	30.8	
8/30/2015 7:00	2.1	187	21.2	1.5	30.8	
8/30/2015 8:00	2.5	184	22.3	1.5	30.8	
8/30/2015 9:00	4.2	186	23.5	1.5	30.8	
8/30/2015 10:00	4.3	199	24.1	1.5	30.8	
8/30/2015 11:00	3.5	202	26.4	1.6	30.8	
8/30/2015 12:00	3.7	242	28.4	1.6	30.8	
8/30/2015 13:00	4	189	29.8	19.4	30.8	
8/30/2015 14:00	3.4	44	30.9	15.6	30.8	
8/30/2015 15:00	3.9	172	30.6	4.9	30.8	
8/30/2015 16:00	2.8	79	31.1	6.8	30.8	
8/30/2015 17:00	3.9	13	31.1	7	30.8	
8/30/2015 18:00	3.7	29	30.3	18.8	30.8	
8/30/2015 19:00	3.1	30	29.5	48.9	30.8	
8/30/2015 20:00	2.6	65	28	64	30.8	
8/30/2015 21:00	3.3	89	27.2	67.1	30.8	
8/30/2015 22:00	2.2	115	26.6	72.3	30.8	
8/30/2015 23:00	2.1	132	26	74.6	30.8	
8/31/2015 0:00	2.3	137	25.4	53.7	30.8	
8/31/2015 1:00	2.7	136	25	1.5	30.8	
8/31/2015 2:00	4.4	152	24.9	1.5	30.8	
8/31/2015 3:00	3	147	24.5	1.5	30.8	
8/31/2015 4:00	2.4	139	23.9	1.5	30.8	
8/31/2015 5:00	3.9	153	23.5	1.5	30.8	
8/31/2015 6:00	3.8	163	23.4	1.5	30.8	
8/31/2015 7:00	2.7	170	23.5	1.5	30.8	

Date Time	WS(MPH)	WD(DEG)	AT(C)	RH(%)	BP(InH)	Status
8/31/2015 8:00	4	165	23.9	1.5	30.8	
8/31/2015 9:00	5.2	163	25	1.5	30.8	
8/31/2015 10:00	5.3	183	26.7	60.5	30.8	
8/31/2015 11:00	4.3	181	28.4	1.6	30.8	
8/31/2015 12:00	3.7	145	29.8	1.6	30.8	
8/31/2015 13:00	3.9	115	30.6	1.6	30.8	
8/31/2015 14:00	4.2	122	31.6	1.6	30.8	
8/31/2015 15:00	4.4	151	32.4	27.3	30.8	
8/31/2015 16:00	4.4	146	32.7	1.6	30.8	
8/31/2015 17:00	3.7	117	32.4	1.6	30.8	
8/31/2015 18:00	4	112	29.4	1.5	30.8	
8/31/2015 19:00	2.9	124	29.3	1.5	30.8	
8/31/2015 20:00	2.7	113	28.2	1.5	30.8	
8/31/2015 21:00	2.6	124	27.4	1.5	30.8	
8/31/2015 22:00	3.7	131	27.1	1.5	30.8	
8/31/2015 23:00	4.3	147	26.7	18.5	30.8	
9/1/2015 0:00	4	158	26.3	1.5	30.8	
9/1/2015 1:00	3.6	168	25.8	1.5	30.8	
9/1/2015 2:00	3.7	168	25.4	1.5	30.8	
9/1/2015 3:00	3.7	169	25	1.5	30.8	
9/1/2015 4:00	3.6	168	24.5	1.5	30.8	
9/1/2015 5:00	4.2	165	24.2	1.5	30.8	
9/1/2015 6:00	5	168	23.9	1.5	30.8	
9/1/2015 7:00	4.7	172	23.7	1.5	30.8	
9/1/2015 8:00	4.6	169	24	3.5	30.8	
9/1/2015 9:00	5.9	189	25.1	1.5	30.8	
9/1/2015 10:00	6.6	191	26.8	1.6	30.8	
9/1/2015 11:00	6.9	191	28.7	1.6	30.8	
9/1/2015 12:00	6.3	194	30.5	1.6	30.8	
9/1/2015 13:00	5.3	190	31.7	1.6	30.8	
9/1/2015 14:00	5.1	191	32.7	1.6	30.8	
9/1/2015 15:00	6.6	185	32.9	1.6	30.8	
9/1/2015 16:00	6.9	174	33	15.7	30.8	
9/1/2015 17:00	6.9	167	32.8	5.8	30.8	
9/1/2015 18:00	6.9	176	32.5	1.6	30.8	
9/1/2015 19:00	5.1	175	31.8	1.6	30.8	
9/1/2015 20:00	4.3	150	30.4	1.5	30.8	
9/1/2015 21:00	3.2	138	29.1	1.5	30.8	
9/1/2015 22:00	3.4	137	28.3	1.5	30.8	
9/1/2015 23:00	4.8	146	27.7	1.5	30.8	
9/2/2015 0:00	4.5	166	27	1.5	30.8	
9/2/2015 1:00	4	191	25.7	1.5	30.8	
9/2/2015 2:00	3.8	194	25.2	1.5	30.8	
9/2/2015 3:00	3	159	24.6	1.5	30.8	
9/2/2015 4:00	3.9	157	24.4	1.5	30.8	
9/2/2015 5:00	3.3	172	23.9	1.5	30.8	

Date Time	WS(MPH)	WD(DEG)	AT(C)	RH(%)	BP(InH)	Status
9/2/2015 6:00	3.5	163	23.8	1.5	30.8	
9/2/2015 7:00	3.7	168	23.6	1.5	30.8	
9/2/2015 8:00	3.8	162	24.2	1.5	30.8	
9/2/2015 9:00	5.6	182	25.7	1.5	30.8	
9/2/2015 10:00	6.8	196	27.4	1.6	30.8	
9/2/2015 11:00	7	209	28.9	1.6	30.8	
9/2/2015 12:00	9.1	214	30	1.6	30.8	
9/2/2015 13:00	7.2	204	31	1.6	30.8	
9/2/2015 14:00	7.8	206	32	1.6	30.8	
9/2/2015 15:00	7.1	190	32.7	1.6	30.8	
9/2/2015 16:00	6.7	187	32.5	1.6	30.8	
9/2/2015 17:00	6.5	180	31.9	1.6	30.8	
9/2/2015 18:00	6.1	197	31.2	1.5	30.8	
9/2/2015 19:00	4.6	191	31.4	1.6	30.8	
9/2/2015 20:00	2.3	199	29.7	1.5	30.8	
9/2/2015 21:00	1.1	157	28.2	1.5	30.8	
9/2/2015 22:00	1	117	27.5	1.5	30.8	
9/2/2015 23:00	0.7	117	26.5	1.5	30.8	
9/3/2015 0:00	1.4	152	26	1.5	30.8	
9/3/2015 1:00	2.1	163	25.7	1.5	30.8	
9/3/2015 2:00	2.8	170	25.4	1.5	30.8	
9/3/2015 3:00	3	173	24.9	1.5	30.8	
9/3/2015 4:00	3.4	161	24.5	1.5	30.8	
9/3/2015 5:00	3.7	157	24.2	1.5	30.8	
9/3/2015 6:00	3.4	158	24	1.5	30.8	
9/3/2015 7:00	3.7	167	24.2	1.5	30.8	
9/3/2015 8:00	3.3	174	24.8	1.5	30.8	
9/3/2015 9:00	4.7	183	26.4	1.5	30.8	
9/3/2015 10:00	5.6	206	27.8	1.6	30.8	
9/3/2015 11:00	5.1	190	29.4	19.4	30.8	
9/3/2015 12:00	6.1	191	30.7	1.6	30.8	
9/3/2015 13:00	9.7	210	31.6	1.6	30.8	
9/3/2015 14:00	10.2	220	32.2	1.6	30.8	
9/3/2015 15:00	7.8	209	32.7	1.6	30.8	
9/3/2015 16:00	6.2	210	33.3	1.6	30.8	
9/3/2015 17:00	6	214	33.5	1.6	30.7	
9/3/2015 18:00	6.6	214	33.1	1.6	30.7	
9/3/2015 19:00	5.2	210	32.4	1.6	30.8	
9/3/2015 20:00	3.1	190	30.5	1.5	30.7	
9/3/2015 21:00	1.5	167	29	1.5	30.7	
9/3/2015 22:00	0.7	91	27.4	1.5	30.7	
9/3/2015 23:00	0.7	122	26.8	1.5	30.8	
9/4/2015 0:00	0.9	198	26.3	1.5	30.8	
9/4/2015 1:00	1.9	191	25.7	4.1	30.8	
9/4/2015 2:00	1.7	186	24.7	1.5	30.8	
9/4/2015 3:00	1.1	179	24	1.5	30.7	

Date Time	WS(MPH)	WD(DEG)	AT(C)	RH(%)	BP(InH)	Status
9/4/2015 4:00	2.7	192	23.9	1.5	30.8	
9/4/2015 5:00	2.1	192	23.8	1.5	30.8	
9/4/2015 6:00	1	173	23.2	1.5	30.8	
9/4/2015 7:00	0.8	121	23	1.5	30.8	
9/4/2015 8:00	2.1	167	24.6	16.1	30.8	
9/4/2015 9:00	4.2	200	26.3	1.5	30.8	
9/4/2015 10:00	5.7	207	27.9	1.6	30.8	
9/4/2015 11:00	5	212	30.2	1.6	30.8	
9/4/2015 12:00	5.6	200	32.1	1.6	30.8	
9/4/2015 13:00	6.6	191	32.8	5.5	30.8	
9/4/2015 14:00	6.2	195	33.2	36.3	30.8	
9/4/2015 15:00	6.8	193	33.5	15	30.8	
9/4/2015 16:00	6.3	187	34	19.7	30.8	
9/4/2015 17:00	6.7	216	34	27.1	30.8	
9/4/2015 18:00	6	213	33.6	1.6	30.8	
9/4/2015 19:00	4.6	210	32.5	1.6	30.8	
9/4/2015 20:00	2.8	189	31	1.5	30.8	
9/4/2015 21:00	1.7	176	29.3	1.5	30.8	
9/4/2015 22:00	1.1	74	28.1	1.5	30.8	
9/4/2015 23:00	1.1	155	27.6	1.5	30.8	
9/5/2015 0:00	1	119	26.7	1.5	30.8	
9/5/2015 1:00	1.2	106	26.4	6.6	30.8	
9/5/2015 2:00	1.4	171	26	1.5	30.8	
9/5/2015 3:00	1.3	160	25.5	1.5	30.8	
9/5/2015 4:00	3.3	186	24.6	1.5	30.8	
9/5/2015 5:00	2.6	170	23.9	1.5	30.8	
9/5/2015 6:00	0.9	69	23.3	1.5	30.8	
9/5/2015 7:00	1.2	49	22.8	1.5	30.8	
9/5/2015 8:00	1.5	90	24.6	1.5	30.8	
9/5/2015 9:00	1.5	141	28.4	1.6	30.8	
9/5/2015 10:00	2.7	198	29.9	5.7	30.8	
9/5/2015 11:00	5	181	31.2	1.6	30.8	
9/5/2015 12:00	6.2	187	32.1	1.6	30.8	
9/5/2015 13:00	4.8	161	33.4	8.3	30.8	
9/5/2015 14:00	4.1	137	33.4	1.6	30.8	
9/5/2015 15:00	3.9	124	33.8	1.6	30.8	
9/5/2015 16:00	4.4	126	34.1	1.6	30.8	
9/5/2015 17:00	4.5	143	34.3	3.2	30.8	
9/5/2015 18:00	3.9	135	33.9	2.4	30.8	
9/5/2015 19:00	2.5	113	32.9	1.6	30.8	
9/5/2015 20:00	1.9	112	30.6	1.5	30.8	
9/5/2015 21:00	1.8	105	29.5	1.5	30.8	
9/5/2015 22:00	1.6	107	28.8	1.5	30.8	
9/5/2015 23:00	1.5	120	28.2	1.5	30.8	
9/6/2015 0:00	1.5	123	27.6	1.5	30.8	
9/6/2015 1:00	1.5	103	26.9	1.5	30.8	

Date Time	WS(MPH)	WD(DEG)	AT(C)	RH(%)	BP(InH)	Status
9/6/2015 2:00	1.3	102	25.8	1.5	30.8	
9/6/2015 3:00	2	150	25.8	1.5	30.8	
9/6/2015 4:00	2.7	148	25.7	1.5	30.8	
9/6/2015 5:00	1.7	167	25	1.5	30.8	
9/6/2015 6:00	1.2	129	24.3	1.5	30.8	
9/6/2015 7:00	1.2	145	23.9	1.5	30.8	
9/6/2015 8:00	1	107	25.8	1.5	30.8	
9/6/2015 9:00	1.9	152	27.9	1.5	30.8	
9/6/2015 10:00	4.5	176	28.9	1.6	30.8	
9/6/2015 11:00	5.5	179	30.7	3	30.8	
9/6/2015 12:00	6.2	190	32.2	1.6	30.8	
9/6/2015 13:00	7.1	190	33.3	1.6	30.8	
9/6/2015 14:00	6.4	175	34.2	1.6	30.8	
9/6/2015 15:00	7.4	182	34.5	16	30.8	
9/6/2015 16:00	5.2	151	35	2.1	30.8	
9/6/2015 17:00	4.5	133	35.6	3.7	30.8	
9/6/2015 18:00	4.8	142	34.8	8.7	30.8	
9/6/2015 19:00	3.5	125	33.5	1.6	30.8	
9/6/2015 20:00	2.9	136	31.2	1.5	30.8	
9/6/2015 21:00	2.8	134	29.9	1.5	30.8	
9/6/2015 22:00	3.2	131	29.1	1.5	30.8	
9/6/2015 23:00	3.3	132	28.4	1.5	30.8	
9/7/2015 0:00	3.8	140	27.7	1.5	30.8	
9/7/2015 1:00	3.8	137	27.2	1.5	30.8	
9/7/2015 2:00	4.7	144	26.7	1.5	30.8	
9/7/2015 3:00	4.1	155	26.3	1.5	30.8	
9/7/2015 4:00	4	150	25.9	1.5	30.8	
9/7/2015 5:00	3.2	164	25.3	1.5	30.8	
9/7/2015 6:00	1	143	24.2	1.5	30.8	
9/7/2015 7:00	1.1	141	23.9	1.5	30.8	
9/7/2015 8:00	1.5	165	24.6	1.5	30.8	
9/7/2015 9:00	3.9	160	25.8	1.5	30.8	
9/7/2015 10:00	5.4	169	27	1.5	30.8	
9/7/2015 11:00	4.8	221	27.3	1.5	30.8	
9/7/2015 12:00	4.6	186	28.8	1.6	30.8	
9/7/2015 13:00	8.3	191	29.9	1.6	30.8	
9/7/2015 14:00	6.5	180	30.2	1.5	30.8	
9/7/2015 15:00	6.5	161	31.1	1.6	30.8	
9/7/2015 16:00	4.9	132	32.4	1.6	30.8	
9/7/2015 17:00	5	138	31.9	1.6	30.7	
9/7/2015 18:00	3	123	31.4	1.6	30.8	
9/7/2015 19:00	3.8	132	30.7	1.5	30.8	
9/7/2015 20:00	2.4	130	29.6	1.5	30.8	
9/7/2015 21:00	2.3	123	28.9	1.5	30.8	
9/7/2015 22:00	3.3	126	28.4	1.5	30.8	
9/7/2015 23:00	4.4	144	27.9	1.5	30.8	

Date Time	WS(MPH)	WD(DEG)	AT(C)	RH(%)	BP(InH)	Status
9/8/2015 0:00	4.4	143	27.4	1.5	30.7	
9/8/2015 1:00	5.3	151	27.4	1.5	30.8	
9/8/2015 2:00	3.9	173	26.7	1.5	30.8	
9/8/2015 3:00	3.8	142	26.3	1.5	30.8	
9/8/2015 4:00	5.2	158	26.4	1.5	30.8	
9/8/2015 5:00	4.8	154	26.2	1.5	30.7	
9/8/2015 6:00	3.6	145	25.5	1.5	30.7	
9/8/2015 7:00	4.1	154	25.4	1.5	30.8	
9/8/2015 8:00	4.8	145	25.2	1.5	30.8	
9/8/2015 9:00	7.3	164	26.4	1.5	30.8	
9/8/2015 10:00	7.9	161	28.4	1.6	30.7	
9/8/2015 11:00	9.2	167	29.7	17.3	30.7	
9/8/2015 12:00	10.5	176	31.2	16.7	30.7	
9/8/2015 13:00	10.8	188	29.9	9.4	30.7	
9/8/2015 14:00	11.8	199	29.7	1.5	30.7	
9/8/2015 15:00	11.4	259	28.1	1.5	30.7	
9/8/2015 16:00	7.3	268	26.9	1.5	30.7	
9/8/2015 17:00	4.2	197	25.9	1.5	30.7	
9/8/2015 18:00	1.4	108	26	1.5	30.7	
9/8/2015 19:00	3.1	36	25.5	1.5	30.7	
9/8/2015 20:00	3	80	24.8	1.5	30.7	
9/8/2015 21:00	3.2	95	24.5	1.5	30.7	
9/8/2015 22:00	3.4	54	24.4	1.5	30.7	
9/8/2015 23:00	3.3	59	23.7	1.5	30.8	
9/9/2015 0:00	3.6	21	23.4	1.5	30.7	
9/9/2015 1:00	3.7	71	21.3	1.5	30.8	
9/9/2015 2:00	2.6	154	21.3	1.5	30.7	
9/9/2015 3:00	2.8	191	21.6	22.1	30.7	
9/9/2015 4:00	2.9	320	21.7	1.5	30.8	
9/9/2015 5:00	2.4	256	22	1.5	30.7	
9/9/2015 6:00	2	43	22.2	1.5	30.7	
9/9/2015 7:00	1.9	124	22.1	1.5	30.8	
9/9/2015 8:00	2.8	145	22.1	1.5	30.8	
9/9/2015 9:00	2.2	185	22.1	1.5	30.8	
9/9/2015 10:00	1.7	189	22.8	1.5	30.8	
9/9/2015 11:00	1.9	313	24.1	1.5	30.8	
9/9/2015 12:00	2.9	304	24.7	1.5	30.8	
9/9/2015 13:00	3.8	275	25.7	1.5	30.8	
9/9/2015 14:00	3.8	263	27.4	30.7	30.8	
9/9/2015 15:00	5.2	287	28.3	6	30.8	
9/9/2015 16:00	7.3	344	28.1	1.6	30.8	
9/9/2015 17:00	6.8	359	28.1	1.6	30.7	
9/9/2015 18:00	5.5	13	27.8	1.5	30.7	
9/9/2015 19:00	3.8	78	26.8	1.5	30.7	
9/9/2015 20:00	1.8	128	24.9	1.5	30.7	
9/9/2015 21:00	2	141	23.5	69.8	30.8	

Date Time	WS(MPH)	WD(DEG)	AT(C)	RH(%)	BP(InH)	Status
9/9/2015 22:00	1.2	162	22.8	83.1	30.7	
9/9/2015 23:00	0.9	144	22.2	62	30.8	
9/10/2015 0:00	0.8	17	21.6	89.3	30.8	
9/10/2015 1:00	1	92	21.4	53.4	30.8	
9/10/2015 2:00	0.9	107	20.9	92.4	30.8	
9/10/2015 3:00	0.9	87	20.7	92.7	30.8	
9/10/2015 4:00	1	127	20.5	94.8	30.8	
9/10/2015 5:00	1	184	20.3	95	30.8	
9/10/2015 6:00	1.8	173	20.4	44.1	30.7	
9/10/2015 7:00	1.1	161	20.2	1.5	30.8	
9/10/2015 8:00	2.7	209	21.7	1.5	30.8	
9/10/2015 9:00	2.2	192	23	1.5	30.8	
9/10/2015 10:00	3.1	191	25.2	1.6	30.8	
9/10/2015 11:00	2.9	280	27.4	1.6	30.7	
9/10/2015 12:00	3.2	190	28.7	14.5	30.8	
9/10/2015 13:00	3.5	259	28.7	1.6	30.7	
9/10/2015 14:00	4.4	233	28.7	1.6	30.7	
9/10/2015 15:00	6.5	199	29	1.6	30.7	
9/10/2015 16:00	6.2	188	29.4	1.6	30.7	
9/10/2015 17:00	3.8	182	30.4	1.6	30.7	
9/10/2015 18:00	4.1	214	29.9	1.5	30.7	
9/10/2015 19:00	4.7	198	28.9	1.5	30.7	
9/10/2015 20:00	2.7	151	26.9	1.5	30.7	
9/10/2015 21:00	9.1	50	22.9	1.5	30.7	
9/10/2015 22:00	4.8	86	20.6	1.5	30.7	
9/10/2015 23:00	3.2	145	20.9	1.5	30.7	
9/11/2015 0:00	4.3	179	21.7	1.5	30.8	
9/11/2015 1:00	4.1	196	21.5	1.5	30.7	
9/11/2015 2:00	3.1	179	21.3	1.5	30.7	
9/11/2015 3:00	5.6	187	21.5	1.5	30.7	
9/11/2015 4:00	9.5	336	21	5.2	30.7	
9/11/2015 5:00	6.7	331	18.8	7	30.7	
9/11/2015 6:00	6.1	348	18.3	50	30.8	
9/11/2015 7:00	5.8	352	18.2	92.4	30.8	
9/11/2015 8:00	3.5	45	18.3	76.1	30.8	
9/11/2015 9:00	7.7	356	18.6	38.4	30.8	
9/11/2015 10:00	8.2	355	18.5	1.5	30.8	
9/11/2015 11:00	8.6	341	18.8	10.8	30.8	
9/11/2015 12:00	7.4	328	19.6	50.7	30.8	
9/11/2015 13:00	8.2	320	21.3	1.5	30.8	
9/11/2015 14:00	8.2	301	22.9	1.5	30.8	
9/11/2015 15:00	11.1	305	23.2	1.5	30.8	
9/11/2015 16:00	12.5	312	23.2	1.5	30.8	
9/11/2015 17:00	13.3	306	23.1	1.5	30.8	
9/11/2015 18:00	12.4	310	22.6	1.5	30.8	
9/11/2015 19:00	10.3	313	21.7	1.5	30.8	

Date Time	WS(MPH)	WD(DEG)	AT(C)	RH(%)	BP(InH)	Status
9/11/2015 20:00	7	315	20	36.5	30.8	
9/11/2015 21:00	6.5	320	18.6	28.7	30.8	
9/11/2015 22:00	6	316	17.7	59.9	30.8	
9/11/2015 23:00	6.2	303	17	41.1	30.8	
9/12/2015 0:00	7.5	314	16.3	36.4	30.8	
9/12/2015 1:00	7.2	332	15.4	68.7	30.8	
9/12/2015 2:00	4.8	353	14.5	74.5	30.8	
9/12/2015 3:00	4.6	320	14	76.6	30.8	
9/12/2015 4:00	5.3	311	13.7	77.5	30.8	
9/12/2015 5:00	5	293	13.1	80.3	30.8	
9/12/2015 6:00	4.6	302	12.5	82	30.8	
9/12/2015 7:00	3.9	288	12	85.6	30.8	
9/12/2015 8:00	6.3	303	12.3	84.9	30.8	
9/12/2015 9:00	8.8	321	13.7	77.9	30.8	
9/12/2015 10:00	9.8	313	15.2	54.1	30.8	
9/12/2015 11:00	11.7	309	16.4	48.7	30.8	
9/12/2015 12:00	10.6	299	17.1	20.2	30.8	
9/12/2015 13:00	9.3	314	17.6	17.8	30.8	
9/12/2015 14:00	9.9	324	17.9	33.8	30.8	
9/12/2015 15:00	8.9	329	18.5	24.3	30.8	
9/12/2015 16:00	10.6	313	18.2	11.7	30.8	
9/12/2015 17:00	10.1	327	18.5	5.6	30.8	
9/12/2015 18:00	9.2	318	18.4	10	30.8	
9/12/2015 19:00	7.1	338	17.8	14.1	30.8	
9/12/2015 20:00	2.8	324	16.1	58.7	30.8	
9/12/2015 21:00	0.9	166	14.8	72	30.8	
9/12/2015 22:00	1.7	172	14.3	76.6	30.8	
9/12/2015 23:00	2.3	183	13.2	85.9	30.8	
9/13/2015 0:00	3.4	192	12.9	88.8	30.8	
9/13/2015 1:00	2.5	176	12.4	92.7	30.8	
9/13/2015 2:00	1.8	178	11.8	94.2	30.8	
9/13/2015 3:00	2.2	178	11.4	95.3	30.8	
9/13/2015 4:00	3.8	200	11.2	94	30.8	
9/13/2015 5:00	1.9	177	10.4	94.2	30.8	
9/13/2015 6:00	1.6	185	9.9	96.2	30.8	
9/13/2015 7:00	2.3	180	9.9	95.6	30.8	
9/13/2015 8:00	3.3	185	11.1	89.7	30.8	
9/13/2015 9:00	3.3	196	13.2	83.7	30.8	
9/13/2015 10:00	3.3	184	16	74.3	30.8	
9/13/2015 11:00	5.2	207	18.1	58.7	30.8	
9/13/2015 12:00	4.5	201	20.3	14.3	30.8	
9/13/2015 13:00	5.4	203	21	1.5	30.8	
9/13/2015 14:00	5.5	193	21.8	26.2	30.8	
9/13/2015 15:00	5.4	170	22.6	34.9	30.8	
9/13/2015 16:00	6	184	23	33.4	30.8	
9/13/2015 17:00	6.2	182	23.3	32.5	30.8	

Date Time	WS(MPH)	WD(DEG)	AT(C)	RH(%)	BP(InH)	Status
9/13/2015 18:00	5.7	160	23.4	32.3	30.8	
9/13/2015 19:00	5.1	160	22.8	10.9	30.8	
9/13/2015 20:00	2.9	141	20.7	39.2	30.8	
9/13/2015 21:00	2.9	132	19.2	19.4	30.8	
9/13/2015 22:00	3.6	129	18.6	38.3	30.8	
9/13/2015 23:00	3.9	133	18.1	57.2	30.8	
9/14/2015 0:00	4.5	143	17.6	60.8	30.8	
9/14/2015 1:00	5.6	156	17.3	63.6	30.8	
9/14/2015 2:00	5.8	154	17.1	38.2	30.8	
9/14/2015 3:00	4.8	149	16.5	67.5	30.8	
9/14/2015 4:00	3.7	148	16	69.6	30.8	
9/14/2015 5:00	4.2	148	15.5	71.4	30.8	
9/14/2015 6:00	4.7	152	15.4	72	30.8	
9/14/2015 7:00	4.6	152	15.3	72.8	30.8	
9/14/2015 8:00	4.8	154	15.9	30.5	30.8	
9/14/2015 9:00	5.4	148	17.7	19.1	30.8	
9/14/2015 10:00	7.2	165	20.2	1.5	30.8	
9/14/2015 11:00	7.5	161	22.1	5.6	30.8	
9/14/2015 12:00	7.2	151	24.2	46.2	30.8	
9/14/2015 13:00	7.8	149	25.6	44.1	30.8	
9/14/2015 14:00	7.2	143	26.9	7.9	30.8	
9/14/2015 15:00	7.1	144	27.9	1.6	30.8	
9/14/2015 16:00	7.1	144	28.1	1.5	30.8	
9/14/2015 17:00	8.4	146	27.8	1.5	30.8	
9/14/2015 18:00	8	145	26.8	1.5	30.8	
9/14/2015 19:00	7.3	143	25.5	1.5	30.8	
9/14/2015 20:00	5.5	142	24.1	1.5	30.8	
9/14/2015 21:00	5.9	142	23.2	1.5	30.8	
9/14/2015 22:00	4.8	141	22.3	1.5	30.8	
9/14/2015 23:00	4.7	145	21.6	3.9	30.8	
9/15/2015 0:00	4	138	20.9	60.3	30.8	
9/15/2015 1:00	3.6	134	20.2	22.3	30.8	
9/15/2015 2:00	3.7	134	19.8	1.5	30.8	
9/15/2015 3:00	3.8	139	19.3	1.5	30.9	
9/15/2015 4:00	3.8	140	18.7	1.5	30.9	
9/15/2015 5:00	2.6	134	18	58.8	30.8	
9/15/2015 6:00	2.6	148	17.7	50.9	30.8	
9/15/2015 7:00	3.3	143	17.2	73.7	30.9	
9/15/2015 8:00	3.6	140	17.8	62.3	30.9	
9/15/2015 9:00	5.3	147	19.5	17.3	30.9	
9/15/2015 10:00	6.1	160	21.8	29.8	30.9	
9/15/2015 11:00	7.1	152	23.8	1.5	30.9	
9/15/2015 12:00	7.5	148	25.7	1.6	30.9	
9/15/2015 13:00	7.1	146	27	1.6	30.9	
9/15/2015 14:00	7.1	144	27.8	1.6	30.9	
9/15/2015 15:00	7.2	141	28.3	1.6	30.8	

Date Time	WS(MPH)	WD(DEG)	AT(C)	RH(%)	BP(InH)	Status
9/15/2015 16:00	8.8	150	28.5	12.8	30.8	
9/15/2015 17:00	8.6	146	28.6	1.5	30.8	
9/15/2015 18:00	6.2	133	28.2	1.5	30.8	
9/15/2015 19:00	5.6	134	26.9	1.5	30.8	
9/15/2015 20:00	4.3	133	24.8	24.2	30.8	
9/15/2015 21:00	3.2	134	23.5	1.7	30.8	
9/15/2015 22:00	2.2	118	22.3	1.5	30.8	
9/15/2015 23:00	2.8	130	21.6	1.5	30.9	
9/16/2015 0:00	3.9	136	21.4	14.1	30.9	
9/16/2015 1:00	3.6	132	20.7	43.9	30.9	
9/16/2015 2:00	3.3	132	20.2	56.9	30.9	
9/16/2015 3:00	2.7	140	19.3	1.5	30.9	
9/16/2015 4:00	2.7	134	18.7	26.3	30.8	
9/16/2015 5:00	3.1	140	18.4	72.1	30.9	
9/16/2015 6:00	2.4	136	18	74.6	30.8	
9/16/2015 7:00	2.4	132	17.8	76	30.9	
9/16/2015 8:00	2.1	130	18.7	33.8	30.9	
9/16/2015 9:00	5	145	20.6	1.5	30.9	
9/16/2015 10:00	6.7	148	22.5	1.5	30.9	
9/16/2015 11:00	6.1	151	24.9	1.6	30.9	
9/16/2015 12:00	6.4	143	26.8	1.6	30.9	
9/16/2015 13:00	6	146	28.2	1.6	30.9	
9/16/2015 14:00	4.9	126	29.7	1.6	30.8	
9/16/2015 15:00	5.8	129	30.5	1.6	30.8	
9/16/2015 16:00	7.2	140	30.5	1.6	30.8	
9/16/2015 17:00	7.9	145	30.3	1.6	30.8	
9/16/2015 18:00	5.7	132	30	1.5	30.8	
9/16/2015 19:00	4.9	132	28.7	1.5	30.8	
9/16/2015 20:00	4.1	131	26.7	1.5	30.8	
9/16/2015 21:00	3.8	129	25.5	30.8	30.8	
9/16/2015 22:00	3.7	129	24.8	62.3	30.8	
9/16/2015 23:00	4	131	24.1	64.1	30.8	
9/17/2015 0:00	4.9	141	23.6	53.1	30.8	
9/17/2015 1:00	4.8	140	23.2	1.5	30.8	
9/17/2015 2:00	4.8	141	22.8	1.5	30.8	
9/17/2015 3:00	4.7	144	22.3	1.5	30.8	
9/17/2015 4:00	5.1	147	22	1.5	30.8	
9/17/2015 5:00	4.7	146	21.6	60.3	30.8	
9/17/2015 6:00	5.9	152	21.5	69.5	30.8	
9/17/2015 7:00	6.5	151	21.3	71	30.8	
9/17/2015 8:00	6.7	150	21.6	23.2	30.8	
9/17/2015 9:00	6.5	153	22.7	1.5	30.8	
9/17/2015 10:00	7.4	161	24.5	1.5	30.8	
9/17/2015 11:00	7.9	164	26.9	1.6	30.8	
9/17/2015 12:00	8.8	164	28.9	1.6	30.8	
9/17/2015 13:00	9.1	172	30.3	1.6	30.8	

Date Time	WS(MPH)	WD(DEG)	AT(C)	RH(%)	BP(InH)	Status
9/17/2015 14:00	9.2	172	31.6	24.4	30.8	
9/17/2015 15:00	8.7	169	32.1	1.6	30.7	
9/17/2015 16:00	8	157	32	1.6	30.8	
9/17/2015 17:00	6.5	139	32.2	1.6	30.7	
9/17/2015 18:00	8.2	142	31.6	1.6	30.7	
9/17/2015 19:00	7.6	139	30.3	1.5	30.7	
9/17/2015 20:00	7.3	138	28.8	1.5	30.7	
9/17/2015 21:00	7.9	142	27.8	1.5	30.7	
9/17/2015 22:00	7.4	146	27	1.5	30.8	
9/17/2015 23:00	6.3	149	26.4	1.5	30.7	
9/18/2015 0:00	6.8	153	26	1.5	30.7	
9/18/2015 1:00	8	171	25.8	1.5	30.8	
9/18/2015 2:00	7.5	164	25.7	1.5	30.7	
9/18/2015 3:00	6.6	163	25.5	1.5	30.7	
9/18/2015 4:00	6.2	176	25.2	1.5	30.7	
9/18/2015 5:00	6.2	171	24.8	1.5	30.7	
9/18/2015 6:00	6.3	163	24.8	1.5	30.7	
9/18/2015 7:00	7.1	168	24.6	1.5	30.7	
9/18/2015 8:00	7.4	174	24.9	1.5	30.7	
9/18/2015 9:00	7.4	179	24.8	1.5	30.7	
9/18/2015 10:00	6.7	178	25.4	1.5	30.7	
9/18/2015 11:00	6.1	178	26.8	1.5	30.8	
9/18/2015 12:00	7.5	182	29.6	1.6	30.7	
9/18/2015 13:00	7.7	206	30.6	1.6	30.7	
9/18/2015 14:00	6	182	31.7	1.6	30.7	
9/18/2015 15:00	6.2	177	31.9	1.6	30.7	
9/18/2015 16:00	7.7	188	32.1	1.6	30.7	
9/18/2015 17:00	8.6	204	31.5	1.6	30.7	
9/18/2015 18:00	7.2	175	30.9	1.5	30.7	
9/18/2015 19:00	8.5	174	30.6	1.5	30.7	
9/18/2015 20:00	7	172	29.6	1.5	30.7	
9/18/2015 21:00	7.1	169	28.9	1.5	30.7	
9/18/2015 22:00	7	178	28.2	1.5	30.7	
9/18/2015 23:00	6.8	180	27.6	1.5	30.7	
9/19/2015 0:00	7.2	191	27.1	1.5	30.7	
9/19/2015 1:00	8.1	196	26.6	1.5	30.7	
9/19/2015 2:00	9.3	234	26.1	1.5	30.7	
9/19/2015 3:00	12.1	274	23.7	44.4	30.7	
9/19/2015 4:00	10.9	292	20	1.5	30.7	
9/19/2015 5:00	9.2	301	19.2	1.5	30.8	
9/19/2015 6:00	9.4	305	18.8	1.5	30.8	
9/19/2015 7:00	8.1	304	17.8	73.9	30.8	
9/19/2015 8:00	7.6	300	17.5	56.3	30.8	
9/19/2015 9:00	10.6	301	17.3	47.8	30.8	
9/19/2015 10:00	10.7	306	17.2	27.7	30.8	
9/19/2015 11:00	9.8	309	17.5	9.8	30.8	

Date Time	WS(MPH)	WD(DEG)	AT(C)	RH(%)	BP(InH)	Status
9/19/2015 12:00	9.2	308	19.2	7.1	30.8	
9/19/2015 13:00	8.9	326	20.6	1.5	30.8	
9/19/2015 14:00	8.5	305	21.6	1.5	30.8	
9/19/2015 15:00	8.8	311	22.4	1.5	30.8	
9/19/2015 16:00	8.5	319	22.9	1.5	30.8	
9/19/2015 17:00	9.3	328	22.9	1.5	30.8	
9/19/2015 18:00	9.6	332	22.4	1.5	30.8	
9/19/2015 19:00	8	333	21.5	28	30.8	
9/19/2015 20:00	2.9	358	19.5	50.8	30.8	
9/19/2015 21:00	1.8	22	17.9	29.4	30.8	
9/19/2015 22:00	1.6	4	16.7	75.3	30.9	
9/19/2015 23:00	1.2	27	15.7	82.5	30.8	
9/20/2015 0:00	1.3	36	14.9	88.1	30.8	
9/20/2015 1:00	1	59	14.4	91.3	30.8	
9/20/2015 2:00	1.1	56	13.9	93.1	30.8	
9/20/2015 3:00	1.2	44	13.6	95.3	30.8	
9/20/2015 4:00	1.3	318	13.3	94.9	30.8	
9/20/2015 5:00	1.4	350	13.3	88.7	30.8	
9/20/2015 6:00	1.8	334	12.5	92.5	30.9	
9/20/2015 7:00	1.5	20	12.1	89.8	30.8	
9/20/2015 8:00	1.9	326	13.5	72.3	30.9	
9/20/2015 9:00	2.5	2	16.4	44.9	30.9	
9/20/2015 10:00	4.6	64	18.8	12.2	30.9	
9/20/2015 11:00	6.2	64	20.2	1.5	30.8	
9/20/2015 12:00	6.1	59	20.8	1.5	30.9	
9/20/2015 13:00	4.3	74	22	1.5	30.8	
9/20/2015 14:00	4.2	346	22.8	1.5	30.8	
9/20/2015 15:00	3.3	72	23.7	2.5	30.8	
9/20/2015 16:00	4	55	24.2	1.5	30.8	
9/20/2015 17:00	5	10	23.7	1.5	30.8	
9/20/2015 18:00	3.7	57	24	1.5	30.8	
9/20/2015 19:00	2.9	91	22.3	1.5	30.8	
9/20/2015 20:00	2.1	131	20.6	9.4	30.8	
9/20/2015 21:00	1.2	170	19.1	20.7	30.8	
9/20/2015 22:00	1.3	173	17.9	50.7	30.8	
9/20/2015 23:00	2.9	192	17.1	73.4	30.8	
9/21/2015 0:00	1.5	164	16.1	79.3	30.8	
9/21/2015 1:00	1	144	15.4	81.6	30.8	
9/21/2015 2:00	1.2	35	14.4	86.2	30.8	
9/21/2015 3:00	1.3	131	13.8	89	30.8	
9/21/2015 4:00	1.1	167	13.6	90.9	30.8	
9/21/2015 5:00	1.2	69	13	93.9	30.8	
9/21/2015 6:00	1.1	156	12.9	93.1	30.8	
9/21/2015 7:00	1.4	190	12.5	97.5	30.8	
9/21/2015 8:00	1.1	180	13.9	83.2	30.8	
9/21/2015 9:00	1.9	0	17.1	23.3	30.8	

Date Time	WS(MPH)	WD(DEG)	AT(C)	RH(%)	BP(InH)	Status
9/21/2015 10:00	2.3	360	19.9	1.5	30.8	
9/21/2015 11:00	3.4	108	21.9	1.5	30.8	
9/21/2015 12:00	4.1	148	23.6	1.6	30.8	
9/21/2015 13:00	4.5	152	24.2	1.6	30.8	
9/21/2015 14:00	4.7	138	25	1.5	30.8	
9/21/2015 15:00	4.9	89	25.8	1.5	30.8	
9/21/2015 16:00	4.9	98	26.3	1.5	30.8	
9/21/2015 17:00	4.8	95	26.4	1.5	30.8	
9/21/2015 18:00	3.2	121	26.7	1.5	30.8	
9/21/2015 19:00	2.7	131	25.2	1.5	30.8	
9/21/2015 20:00	2.1	128	22.6	1.5	30.8	
9/21/2015 21:00	2.1	99	21.2	1.5	30.8	
9/21/2015 22:00	1.5	102	20.2	1.5	30.8	
9/21/2015 23:00	1.6	99	19.5	1.5	30.8	
9/22/2015 0:00	1.3	117	18.7	9.1	30.8	
9/22/2015 1:00	1.5	137	18	7	30.8	
9/22/2015 2:00	1.3	252	17.2	15.1	30.8	
9/22/2015 3:00	1.1	72	15.4	84.9	30.8	
9/22/2015 4:00	1.2	71	15	85.5	30.8	
9/22/2015 5:00	1	81	14.5	87.5	30.8	
9/22/2015 6:00	1.3	103	15.3	80	30.8	
9/22/2015 7:00	0.8	120	15	85.3	30.8	
9/22/2015 8:00	1.1	45	16.2	50.2	30.9	
9/22/2015 9:00	1.6	359	19.8	1.5	30.9	
9/22/2015 10:00	2.9	136	22.8	1.5	30.8	
9/22/2015 11:00	4.1	150	24.7	1.6	30.8	
9/22/2015 12:00	3.1	196	26.2	1.6	30.8	
9/22/2015 13:00	3.5	114	27.4	1.6	30.9	
9/22/2015 14:00	4.5	53	27.3	1.6	30.8	
9/22/2015 15:00	4.4	70	28.1	1.6	30.8	
9/22/2015 16:00	4	104	28.7	1.5	30.8	
9/22/2015 17:00	3.3	89	29.1	1.5	30.8	
9/22/2015 18:00	3.1	83	28.7	1.5	30.8	
9/22/2015 19:00	2.5	76	26.7	1.5	30.8	
9/22/2015 20:00	1.9	62	24	4.1	30.8	
9/22/2015 21:00	1.6	100	22.8	6.5	30.8	
9/22/2015 22:00	1.9	68	22	1.5	30.8	
9/22/2015 23:00	1.7	36	19.6	1.5	30.9	
9/23/2015 0:00	1.5	14	18.3	1.5	30.8	
9/23/2015 1:00	1.4	46	17.6	1.5	30.9	
9/23/2015 2:00	0.9	124	17.4	1.5	30.9	
9/23/2015 3:00	1	177	17.2	1.5	30.8	
9/23/2015 4:00	0.9	159	16.9	14.4	30.8	
9/23/2015 5:00	1.4	25	16.2	89	30.8	
9/23/2015 6:00	1.3	43	15.3	93.1	30.9	
9/23/2015 7:00	1	69	15	92.7	30.8	

Date Time	WS(MPH)	WD(DEG)	AT(C)	RH(%)	BP(InH)	Status
9/23/2015 8:00	2.3	21	15.8	69.6	30.9	
9/23/2015 9:00	2.3	359	19	20.3	30.9	
9/23/2015 10:00	3.3	46	22.4	11.9	30.9	
9/23/2015 11:00	2.8	84	25.4	1.6	30.9	
9/23/2015 12:00	3.1	71	28.2	1.6	30.9	
9/23/2015 13:00	4.5	69	28.7	1.6	30.9	
9/23/2015 14:00	4.5	81	29.1	1.6	30.8	
9/23/2015 15:00	5.1	50	29.3	1.6	30.8	
9/23/2015 16:00	3.6	105	30.1	1.6	30.8	
9/23/2015 17:00	4.8	58	29.6	1.6	30.8	
9/23/2015 18:00	4.2	54	28.8	1.5	30.8	
9/23/2015 19:00	2.3	57	26.5	1.5	30.8	
9/23/2015 20:00	2.1	62	24.5	8.5	30.8	
9/23/2015 21:00	2.2	85	23.7	1.5	30.9	
9/23/2015 22:00	0.7	76	22	4.2	30.8	
9/23/2015 23:00	1.9	23	20.2	9.1	30.8	
9/24/2015 0:00	1.5	359	19.2	1.5	30.9	
9/24/2015 1:00	1.5	29	18.5	48	30.8	
9/24/2015 2:00	1.3	349	17.9	12.2	30.9	
9/24/2015 3:00	1.3	30	17.5	17.5	30.9	
9/24/2015 4:00	1.4	359	16.6	87.1	30.8	
9/24/2015 5:00	1.3	35	16.1	89.8	30.8	
9/24/2015 6:00	1.3	33	15.6	91.8	30.8	
9/24/2015 7:00	1.4	37	15.1	94.2	30.9	
9/24/2015 8:00	1.8	16	15.8	44.7	30.8	
9/24/2015 9:00	2.6	353	18	1.5	30.9	
9/24/2015 10:00	3.2	347	19.5	1.5	30.9	
9/24/2015 11:00	2.9	1	22.7	6.7	30.9	
9/24/2015 12:00	3.8	353	25	4.1	30.8	
9/24/2015 13:00	3.8	347	27.1	7.5	30.8	
9/24/2015 14:00	4.6	47	28.2	1.6	30.9	
9/24/2015 15:00	4	358	28.6	1.6	30.8	
9/24/2015 16:00	5.9	9	28.8	1.6	30.8	
9/24/2015 17:00	4.3	2	29.2	1.6	30.9	
9/24/2015 18:00	5.5	10	28.4	1.5	30.8	
9/24/2015 19:00	3.3	22	26.8	1.5	30.8	
9/24/2015 20:00	1.8	47	24.1	1.5	30.8	
9/24/2015 21:00	1.3	87	22.5	1.5	30.8	
9/24/2015 22:00	1.4	27	20.8	9.6	30.8	
9/24/2015 23:00	1.5	33	18.7	1.5	30.8	
9/25/2015 0:00	1.4	35	17.5	59.4	30.9	
9/25/2015 1:00	0.9	172	17	80.2	30.8	
9/25/2015 2:00	0.8	69	16.4	94.8	30.8	
9/25/2015 3:00	1.3	32	16.1	68.7	30.8	
9/25/2015 4:00	0.9	22	15.3	96.2	30.8	
9/25/2015 5:00	1.4	23	15	96.1	30.8	

Date Time	WS(MPH)	WD(DEG)	AT(C)	RH(%)	BP(InH)	Status
9/25/2015 6:00	1.7	7	14.9	39.6	30.8	
9/25/2015 7:00	1.7	354	15	1.4	30.9	
9/25/2015 8:00	2.7	343	15.6	1.5	30.9	
9/25/2015 9:00	4	346	17.6	1.5	30.8	
9/25/2015 10:00	3.5	358	20.1	4.3	30.8	
9/25/2015 11:00	4.5	355	22.8	1.6	30.8	
9/25/2015 12:00	6.1	342	25.7	5.3	30.8	
9/25/2015 13:00	7.5	11	27.3	2.7	30.8	
9/25/2015 14:00	7.1	12	28.2	1.6	30.8	
9/25/2015 15:00	7.7	11	28.6	1.6	30.8	
9/25/2015 16:00	6.8	358	29.2	1.6	30.8	
9/25/2015 17:00	5.2	17	29.5	1.6	30.8	
9/25/2015 18:00	4.9	30	29.4	1.5	30.8	
9/25/2015 19:00	3.8	33	27.6	1.5	30.8	
9/25/2015 20:00	2.6	44	24.9	1.5	30.8	
9/25/2015 21:00	2.3	2	22.7	1.5	30.8	
9/25/2015 22:00	2	13	20	7.8	30.8	
9/25/2015 23:00	1.8	357	19	1.5	30.8	
9/26/2015 0:00	1.9	350	18.5	17.7	30.8	
9/26/2015 1:00	3.6	43	19.9	1.5	30.8	
9/26/2015 2:00	2.8	27	19.4	1.5	30.8	
9/26/2015 3:00	1.7	15	17.4	26.6	30.9	
9/26/2015 4:00	2.3	11	17	40.7	30.9	
9/26/2015 5:00	2.7	4	16.2	55.3	30.9	
9/26/2015 6:00	2.9	8	15.7	84.1	30.8	
9/26/2015 7:00	3.1	7	15.4	72.1	30.9	
9/26/2015 8:00	3	6	16.3	37.9	30.8	
9/26/2015 9:00	5.7	39	18.8	1.5	30.8	
9/26/2015 10:00	6.7	49	20.3	1.5	30.8	
9/26/2015 11:00	7.2	46	21.2	1.5	30.8	
9/26/2015 12:00	7.1	35	22.2	1.5	30.8	
9/26/2015 13:00	7.4	44	23.6	1.5	30.8	
9/26/2015 14:00	6.7	48	23.9	3.9	30.8	
9/26/2015 15:00	6.5	69	24.2	1.5	30.8	
9/26/2015 16:00	5.9	83	24	1.5	30.8	
9/26/2015 17:00	5.3	79	23.5	1.5	30.8	
9/26/2015 18:00	4.7	72	23.6	1.5	30.8	
9/26/2015 19:00	4.3	81	23.1	1.5	30.8	
9/26/2015 20:00	3.2	73	22.8	1.5	30.8	
9/26/2015 21:00	2.5	70	22.7	1.5	30.8	
9/26/2015 22:00	3	75	22.5	1.5	30.8	
9/26/2015 23:00	3.4	36	21.9	8.1	30.8	
9/27/2015 0:00	2.1	41	20.9	1.5	30.8	
9/27/2015 1:00	2.2	21	20	6.4	30.8	
9/27/2015 2:00	1.7	7	19.5	1.5	30.8	
9/27/2015 3:00	1.8	69	20.2	1.5	30.8	

Date Time	WS(MPH)	WD(DEG)	AT(C)	RH(%)	BP(InH)	Status
9/27/2015 4:00	2.2	17	20.1	1.5	30.8	
9/27/2015 5:00	2.8	49	19.7	1.5	30.8	
9/27/2015 6:00	4.2	79	19.7	1.5	30.8	
9/27/2015 7:00	4.1	88	19.7	1.5	30.8	
9/27/2015 8:00	3.6	92	19.8	1.5	30.8	
9/27/2015 9:00	3.1	65	20.3	1.5	30.8	
9/27/2015 10:00	4	78	20.8	1.5	30.8	
9/27/2015 11:00	4.3	76	21.9	1.5	30.8	
9/27/2015 12:00	3.9	82	23.6	32.6	30.8	
9/27/2015 13:00	3.6	78	24.1	4.6	30.8	
9/27/2015 14:00	3.8	90	24.6	1.5	30.8	
9/27/2015 15:00	4.1	76	24.5	1.5	30.8	
9/27/2015 16:00	5	88	24.7	1.5	30.8	
9/27/2015 17:00	4.1	95	24.5	1.5	30.8	
9/27/2015 18:00	3.5	111	24.3	1.5	30.8	
9/27/2015 19:00	2.4	112	24	1.5	30.8	
9/27/2015 20:00	2.3	106	23.1	1.5	30.8	
9/27/2015 21:00	2.3	110	23	1.5	30.8	
9/27/2015 22:00	2.5	112	22.8	1.5	30.8	
9/27/2015 23:00	3	115	22.6	1.5	30.8	
9/28/2015 0:00	3.2	132	22.4	1.5	30.8	
9/28/2015 1:00	3.3	136	21.9	1.5	30.8	
9/28/2015 2:00	3.2	146	21.1	1.5	30.8	
9/28/2015 3:00	1.8	120	20.3	1.5	30.8	
9/28/2015 4:00	1.1	126	19.8	1.5	30.8	
9/28/2015 5:00	1.4	134	19.4	1.5	30.8	
9/28/2015 6:00	1.7	76	19.1	1.5	30.8	
9/28/2015 7:00	2.8	97	19.2	1.5	30.8	
9/28/2015 8:00	2	45	19.6	1.5	30.8	
9/28/2015 9:00	2.5	30	20.9	1.5	30.8	
9/28/2015 10:00	2.3	130	23.5	1.5	30.8	
9/28/2015 11:00	2.8	233	24.7	1.5	30.8	
9/28/2015 12:00	3.8	227	25.5	1.6	30.8	
9/28/2015 13:00	4	213	26.3	1.6	30.8	
9/28/2015 14:00	2.7	203	26.3	1.5	30.8	
9/28/2015 15:00	3.3	115	27.5	1.5	30.8	
9/28/2015 16:00	3.5	128	28.7	1.6	30.8	
9/28/2015 17:00	4.6	164	28.2	1.5	30.7	
9/28/2015 18:00	4.7	149	27.5	1.5	30.7	
9/28/2015 19:00	3.9	142	26.5	1.5	30.7	
9/28/2015 20:00	3.4	141	25.4	1.5	30.7	
9/28/2015 21:00	1.8	120	24.2	1.5	30.8	
9/28/2015 22:00	1.2	50	23.1	1.5	30.8	
9/28/2015 23:00	1.6	71	21.9	1.5	30.8	
9/29/2015 0:00	3.9	141	23.4	1.5	30.8	
9/29/2015 1:00	4.1	170	23.3	12.5	30.8	

Date Time	WS(MPH)	WD(DEG)	AT(C)	RH(%)	BP(InH)	Status
9/29/2015 2:00	4.7	177	22.6	1.5	30.8	
9/29/2015 3:00	3.6	184	21.9	1.5	30.8	
9/29/2015 4:00	2.6	204	21.6	1.5	30.7	
9/29/2015 5:00	2.7	221	21.3	1.5	30.7	
9/29/2015 6:00	2	218	21.2	1.5	30.8	
9/29/2015 7:00	1.2	99	21.1	1.5	30.8	
9/29/2015 8:00	1.9	253	21.3	1.5	30.7	
9/29/2015 9:00	3.5	228	21.5	1.5	30.8	
9/29/2015 10:00	4.1	276	21.5	1.5	30.8	
9/29/2015 11:00	3.3	324	22.8	1.5	30.7	
9/29/2015 12:00	4.4	342	23.7	1.5	30.8	
9/29/2015 13:00	6	3	25.2	1.5	30.7	
9/29/2015 14:00	5.2	42	25.2	1.5	30.8	
9/29/2015 15:00	4.9	33	25.5	1.5	30.8	
9/29/2015 16:00	4.3	26	25.8	1.5	30.8	
9/29/2015 17:00	5.3	59	25.3	9.1	30.8	
9/29/2015 18:00	7.3	305	21.4	54	30.8	
9/29/2015 19:00	6.9	346	19.6	55.7	30.8	
9/29/2015 20:00	7	5	19.2	93.1	30.8	
9/29/2015 21:00	6.5	346	19.3	89.4	30.8	
9/29/2015 22:00	10	349	18.4	2.3	30.8	
9/29/2015 23:00	8.2	357	17.5	1.5	30.8	
9/30/2015 0:00	8.1	1	17.2	1.5	30.8	
9/30/2015 1:00	7.5	358	17	1.5	30.8	
9/30/2015 2:00	7.4	355	16.7	1.5	30.8	
9/30/2015 3:00	7.5	358	16.3	1.5	30.8	
9/30/2015 4:00	8.5	355	15.7	25.9	30.8	
9/30/2015 5:00	8.5	350	14.9	41.1	30.8	
9/30/2015 6:00	8	349	14.6	1.4	30.8	
9/30/2015 7:00	9.9	338	14	32.3	30.8	
9/30/2015 8:00	9.3	346	13.3	81.4	30.8	
9/30/2015 9:00	9.3	345	13.2	82	30.8	
9/30/2015 10:00	10	355	14	45.3	30.8	
9/30/2015 11:00	9.3	352	15.5	15.7	30.9	
9/30/2015 12:00	9.6	347	17.1	1.5	30.8	
9/30/2015 13:00	10.5	338	18.5	1.5	30.8	
9/30/2015 14:00	10.9	341	19.8	7.7	30.8	
9/30/2015 15:00	12	334	20.6	1.5	30.8	
9/30/2015 16:00	11	339	21.3	1.5	30.8	
9/30/2015 17:00	11.1	342	21.6	1.5	30.8	
9/30/2015 18:00	9.9	342	21.4	13.2	30.8	
9/30/2015 19:00	6.2	344	20	2.6	30.8	
9/30/2015 20:00	4.6	338	17.7	1.5	30.8	
9/30/2015 21:00	4.8	350	16.3	1.5	30.8	
9/30/2015 22:00	4.3	4	15.1	1.4	30.8	
9/30/2015 23:00	6.2	6	14.6	1.4	30.8	

Date Time	WS(MPH)	WD(DEG)	AT(C)	RH(%)	BP(InH)	Status
10/1/2015 0:00	7.1	9	13.8	44.4	30.9	
10/1/2015 1:00	6.1	3	12.8	69.3	30.8	
10/1/2015 2:00	6.4	355	11.8	75	30.9	
10/1/2015 3:00	7.1	348	10.6	78.6	30.8	
10/1/2015 4:00	5.2	349	10	81.2	30.8	
10/1/2015 5:00	6	345	9.6	84.1	30.8	
10/1/2015 6:00	6.6	342	9.3	85.9	30.9	
10/1/2015 7:00	7.7	338	9.1	86.7	30.9	
10/1/2015 8:00	7.3	345	9	87	30.9	
10/1/2015 9:00	10	350	10	82.7	30.9	
10/1/2015 10:00	9.6	359	11.4	76.5	30.9	
10/1/2015 11:00	10.3	351	13.2	71	30.9	
10/1/2015 12:00	10.1	352	15.8	56.8	30.9	
10/1/2015 13:00	11.5	353	17.4	27.7	30.9	
10/1/2015 14:00	10.9	348	18	7.6	30.9	
10/1/2015 15:00	10.3	343	18.9	23.8	30.8	
10/1/2015 16:00	11.8	347	19.3	26.9	30.9	
10/1/2015 17:00	10.4	357	19.9	23.4	30.9	
10/1/2015 18:00	10.4	357	19.6	12.1	30.8	
10/1/2015 19:00	7.8	2	18.3	3.9	30.9	
10/1/2015 20:00	7.8	4	16.7	41.9	30.9	
10/1/2015 21:00	7.5	6	15.4	52.3	30.9	
10/1/2015 22:00	8.6	4	14.3	56.4	30.9	
10/1/2015 23:00	8.5	5	13.2	62	30.9	
10/2/2015 0:00	7.6	1	12.3	68	30.9	
10/2/2015 1:00	7.1	356	11.6	73.5	30.9	
10/2/2015 2:00	7.5	349	10.4	78.5	30.9	
10/2/2015 3:00	7	351	9.6	83.1	30.9	
10/2/2015 4:00	7	351	9.2	84.8	30.9	
10/2/2015 5:00	7.7	358	9	84.6	30.9	
10/2/2015 6:00	7.4	353	8.7	84.8	30.9	
10/2/2015 7:00	7.3	353	8.4	86.3	30.9	
10/2/2015 8:00	6.8	356	8.2	86.2	30.9	
10/2/2015 9:00	10.2	348	8.7	83.4	30.9	
10/2/2015 10:00	10.6	348	9.4	81.1	30.9	
10/2/2015 11:00	11.8	346	10.6	76.8	30.9	
10/2/2015 12:00	11.4	344	12.4	65.9	30.9	
10/2/2015 13:00	12	350	15.2	58.6	30.9	
10/2/2015 14:00	12.2	347	17.4	24.9	30.8	
10/2/2015 15:00	12.7	356	19	2.9	30.8	
10/2/2015 16:00	13.3	358	19.7	1.5	30.8	
10/2/2015 17:00	11.9	5	20.1	1.5	30.8	
10/2/2015 18:00	9.5	11	19.6	4.9	30.8	
10/2/2015 19:00	7.3	5	18.6	1.5	30.8	
10/2/2015 20:00	6	7	17.2	1.5	30.8	
10/2/2015 21:00	6.8	8	16.1	1.5	30.8	

Date Time	WS(MPH)	WD(DEG)	AT(C)	RH(%)	BP(InH)	Status
10/2/2015 22:00	8.9	2	15.1	40.6	30.8	
10/2/2015 23:00	7.6	4	13.7	56.2	30.8	
10/3/2015 0:00	6.5	2	12.4	61.6	30.8	
10/3/2015 1:00	5.5	355	11.2	68.1	30.8	
10/3/2015 2:00	4.3	356	10.2	72.9	30.8	
10/3/2015 3:00	4.5	353	9.5	73	30.8	
10/3/2015 4:00	5.8	355	9.4	72.6	30.8	
10/3/2015 5:00	7.7	2	9.3	71.2	30.8	
10/3/2015 6:00	6.7	346	8.5	74.7	30.8	
10/3/2015 7:00	7.2	343	8.5	76.6	30.8	
10/3/2015 8:00	6	355	8.6	79	30.8	
10/3/2015 9:00	6.8	346	9.5	78.4	30.8	
10/3/2015 10:00	8.6	11	11.2	74.4	30.8	
10/3/2015 11:00	10.8	7	11.7	72.3	30.8	
10/3/2015 12:00	11.4	357	11.8	70	30.8	
10/3/2015 13:00	12.1	355	11.6	70.5	30.8	
10/3/2015 14:00	13.3	357	11.9	55.3	30.8	
10/3/2015 15:00	11.3	357	12.7	27	30.8	
10/3/2015 16:00	11.2	359	13.4	63.2	30.8	
10/3/2015 17:00	10.1	345	14	29.8	30.8	
10/3/2015 18:00	9.6	345	14.5	1.5	30.8	
10/3/2015 19:00	8.3	353	14.8	1.4	30.8	
10/3/2015 20:00	9.6	6	14.5	14.8	30.8	
10/3/2015 21:00	11.4	10	14	22.4	30.8	
10/3/2015 22:00	9.2	11	13.5	1.4	30.8	
10/3/2015 23:00	9.4	22	12.6	60	30.8	
10/4/2015 0:00	7.8	10	11.6	79.1	30.8	
10/4/2015 1:00	9.4	7	11.2	81.4	30.8	
10/4/2015 2:00	9.1	9	10.5	84.4	30.8	
10/4/2015 3:00	8.1	9	10.3	86.1	30.8	
10/4/2015 4:00	7.5	10	10.1	87.6	30.8	
10/4/2015 5:00	8.2	348	9.5	95.6	30.8	
10/4/2015 6:00	8.6	343	9.4	96.1	30.8	
10/4/2015 7:00	7.7	345	9.4	97.3	30.8	
10/4/2015 8:00	8	351	9.7	93.6	30.8	
10/4/2015 9:00	8.3	350	10	92	30.8	
10/4/2015 10:00	8.1	3	10.3	90.1	30.8	
10/4/2015 11:00	9	2	11	86.6	30.8	
10/4/2015 12:00	8.2	355	11.8	38.2	30.8	
10/4/2015 13:00	7.7	343	12.7	61.9	30.8	
10/4/2015 14:00	8.3	334	13.3	25.9	30.8	
10/4/2015 15:00	8.8	322	13.7	1.5	30.8	
10/4/2015 16:00	9.4	314	13.8	1.5	30.8	
10/4/2015 17:00	8.5	310	14	1.5	30.8	
10/4/2015 18:00	8.8	318	14.3	1.5	30.8	
10/4/2015 19:00	6.8	315	14.1	1.4	30.8	

Date Time	WS(MPH)	WD(DEG)	AT(C)	RH(%)	BP(InH)	Status
10/4/2015 20:00	6.3	314	13.9	1.4	30.8	
10/4/2015 21:00	4.2	323	13.3	1.4	30.8	
10/4/2015 22:00	4.1	312	13	1.4	30.8	
10/4/2015 23:00	3.2	317	13	1.4	30.8	
10/5/2015 0:00	2.8	310	12.7	1.4	30.8	
10/5/2015 1:00	3.2	329	12.7	1.4	30.8	
10/5/2015 2:00	3.5	330	12.4	1.4	30.8	
10/5/2015 3:00	4.1	332	12.5	1.4	30.8	
10/5/2015 4:00	4.5	333	12.4	1.4	30.8	
10/5/2015 5:00	4.7	340	12.2	1.4	30.8	
10/5/2015 6:00	4.3	346	11.9	1.4	30.8	
10/5/2015 7:00	3.9	346	11.7	1.4	30.8	
10/5/2015 8:00	4.2	348	11.9	1.4	30.8	
10/5/2015 9:00	6.8	345	12.6	1.4	30.8	
10/5/2015 10:00	6.8	344	13.3	1.5	30.8	
10/5/2015 11:00	5.9	346	14.4	5.1	30.8	
10/5/2015 12:00	5.3	342	15.7	62.6	30.8	
10/5/2015 13:00	6.1	321	17.7	29.9	30.8	
10/5/2015 14:00	7.5	306	18.9	62.8	30.8	
10/5/2015 15:00	6.6	298	19.5	70.6	30.8	
10/5/2015 16:00	6.9	304	20.6	64	30.8	
10/5/2015 17:00	5.8	317	21.5	46.1	30.8	
10/5/2015 18:00	5.8	310	20.7	1.5	30.8	
10/5/2015 19:00	4.8	323	20.1	1.5	30.8	
10/5/2015 20:00	4.2	308	19.3	1.5	30.8	
10/5/2015 21:00	3.9	308	18.7	1.5	30.8	
10/5/2015 22:00	1.9	327	17.9	1.5	30.8	
10/5/2015 23:00	1.1	304	17	1.5	30.8	
10/6/2015 0:00	1.2	1	16.7	1.5	30.8	
10/6/2015 1:00	1.5	325	16.4	1.5	30.8	
10/6/2015 2:00	2	352	16.1	1.5	30.8	
10/6/2015 3:00	1.6	2	15.7	1.5	30.8	
10/6/2015 4:00	1.3	169	15.5	1.5	30.8	
10/6/2015 5:00	2.3	300	15.8	1.5	30.8	
10/6/2015 6:00	2.8	316	15.7	1.5	30.8	
10/6/2015 7:00	2.9	331	15.8	1.5	30.8	
10/6/2015 8:00	2.5	358	15.8	1.5	30.8	
10/6/2015 9:00	4.4	345	16.2	1.5	30.9	
10/6/2015 10:00	4.7	355	18	1.5	30.8	
10/6/2015 11:00	5.1	333	18.8	1.5	30.9	
10/6/2015 12:00	6.4	319	20.6	51.7	30.8	
10/6/2015 13:00	7.6	333	21.9	18.5	30.8	
10/6/2015 14:00	7.8	332	22.6	5.2	30.8	
10/6/2015 15:00	7.3	344	23.5	29.3	30.8	
10/6/2015 16:00	7	321	24.1	4	30.8	
10/6/2015 17:00	6	310	24.1	1.5	30.8	

Date Time	WS(MPH)	WD(DEG)	AT(C)	RH(%)	BP(InH)	Status
10/6/2015 18:00	7.6	320	23.3	36	30.8	
10/6/2015 19:00	5.3	326	22	45.8	30.8	
10/6/2015 20:00	4	353	20.7	1.5	30.8	
10/6/2015 21:00	2.5	16	19.6	1.5	30.8	
10/6/2015 22:00	2.7	335	18.8	1.5	30.8	
10/6/2015 23:00	1.8	16	18	1.5	30.8	
10/7/2015 0:00	1.4	1	17.1	1.5	30.8	
10/7/2015 1:00	0.8	99	17	1.5	30.8	
10/7/2015 2:00	1.2	163	17.1	1.5	30.8	
10/7/2015 3:00	0.9	133	17.2	1.5	30.8	
10/7/2015 4:00	1.3	280	17.5	1.5	30.8	
10/7/2015 5:00	1	70	17.5	1.5	30.8	
10/7/2015 6:00	2	14	17.4	1.5	30.8	
10/7/2015 7:00	1.9	19	17.3	1.5	30.8	
10/7/2015 8:00	2	330	17.7	1.5	30.8	
10/7/2015 9:00	3.1	349	18.3	37.2	30.8	
10/7/2015 10:00	3.3	6	19.1	1.5	30.8	
10/7/2015 11:00	3.4	345	20	1.5	30.9	
10/7/2015 12:00	2.5	318	21.2	21.3	30.9	
10/7/2015 13:00	3.4	242	21.9	12.2	30.8	
10/7/2015 14:00	3.6	315	22.6	1.5	30.8	
10/7/2015 15:00	4.4	282	22.6	1.5	30.8	
10/7/2015 16:00	5	266	22.1	1.5	30.8	
10/7/2015 17:00	4.7	245	22.3	1.5	30.8	
10/7/2015 18:00	4.5	232	22.3	1.5	30.8	
10/7/2015 19:00	1.9	214	20.8	1.5	30.8	
10/7/2015 20:00	2.6	188	19.6	1.5	30.9	
10/7/2015 21:00	3.2	192	19	1.5	30.8	
10/7/2015 22:00	3.6	193	18.4	1.5	30.8	
10/7/2015 23:00	3.2	191	17.8	1.5	30.8	
10/8/2015 0:00	1.2	174	17.2	1.5	30.8	
10/8/2015 1:00	1.4	15	16.4	1.5	30.8	
10/8/2015 2:00	0.7	45	15.4	1.4	30.8	
10/8/2015 3:00	1.7	141	15.3	1.4	30.8	
10/8/2015 4:00	3.2	189	15.2	1.5	30.8	
10/8/2015 5:00	2.8	198	14.9	1.4	30.8	
10/8/2015 6:00	2.2	194	14.4	94.7	30.8	
10/8/2015 7:00	1.7	202	14.2	100.9	30.8	
10/8/2015 8:00	2.2	174	14.7	57.8	30.8	
10/8/2015 9:00	4.5	179	16.6	1.5	30.8	
10/8/2015 10:00	8.1	198	18.5	1.5	30.8	
10/8/2015 11:00	7.7	206	20.7	1.5	30.8	
10/8/2015 12:00	6.9	205	23.1	1.6	30.8	
10/8/2015 13:00	7.9	202	25	20.6	30.8	
10/8/2015 14:00	9.6	211	26.1	1.6	30.8	
10/8/2015 15:00	9.7	229	27	1.6	30.8	

Date Time	WS(MPH)	WD(DEG)	AT(C)	RH(%)	BP(InH)	Status
10/8/2015 16:00	7.4	232	27.5	1.5	30.8	
10/8/2015 17:00	5.6	230	27.5	1.5	30.8	
10/8/2015 18:00	6.2	204	27.7	1.5	30.8	
10/8/2015 19:00	3.7	183	26.3	1.5	30.8	
10/8/2015 20:00	2.1	169	24.5	1.5	30.8	
10/8/2015 21:00	2.5	169	23.1	39.1	30.8	
10/8/2015 22:00	3.1	188	22.2	11.6	30.8	
10/8/2015 23:00	4.2	196	21.4	1.5	30.8	
10/9/2015 0:00	4.2	180	21	1.5	30.8	
10/9/2015 1:00	2.7	216	21	1.5	30.8	
10/9/2015 2:00	5.8	279	21.2	1.5	30.8	
10/9/2015 3:00	6.3	274	20.6	1.5	30.8	
10/9/2015 4:00	6	308	19.8	1.5	30.8	
10/9/2015 5:00	6.7	301	18.9	1.5	30.8	
10/9/2015 6:00	8.2	307	17.9	1.5	30.8	
10/9/2015 7:00	7.8	306	17	1.5	30.8	
10/9/2015 8:00	8.4	314	16.2	1.5	30.8	
10/9/2015 9:00	8.7	318	15.2	1.5	30.8	
10/9/2015 10:00	9.2	319	14.5	53.3	30.8	
10/9/2015 11:00	9.2	328	14.8	1.5	30.9	
10/9/2015 12:00	8.4	318	15.5	1.5	30.8	
10/9/2015 13:00	8.7	326	16.6	1.5	30.9	
10/9/2015 14:00	8.6	323	17.3	1.5	30.8	
10/9/2015 15:00	7.9	322	17.3	1.5	30.8	
10/9/2015 16:00	8.3	320	17.1	1.5	30.9	
10/9/2015 17:00	10.1	329	16.9	1.5	30.9	
10/9/2015 18:00	9.6	337	16.6	1.5	30.9	
10/9/2015 19:00	7.7	338	16.1	1.5	30.9	
10/9/2015 20:00	8	334	15.6	1.5	30.9	
10/9/2015 21:00	8.5	335	15.4	1.5	30.9	
10/9/2015 22:00	7.6	335	14.9	1.5	30.9	
10/9/2015 23:00	6.1	356	14.6	1.4	30.9	
10/10/2015 0:00	4.7	7	14.3	1.4	30.9	
10/10/2015 1:00	2.2	5	13.8	41.7	30.9	
10/10/2015 2:00	2.4	350	12.8	24.1	30.9	
10/10/2015 3:00	1.3	37	11.6	80.9	30.9	
10/10/2015 4:00	0.8	108	10.1	89	30.9	
10/10/2015 5:00	2.3	355	10.1	88.7	30.9	
10/10/2015 6:00	2.1	286	10.9	85.6	30.9	
10/10/2015 7:00	1.4	299	10.7	84.6	30.9	
10/10/2015 8:00	2.2	336	9.7	89.7	30.9	
10/10/2015 9:00	4	332	11.1	25.4	30.9	
10/10/2015 10:00	2.3	78	13.8	24.1	30.9	
10/10/2015 11:00	2.5	351	16.2	7.5	30.9	
10/10/2015 12:00	3.8	356	17.3	1.5	30.9	
10/10/2015 13:00	3.7	326	17.9	1.5	30.9	

Date Time	WS(MPH)	WD(DEG)	AT(C)	RH(%)	BP(InH)	Status
10/10/2015 14:00	4.3	280	18.6	1.5	30.8	
10/10/2015 15:00	5	217	19.3	1.5	30.8	
10/10/2015 16:00	5.7	162	20.2	1.5	30.8	
10/10/2015 17:00	4.8	183	20.6	1.5	30.8	
10/10/2015 18:00	3.9	222	20.6	1.5	30.8	
10/10/2015 19:00	2.5	191	18.7	1.5	30.8	
10/10/2015 20:00	1.4	124	16.4	9.4	30.8	
10/10/2015 21:00	0.9	125	14.8	61.2	30.8	
10/10/2015 22:00	1.2	141	14.6	14.9	30.8	
10/10/2015 23:00	1.3	129	13.6	1.4	30.8	
10/11/2015 0:00	2.7	180	13.6	1.4	30.8	
10/11/2015 1:00	3.5	186	12.9	1.4	30.8	
10/11/2015 2:00	2.7	170	12.3	77.6	30.8	
10/11/2015 3:00	2.7	178	12.4	42.6	30.8	
10/11/2015 4:00	3	159	12.2	75	30.8	
10/11/2015 5:00	3.3	159	11.9	80.7	30.8	
10/11/2015 6:00	4.7	172	11.9	81.3	30.8	
10/11/2015 7:00	4.6	172	12	26.2	30.8	
10/11/2015 8:00	4.9	172	12.2	1.4	30.7	
10/11/2015 9:00	5	175	14.1	14.2	30.8	
10/11/2015 10:00	7	182	16	1.5	30.8	
10/11/2015 11:00	6.8	173	18.6	1.5	30.8	
10/11/2015 12:00	6.7	168	21.8	1.5	30.7	
10/11/2015 13:00	8.3	173	23.5	1.5	30.7	
10/11/2015 14:00	7.5	154	25.6	1.5	30.7	
10/11/2015 15:00	7.4	156	27.1	3.4	30.7	
10/11/2015 16:00	6.7	139	27.4	1.5	30.7	
10/11/2015 17:00	7	139	27.5	1.5	30.7	
10/11/2015 18:00	6.4	132	26.5	1.5	30.7	
10/11/2015 19:00	6.8	134	24.4	6.3	30.7	
10/11/2015 20:00	7.1	135	23.1	1.5	30.7	
10/11/2015 21:00	7.7	144	22.3	1.5	30.7	
10/11/2015 22:00	7.4	148	21.4	1.5	30.7	
10/11/2015 23:00	6	158	20.8	1.5	30.7	
10/12/2015 0:00	6.7	158	20.5	1.5	30.7	
10/12/2015 1:00	6.3	173	20.3	1.5	30.7	
10/12/2015 2:00	7.9	175	20.1	1.5	30.7	
10/12/2015 3:00	7.3	177	19.8	1.5	30.7	
10/12/2015 4:00	7	177	19.6	1.5	30.6	
10/12/2015 5:00	5.2	180	19	1.5	30.6	
10/12/2015 6:00	5.8	183	19.2	1.5	30.6	
10/12/2015 7:00	7.1	195	19.2	1.5	30.7	
10/12/2015 8:00	7.4	197	19.1	1.5	30.6	
10/12/2015 9:00	8.6	205	19.9	1.5	30.7	
10/12/2015 10:00	8.9	240	21.6	34.5	30.6	
10/12/2015 11:00	10.3	273	22.7	16.7	30.7	

Date Time	WS(MPH)	WD(DEG)	AT(C)	RH(%)	BP(InH)	Status
10/12/2015 12:00	9.9	288	24.4	1.6	30.7	
10/12/2015 13:00	12.5	297	24.8	1.5	30.7	
10/12/2015 14:00	9	272	24	1.5	30.7	
10/12/2015 15:00	8	257	24.3	1.5	30.7	
10/12/2015 16:00	11.1	257	25.4	1.5	30.6	
10/12/2015 17:00	12.9	247	26.3	1.5	30.6	
10/12/2015 18:00	11.9	246	26.1	1.5	30.6	
10/12/2015 19:00	9.8	250	24.8	1.5	30.6	
10/12/2015 20:00	8.4	249	23.4	1.5	30.7	
10/12/2015 21:00	7.1	256	22	1.5	30.7	
10/12/2015 22:00	6.7	269	20.8	1.5	30.7	
10/12/2015 23:00	7.6	258	20.1	1.5	30.7	
10/13/2015 0:00	8.4	251	19.4	1.5	30.7	
10/13/2015 1:00	9.5	262	18.6	1.5	30.7	
10/13/2015 2:00	9.4	264	17.5	1.5	30.7	
10/13/2015 3:00	8.8	266	16.3	1.5	30.7	
10/13/2015 4:00	9.3	268	15.7	1.4	30.7	
10/13/2015 5:00	9	270	14.9	21.2	30.7	
10/13/2015 6:00	7.3	266	14	24.5	30.7	
10/13/2015 7:00	8.1	256	13.2	54.9	30.7	
10/13/2015 8:00	8.1	263	12.5	58.3	30.7	
10/13/2015 9:00	8.4	266	13.2	19.6	30.7	
10/13/2015 10:00	10.7	263	13.9	1.5	30.7	
10/13/2015 11:00	10.3	263	15.2	4.4	30.7	
10/13/2015 12:00	10.3	256	16.8	20.2	30.7	
10/13/2015 13:00	10	268	18.4	1.5	30.7	
10/13/2015 14:00	9.9	249	19.9	1.5	30.7	
10/13/2015 15:00	11.3	261	20.9	1.5	30.7	
10/13/2015 16:00	11.7	250	21.6	1.5	30.7	
10/13/2015 17:00	10.6	262	22	1.5	30.7	
10/13/2015 18:00	8.3	264	21.7	1.5	30.7	
10/13/2015 19:00	5.1	257	20.3	1.5	30.7	
10/13/2015 20:00	3.6	252	18.9	1.5	30.7	
10/13/2015 21:00	4.1	242	18.2	1.5	30.8	
10/13/2015 22:00	2.3	183	15.6	10	30.7	
10/13/2015 23:00	1.7	175	13.6	57.3	30.8	
10/14/2015 0:00	2.1	181	12.7	41.7	30.7	
10/14/2015 1:00	3.5	194	12.5	66.8	30.7	
10/14/2015 2:00	4.6	179	12.1	69.3	30.8	
10/14/2015 3:00	2.3	176	11.6	72.3	30.8	
10/14/2015 4:00	2.6	163	10.8	77.2	30.8	
10/14/2015 5:00	3	173	9.9	84.4	30.7	
10/14/2015 6:00	2	148	9.7	83.5	30.8	
10/14/2015 7:00	1.1	123	9.1	84.1	30.7	
10/14/2015 8:00	1.4	41	8.9	85.2	30.8	
10/14/2015 9:00	1.4	26	13	26	30.8	

Date Time	WS(MPH)	WD(DEG)	AT(C)	RH(%)	BP(InH)	Status
10/14/2015 10:00	2.5	359	15.9	1.5	30.8	
10/14/2015 11:00	3.7	339	17.9	1.5	30.8	
10/14/2015 12:00	4.2	359	20.5	18.2	30.8	
10/14/2015 13:00	5.3	348	21.5	1.5	30.8	
10/14/2015 14:00	6.2	319	22.2	1.5	30.8	
10/14/2015 15:00	6	322	22.8	1.5	30.8	
10/14/2015 16:00	7.1	299	22.7	1.5	30.8	
10/14/2015 17:00	6.8	322	22.8	1.5	30.8	
10/14/2015 18:00	4.5	314	22.3	1.5	30.8	
10/14/2015 19:00	1.7	6	20	1.5	30.8	
10/14/2015 20:00	1	71	17.6	1.5	30.8	
10/14/2015 21:00	1.2	64	15.5	9.9	30.8	
10/14/2015 22:00	0.9	158	14.2	63.1	30.8	
10/14/2015 23:00	0.8	123	13.1	72	30.8	
10/15/2015 0:00	1	86	12.1	78.6	30.8	
10/15/2015 1:00	1.2	45	11.2	82.7	30.8	
10/15/2015 2:00	1.1	113	10.8	85.2	30.8	
10/15/2015 3:00	1	46	9.9	90.3	30.8	
10/15/2015 4:00	0.9	94	9.2	94	30.8	
10/15/2015 5:00	0.9	138	9.3	94.2	30.8	
10/15/2015 6:00	1.1	157	9.3	94.1	30.8	
10/15/2015 7:00	1.2	180	9.1	94.5	30.8	
10/15/2015 8:00	1.2	235	9.4	90.5	30.8	
10/15/2015 9:00	1.1	280	12.5	54.2	30.8	
10/15/2015 10:00	5.1	167	17.1	1.5	30.8	
10/15/2015 11:00	6.1	162	19.8	1.5	30.8	
10/15/2015 12:00	7.9	183	21.4	1.5	30.8	
10/15/2015 13:00	8.9	187	23	1.5	30.8	
10/15/2015 14:00	8	226	24.2	6.2	30.8	
10/15/2015 15:00	8.9	274	25.3	1.5	30.8	
10/15/2015 16:00	10.8	279	25.7	1.5	30.8	
10/15/2015 17:00	11.6	303	24.6	1.5	30.8	
10/15/2015 18:00	7.5	319	23.1	1.5	30.8	
10/15/2015 19:00	6.3	306	22	1.5	30.8	
10/15/2015 20:00	7.2	313	20.6	1.5	30.8	
10/15/2015 21:00	5.9	295	19.4	1.5	30.8	
10/15/2015 22:00	6.4	299	18.8	1.5	30.9	
10/15/2015 23:00	8.7	311	18.4	1.5	30.9	
10/16/2015 0:00	9	326	17.2	1.5	30.9	

APPENDIX H

AUXIER AND ASSOCIATES PROCEDURES

PROCEDURE 5.1
CALIBRATION PROCEDURE FOR PM 2.5 AIR MONITORING

1.0 PURPOSE

1.1 To describe the procedures for calibrating, checking and adjusting the flow of the Mass Flow Controllers (MFC) of high volume samplers used to perform PM 2.5 monitoring. PM10 and PM2.5 monitoring samples the airborne fraction of particles that can be inhaled into the respiratory system, i.e., particles of aerodynamic diameter less than 10 micrometers (μm). Atmospheric particles commonly occur in two distinct modes: the fine (< 2.5 μm) mode and the coarse (2.5-10.0 μm) mode. The fine or accumulation mode (also termed the respirable particulate matter) is attributed to growth of particles from the gas phase and subsequent agglomeration, while the coarse mode is made of mechanically abraded or ground particles.

2.0 RESPONSIBILITY

2.1 The Project Manager and Site Coordinator are responsible for assuring that this procedure is implemented.

2.2 Survey team personnel are responsible for following this procedure.

NOTE: Do not attempt to perform calibration or flow check of samplers under windy conditions. Short-term wind velocity fluctuations will produce variable pressure readings by the orifice transfer standard's manometer. The measurement will be less precise because of the pressure variations.

3.0 CALIBRATION PROCEDURE

3.1 Summary

During calibration, a certified calibration orifice using 5 different plates (18, 13, 10, 7, and 5) that simulate dust loading on the filter is connected to the inlet of the sampler. The pressure drop across the orifice as measured by a manometer (ΔH_2O) is converted to a flowrate (Q_a) in cubic meters per minute (cmm) using the slope and intercept of the orifice calibration curve and corrected to the temperature and pressure at the time of calibration. The flowrate as measured by the sampler's rotometer in cubic feet per minute (cfm) is recorded and corrected to the temperature and pressure at the time of calibration (IC). Q_a in cfm and IC are used to generate a calibration curve. The slope and intercept of the calibration curve are used when performing quality control (QC) checks of the system. The correlation coefficient of the curve is used to ensure that the relationship between the 5 calibration points is sufficiently linear. Monthly average temperature and barometric pressure values are used to establish the sampler set points.

NOTE: EPA guidelines require 5 readings in the range of 32-46 cfm, with at least three readings in the 36-44 cfm range. #8-32 x1/2 standard pan or round head machine screws and nuts may be used to block (close) any number of holes on any of the resistance plates to obtain readings in the desired resistance range.

3.2 Frequency

3.2.1 Every 6 months;

3.2.2 After any repairs that might affect sampler calibration (e.g., replacing the motor);

3.2.3 If the results of a field flow-check exceed quality control limits (e.g., greater than ±7% from the sampler's indicated flow rate); or

3.2.4 Whenever a field flow-check or performance audit indicates that the sampler is out (or nearly out) of the acceptable flow-rate range.

3.3 Equipment and Materials

3.3.1 Orifice transfer standard with calibration traceable to NIST

3.3.2 Orifice standard Certificate of Conformance

3.3.3 A water or oil manometer, with a 0-400 mm (0-16") range and a minimum scale division of 2 mm (0.1").

3.3.4 PM 2.5 Calibration Form

3.3.5 Temperature and barometric pressure at the time of calibration.

3.3.6 Average temperature in Celsius and average pressure in in. Hg for either the month in which the calibration takes place, or the month during which sampling will take place, as most appropriate.

3.4 Pre-Calibration

3.4.1 Using the PM 2.5 Calibration Form, record:

3.4.1.1 The project name, location, date, and operator name.

3.4.1.2 Sampler Model, MFC serial number, calibrator Orifice Serial No.

3.4.1.3 The barometric pressure in in. Hg and ambient temperature in Celsius and at the time of the calibration. The electronic spreadsheet will then calculate the barometric pressure in mm Hg and the temperature in Kelvin.

3.4.1.4 The average monthly average monthly barometric pressure in in. Hg and the temperature in Celsius, for the month in which the calibration is taking place. The electronic spreadsheet will then automatically calculate the barometric pressure in mm Hg and the temperature in Kelvin.

Average Monthly Temperature and Pressure

Month	Air Temp (F)	Air Temp (C)	Stn Pres (in)
January	28	-2	29
February	28	-2	29
March	43	9	29
April	58	15	29
May	69	21	29
June	78	25	29
July	77	25	29
August	80	26	29
September	70	21	29
October	59	15	29
November	41	5	29
December	39	4	29

3.4.1.5 The "Orifice Calibration Curve relationship" (slope, intercept and correlation coefficient) values, which are found in the Certificate of Conformance. These values are tabulated on page 2 of the Certificate of NIST Traceable Calibration. Use the slope, intercept and correlation coefficient associate with the Q actual (Q_a) values for PM 2.5 sampling. Do not use the Q_{std} values.

3.5 Rotometer Calibration

This calibration occurs during instrument set-up, and should be checked at each calibration.

3.5.1 Using the "Orifice Calibration Curve" slope and intercept, calculate the inches of water, ΔH, which correlates to 40 CFM.

3.5.2 Assemble the manometer according to manufacturer instructions.

3.5.3 Install the 8X10 adapter with the plate that is closest to providing 40 CFM as calculated in step 3.5.1 and through trial and error measurements of the various plates, i.e., install the plate that results in the water displacement as calculated in 3.5.1.

3.5.4 Operate the system for at least 5 minutes at normal line voltage to equilibrate the Rotometer.

3.5.5 If necessary, adjust the Rotometer so the top of the red float reads 40 CFM (1.13 cmm) by GENTLY loosening the lock nut, adjusting the rotometer with small adjustments, and GENTLY tightening the lock nut.

3.6 Calibration Data Collection

3.6.1 Carefully remove the probe containing the anemometer wire. Unscrew the metal clamp and carefully remove the probe. Put the rubber tip on for safety.

WARNING: Always carefully handle the probe tip of the MFC. It is a sensitive hot wire anemometer probe.

WARNING: Ensure that there is no filter in the filter holder

3.6.2 Mount the 8X10 Adapter Plate (AD 810) supplied with the Calibration Kit to the 8X10 Filter Holder Assembly. Make certain that the Adapter Plate is firmly tightened onto the Filter Holder Assembly so that the sponge rubber is squeezed. (Finger–tight then ½ additional turn with screwdriver, plier, etc). This will ensure there are no air leaks. Check all gaskets and replace any questionable ones.

3.6.3 Mount the calibration orifice tank with the No. 18 resistance plate in place on the sampler.

3.6.4 Perform a leak check.

WARNING: Never run the motor for greater than 30 seconds with the orifice blocked to avoid overheating.

WARNING: Never try this leak test procedure with a manometer connected to the side tap on the calibration orifice or the blower motor. Liquid from the manometer could be drawn into the system and cause motor damage.

3.6.4.1 Turn on the sampler.

3.6.4.2 Cover the hole on top of the orifice and the pressure tap with your hands.

3.6.4.3 Listen for a high-pitched squealing sound made by escaping air. If this sound is heard, a leak is present and the top loading adapter hold-down nuts need to be re-tightened. All leaks must be eliminated before proceeding with the calibration. When the system is determined to be leak-free, turn off the sampler.

3.6.5 Assemble the manometer according to manufacturer instructions (attached).

3.6.6 Inspect the connecting tubing of the manometer for crimps or cracks.

3.6.7 Connect one leg of the water manometer to the pressure tap of the calibration orifice using the length of rubber tubing. Leave the other side of the manometer open to atmosphere. Both valves on the manometer have to be open for the liquid to flow freely. To read the manometer, sum the displacement of the liquid (one side goes up, one side goes down) on both sides of the manometer. The manometer must be held or mounted vertically to insure accurate readings.

3.6.8 Turn the air sampler on and after five minutes to allow stabilization, record the water manometer reading in the “Total in. H2O” column, and the rotometer reading in the “I” column of the PM 2.5 Calibration Form.

3.6.9 Repeat steps 3.5.4 – 3.5.8 for the remaining resistance plates (13, 10, 7 and 5).

3.6.10 Turn the sampler off and remove the orifice tank.

3.6.11 Reinstall the anemometer probe, being sure to rotate the probe such that the scribed axial line is "up" (facing flow).

3.7 Calculate Calibration Linear Regression

3.7.1 As the ΔH and I columns are populated, the electronic version of the PM 2.5 calibration form will automatically calculate the slope (mhv), intercept (bhv) and correlation coefficient (rhv) for the calibration data points.

A five-point calibration should yield a regression equation with a correlation coefficient of rhv > 0.990. All five calibration points should be in the 32 to 46 cfm range, and at least three of the calibration points should be within the acceptable operation limits of 36 to 44 cfm. If all conditions are not met, confer with the Project Manager to determine course of action. A graph is presented at the bottom of the spreadsheet which may show which data points are not sufficiently linear, and need to be re-measured.

This data is used only to assess the calibration points to see if any should be rerun. It is not used for subsequent data reduction. Average values for temperature and pressure during sampling periods are used for data reduction.

3.8 Calculate the Sampler Flow Rate (SFR) and Sampler Set Point (SSP)

3.8.1 The electronic version of the PM2.5 calibration form will automatically calculate the SFR and the SSP.

3.9 Adjust the MFC to agree with the SSP.

3.9.1 Load the sampler with a Micro-Quartz filter.

3.9.2 Turn on the sampler and allow it to warm up to normal operating conditions.

WARNING: No one should adjust or change the rotometer screws or MFC potentiometer set screw without proper training. Do not turn the potentiometer more than a few degrees at a time. Improper adjustments can result in compromise of data, test time, and equipment damage.

NOTE: All rotometer readings will be taken by reading the position of the TOP of the red/black float-looking at eye level.

3.9.3 Adjust the MFC set screw (turning potentiometer) until the flow/pressure recorder reads the SSP flow rate by GENTLY loosening the lock nut, adjusting the potentiometer with small adjustments, and GENTLY tightening the lock nut.

3.9.4 The sampler should now be sampling at the flow rate, corrected to average monthly meteorological conditions, which will result in the designated flow rate of 40 CFM.

4.0 Equations

4.1 Calibration Equations

4.1.1 Calculate the flow rate through the orifice tank during calibration (Q_a) using the following equation.

$$Q_a = \frac{1}{m} * \sqrt{(\Delta H_2O)\frac{T_{cal}}{P_{cal}}} - b$$

Where:
Q_a = actual volumetric flow rate through the transfer standard orifice, m_3/min
ΔH_2O = pressure drop across the orifice, in inches of H2O as measured by the manometer
T_{cal} = ambient temperature during calibration, K (K = ^oC + 273)
P_{cal} = ambient barometric pressure during calibration, mm Hg
b = intercept of the orifice calibration relationship
m = slope of the orifice calibration relationship

4.1.2 Convert Q_a to cfm.

$$Q_a\ (cfm) = Q_a\ (cmm) * 35.31\ \frac{cfm}{cmm}$$

4.1.3 Correct the rotometer response to actual conditions for each test calibration point using the following equation.

$$IC = I\sqrt{\frac{T_{cal}}{P_{cal}}}$$

Where:

IC = transformed Rotometer readings
I = Rotometer readings

4.1.4 Calculating the set points

4.1.4.1 Calculate and record the sampler adjusted set point flow rate (SFR) in cfm.

$$SFR = 40\left(\left(\frac{P_m}{P_{cal}}\right)\left(\frac{T_{cal}}{T_m}\right)\right)$$

Where:
SFR = sampler's monthly adjusted set point flow rate, ccm
40 = designed sampling flow rate of PM 2.5 samplers in cfm
P_m = monthly average barometric pressure, mm Hg
P_{cal} = actual ambient barometric pressure during calibration, mm Hg

T_m = monthly average temperature, K
T_{cal} = actual ambient temperature during calibration, K

1.1.1.1 Calculate and record the sampler adjusted set point (SSP) in cfm.

$$SSP = (mhv * SFR + bhv)\left(\sqrt{\frac{P_{cal}}{T_{cal}}}\right)$$

Where :
SSP = sampler set point
mhv = slope of sampler from hi vol calibration
SFR = sampler's monthly adjusted set point flow rate
bhv = intercept of sampler from hi vol calibration
P_{cal} = actual ambient barometric pressure during calibration, mm Hg
T_{cal} = actual ambient temperature during calibration, K

The SSP is the design operating flow rate of the PM 2.5 High Volume Sampler of 40 cfm, corrected to the current ambient temperature and barometric pressure.

PROCEDURE 5.2
ONE POINT FLOW AUDIT FOR PM 2.5 AIR MONITORING

1.0 ONE POINT FLOW AUDIT

1.1 Summary

During the check, with a filter in place, the orifice (without the restrictive plates) is mounted to the sampler inlet. The pressure drop across the orifice as measured by a manometer in mm Hg is converted to a flow rate in cmm using the slope and intercept of the orifice calibration curve and corrected to the temperature and pressure at the time of the check (Q_{aofa}). The sampler flow rate in cfm is converted to actual conditions using the slope and intercept of the hi-volume calibration curve and corrected to the temperature and pressure at the time of the check (Q_{ahvfa}). The orifice is then removed and the flow rate is measured under normal conditions. The percent difference and corrected flow rate is then calculated and compared to control limits. The sampler set point is then determined for the next sampling period.

1.2 Frequency

1.2.1 The QC flow check should be performed at least monthly.

1.3 Equipment and Materials

1.3.1 Orifice transfer standard with calibration traceable to NIST.

1.3.2 Orifice standard Certificate of Conformance

1.3.3 A water or oil manometer, with a 0-400 mm (0-16”) range and a minimum scale division of 2 mm (0.1”).

1.3.4 Latest PM 2.5 Calibration forms and information.

1.3.5 One Point Flow Audit Form.

1.3.6 Temperature and barometric pressure at the time of the flow check.

1.4 Pre-Check

1.4.1 On the One Point Flow Check Form, record:

1.4.1.1 The project name, location, date, and operator name.

1.4.1.2 Instrument information:

1.4.1.2.1 PM 2.5 inlet

1.4.1.2.2 MFC serial number

1.4.1.2.3 Calibrator Orifice Serial No.

1.4.1.3 The barometric pressure in in. Hg and the ambient temperature in Celsius and at the time of the calibration. The electronic spreadsheet will then calculate the barometric pressure in mm Hg and the temperature in Kelvin.

1.4.1.4 The average monthly barometric pressure in in. Hg and the average monthly temperature in Celsius for the next sampling period. The electronic spreadsheet will then automatically calculate the barometric pressure in mm Hg and the temperature in Kelvin. These are the values required to calculate the sampler flow rate (SFR) and sampler set point (SSP).

Average Monthly Temperature and Pressure

Month	Air Temp (F)	Air Temp (C)	Stn Pres (in)
January	28	-2	29
February	28	-2	29
March	43	9	29
April	58	15	29
May	69	21	29
June	78	25	29
July	77	25	29
August	80	26	29
September	70	21	29
October	59	15	29
November	41	5	29
December	39	4	29

1.4.1.5 The "Orifice Calibration Curve relationship" (slope, intercept and correlation coefficient) values, which are found in the Certificate of Conformance. These values are tabulated on the third sheet of the Certificate of Conformance (Sheet 2 of 5). Use the slope, intercept and correlation coefficient associate with the Q actual (Q_a) values for PM 2.5 sampling. Do not use the Q_{std} values.

1.5 Data Collection

1.5.1 Place a clean quartz filter into the 8X10 filter holder.

1.5.2 Mount the 8X10 Adapter Plate supplied with the Calibration Kit to the 8X10 Filter Holder Assembly. Make certain that the Adapter Plate is firmly tightened onto the Filter Holder Assembly so that the sponge rubber is squeezed. (Finger–tight then ½ additional turn with screwdriver, plier, etc). This will ensure there are no air leaks. Check all gaskets and replace any questionable ones.

1.5.3 Mount the same calibration orifice tank that was used to calibrate the sampler, but do not use the resistance plates.

1.5.4 Perform a leak check.

WARNING: Never run the motor for greater than 30 seconds with the orifice blocked to avoid overheating.

WARNING: Never try this leak test procedure with a manometer connected to the side tap on the calibration orifice or the blower motor. Liquid from the manometer could be drawn into the system and cause motor damage.

1.5.4.1 Turn on the sampler.

1.5.4.2 Cover the hole on top of the orifice and the pressure tap with your hands.

1.5.4.3 Listen for a high-pitched squealing sound made by escaping air. If this sound is heard, a leak is present and the top loading adapter hold-down nuts need to be re-tightened. All leaks must be eliminated before proceeding with the check. When the system is determined to be leak-free, turn off the sampler.

1.5.5 Assemble the manometer according to manufacturer instructions (attached).

1.5.6 Inspect the connecting tubing of the manometer for crimps or cracks.

1.5.7 Connect one leg of the water manometer to the pressure tap of the calibration orifice using the length of rubber tubing. Leave the other side of the manometer open to atmosphere. Both valves on the manometer have to be open for the liquid to flow freely. To read the manometer, sum the displacement of the liquid (one side goes up, one side goes down) on both sides of the manometer. The manometer must be held or mounted vertically to insure accurate readings.

1.5.8 Turn the air sampler on and after five minutes to allow stabilization, record the water manometer reading in the “Total in. H2O” column, and the rotometer reading in the “Ifa” column of the PM 2.5 One Point Flow Audit Form.

1.5.9 Turn the sampler off, remove the Calibration Orifice tank, and leave the filter in place.

1.5.10 Turn the sampler on and record the rotometer reading in the “Iwocofa” column of the One Point Flow Audit form.

1.5.11 Turn the sampler off.

1.5.12 The electronic version of the One Point Audit Form will automatically calculate the percent difference and the corrected flow rate. If the percent difference is greater than 7% the sampler fails the check and must be recalibrated. If the corrected flow rate is less than 36 or greater than 44 the sampler fails the check and must be recalibrated.

1.6 Calculate the SFR and SSP for the next sampling period

1.6.1 The electronic version of the One Point Flow Audit Form will automatically calculate the SFR and the SSP.

1.7 Adjust the MFC to agree with the SSP.

1.7.1 Turn on the sampler and allow it to warm up to normal operating conditions.

WARNING: No one should adjust or change the rotometer screws or MFC potentiometer set screw without proper training. Do not turn the potentiometer more than a few degrees at a time. Improper adjustments can result in compromise of data, test time, and equipment damage.

NOTE: All rotometer readings will be taken by reading the position of the TOP of the red/black float-looking at eye level.

1.7.2 Adjust the MFC set screw (turning potentiometer) until the flow/pressure recorder reads the SSP flow rate by GENTLY loosening the lock nut, adjusting the potentiometer with small adjustments, and GENTLY tightening the lock nut.

1.7.3 The sampler should now be sampling at the designed flow rate of 40 cfm corrected to current meteorological conditions.

1.8 One Check Flow Audit Equations

1.8.1 Calculate the flow through the orifice at ambient temperature and pressure at the time of the check in cfm.

$$Q_{aofa} = \left(\frac{1}{m} * \sqrt{\Delta H_2O * \frac{T_{chk}}{P_{chk}}} - b \right) * \frac{cfm}{cmm}$$

Where:

Q_{aofa} = actual volumetric flow rate as indicated by the transfer standard orifice, m^3/min at ambient temperature and pressure at the time of the check

ΔH_2O = pressure drop across the orifice, in. H_2O as measured by the manometer

T_{chk} = ambient temperature during the check, K (K = ^{O}C + 273)

P_{chk} = ambient barometric pressure during the check, mm Hg

b = intercept of the orifice calibration relationship

m = slope of the orifice calibration relationship

$\frac{cfm}{cmm} = 35.31$

1.8.2 Calculate the flow through the MFC at ambient temperature and pressure at the time of the check.

$$Q_{ahvaf} = \frac{1}{mhv} * \sqrt{I_f * \frac{T_{chk}}{P_{chk}}} - bhv$$

Where:

Q_{ahvaf} = actual volumetric flow rate as indicated by the rotometer, m3/min at ambient temperature and pressure at the time of the check

ΔH_2O = pressure drop across the orifice, in. H_2O as measured by the manometer.
T_{chk} = ambient temperature during the check, K (K = ^{O}C + 273).
P_{chk} = ambient barometric pressure during the check, mm Hg.
bhv = intercept of the MFC calibration relationship.
mhv = slope of the MFC calibration relationship.

1.8.3 Calculate the % difference between the Q_{aofa} and the Q_{ahvfa}.

$$\%\ Diff = \frac{Q_{ahvfa} - Q_{aofa}}{Q_{aofa}} * 100$$

The percent difference should be ≤ 7%.

1.8.4 Calculate the corrected flow rate.

$$Corrected\ Flow\ Rate = Q_{ahvfa} * \frac{100 - \%\ diff}{100}$$

The corrected flow rate should be 40 cfm ± 10%, or between 36 and 44 cfm.

PROCEDURE 5.3
SAMPLING PROCEDURE FOR PM 2.5 AIR MONITORING

1.0 PURPOSE

1.0 To describe the procedures for performing PM 2.5 sampling.

2.0 RESPONSIBILITY

2.1 The Project Manager and Site Coordinator are responsible for assuring that this procedure is implemented.

2.2 Survey team personnel are responsible for following this procedure.

3.0 PROCEDURE

3.1 Perform the one point flow audit procedure if necessary.

3.2 Equipment and Materials

3.2.1 Quartz filter, pre-numbered.

3.2.2 PM 2.5 Field Data Form

3.2.3 Average temperature in Celsius and average pressure in in. Hg for the month in which the sampling took place.

Average Monthly Temperature and Pressure

Month	Air Temp (F)	Air Temp (C)	Stn Pres (in)
January	28	-2	29
February	28	-2	29
March	43	9	29
April	58	15	29
May	69	21	29
June	78	25	29
July	77	25	29
August	80	26	29
September	70	21	29
October	59	15	29
November	41	5	29
December	39	4	29

3.3 Pre-Monitoring

3.3.1 On the Field Data Sheet record:

3.3.1.1 The project name, station location, date, and the name of the operator loading the filter onto the sampler.

3.3.1.2 Sampler model, MFC serial number, and filter number.

3.3.1.3 The average temperature in degrees Celsius and Pressure in in. Hg for the sampling period as measured by the meteorological station.

3.3.1.4 The calibration curve relationships from the latest calibration.

3.3.1.5 The Sampler Flow Rate and Sampler Set Point from the latest One Point Flow Audit or the latest calibration.

3.3.2 Inspect the filter

3.3.2.1 Backlight each filter to inspect for pinholes, particles, or other visible imperfections.

3.4 Monitoring

3.4.1 Loosen the nuts that secure the inlet to the base and gently tilt back the inlet to allow access to the filter support screen.

3.4.2 Examine the filter support screen. If the screen appears dirty, wipe it clean.

3.4.3 Center the filter onto the filter holder, rough side up.

3.4.4 Tighten the thumb nuts to hold the filter securely. Check that the gasket is in good condition and has not deteriorated.

Caution: Tighten the thumb nuts evenly on alternate corners to properly align and seat the gasket. The nuts should be only hand-tightened because too much compression can damage the sealing gasket.

3.4.5 Lower the sample inlet. Secure the sample inlet to the sampler base. Open the front door of the sampler and examine the flow controller. Remove any moisture inside by wiping it with a clean cloth.

3.4.6 Energize the sampler. Allow for warm-up.

3.4.7 Observe proper SSP and adjust the MFC constant flow potentiometer if necessary to achieve the SSP.

3.4.8 Record the start time and the flow rate.

3.4.9 Secure the shelter.

3.5 Post Monitoring

3.5.1 Record the rotometer reading in column I of the PM 2.5 Field Data Form.

3.5.2 Indicate on the form whether the rotometer reading is within 10% of the Sampler Set Point.

3.5.3 De-energize the sampler

3.5.4 Remove the filter

3.5.5 Record the Sample Stop Time and calculate the elapsed time in minutes.

3.5.6 Check the porous disk

3.5.6.1 Remove the outer clamp ring (the “round cake mold pan” in which the porous disc rests) by loosening the four spring-loaded knurled finger tightening nuts

3.5.6.2 The white porous disc gets dark from the larger than 2.5 micron particles adhering to it. Wipe it with a rag. Then rub a finger over it. If it feels wet, close the cartridge. If it feels dry, re-saturate by adding more oil.

WARNING: Do NOT over-wet or it will become “super-saturated” and leak/spill the oil all over during reassembly of the PM2.5 cartridge back into the shelter assembly.

APPENDIX I

FIELD DATA FORMS

Auxier & Associates, Inc.
Radiological Health, Safety and Environmental Consulting
A USA Environment, L.P. Company

PM2.5 FIELD DATA FORM

Auxier & Associates, Inc.
9821 Cogdill Road, Suite 1
Knoxville, TN 37932
(865) 675-3669

Project Name:	ENG-WES	Filter No.	TFAQ102
Station Location: 1	A1	Operator (Filter Loading): 5	B. Abernathy / A. Luna
Sampler Model:	PM2.5	Date: 6	7/22/15
MFC Serial No. 2	713282	Operator (Filter Collection): 5	B. Abernathy / A. Luna
		Date: 6	8/19/15

Average Conditions During Sampling Period (from met tower data)

Avg Monthly Pressure (in. Hg)	30.77	Corrected Avg Monthly Pressure (mm Hg)	781.558
Avg Monthly Temp (deg. C) 7	26.38	Corrected Avg Monthly Temperature (deg. K)	299.54

Hi Vol Calibration Curve Relationships (station-specific)

8	Slope (mhv) =	0.3273
9	Intercept (bhv) =	12.3732
10	Correlation Coefficient (rhv) =	-0.9934

Set Points During Sampling Period

11	SFR =	38.06
12	SSP =	39.9

Start of Current Sampling (loading)			End of Current Sampling (collection)				
Start Date/Time	13	**7/22/15 14:21**	**Stop Date/Time**	16	**8/19/15 11:11**	**Elapsed Time (min)**	**40,130**
Flow Rate (cfm)	14	**40**	**Flow Rate (cfm)**	15	**40**	**Avg Flow Rate (cfm)**	**40**

I cfm	I ml/min	I total ml
40	1,132,674	45,454,202,200

Is the collection flow rate within 10% of the loading flow rate? (Y) N

H_2S reading at collection: 0.0 ppm

Reviewed by: Cecilia Greene

Auxier & Associates, Inc.
Radiological Health, Safety and Environmental Consulting
A USA Environment, L.P. Company

PM2.5 FIELD DATA FORM

Auxier & Associates, Inc.
9821 Cogdill Road, Suite 1
Knoxville, TN 37932
(865) 675-3669

Project Name:	ENG-WES	Filter No.	TFAQ102
Station Location: 1	A2	Operator (Filter Loading): 5	
Sampler Model:	PM2.5	Date: 6	
MFC Serial No. 2	714197	Operator (Filter Collection): 5	
		Date: 6	

Average Conditions During Sampling Period (from met tower data)			
Avg Monthly Pressure (in. Hg)	30.77	Corrected Avg Monthly Pressure (mm Hg)	781.558
Avg Monthly Temp (deg. C) 7	26.38	Corrected Avg Monthly Temperature (deg. K)	299.54

Hi Vol Calibration Curve Relationships (station-specific)		
8	Slope (mhv) =	0.3532
9	Intercept (bhv) =	10.4747
10	Correlation Coefficient (rhv) =	0.9962

Set Points During Sampling Period		
11	SFR =	*
12	SSP =	*

Start of Current Sampling (loading)			End of Current Sampling (collection)				
Start Date/Time	13	*	Stop Date/Time	16	*	Elapsed Time (min)	0
Flow Rate (cfm)	14	*	Flow Rate (cfm)	15	*	Avg Flow Rate (cfm)	0

*** Area around station flooded and inaccessible. Circuit turned off, no air filter installed. Station will be relocated.**

I cfm	I ml/min	I total ml
0	0	0

Is the collection flow rate within 10% of the loading flow rate? Y N (N/A)

H_2S reading at collection:	n/a

Reviewed by: Cecilia Greene

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PM2.5 FIELD DATA FORM

Auxier & Associates, Inc.
9821 Cogdill Road, Suite 1
Knoxville, TN 37932
(865) 675-3669

Project Name:	ENG-WES	Filter No.	TFAQ102
Station Location: 1	A3	Operator (Filter Loading): 5	B. Abernathy / A. Luna
Sampler Model:	PM2.5	Date: 6	7/22/15
MFC Serial No. 2	714198	Operator (Filter Collection): 5	B. Abernathy / A. Luna
		Date: 6	8/19/15

Average Conditions During Sampling Period (from met tower data)

Avg Monthly Pressure (in. Hg)	30.77	Corrected Avg Monthly Pressure (mm Hg)	781.558
Avg Monthly Temp (deg. C) 7	26.45	Corrected Avg Monthly Temperature (deg. K)	299.61

Hi Vol Calibration Curve Relationships (station-specific)

8	Slope (mhv) =	0.3498
9	Intercept (bhv) =	10.7009
10	Correlation Coefficient (rhv) =	0.9977

Set Points During Sampling Period

11	SFR =	38.29
12	SSP =	38.6

lost 4,328 minutes

Start of Current Sampling (loading)			End of Current Sampling (collection)				
Start Date/Time	13	7/23/15 7:29	Stop Date/Time	16	8/19/15 8:57	Elapsed Time (min)	34,640
Flow Rate (cfm)	14	39	Flow Rate (cfm)	15	41	Avg Flow Rate (cfm)	40

I cfm	I ml/min	I total ml
40	1,132,674	39,235,822,600

Is the collection flow rate within 10% of the loading flow rate? (Y) N

H_2S reading at collection: 0.0 ppm

Reviewed by: Cecilia Greene

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PM2.5 FIELD DATA FORM

Auxier & Associates, Inc.
9821 Cogdill Road, Suite 1
Knoxville, TN 37932
(865) 675-3669

Project Name:	ENG-WES	Filter No.	TFAQ102
Station Location: 1	A4	Operator (Filter Loading): 5	B. Abernathy / A. Luna
Sampler Model:	PM2.5	Date: 6	7/22/15
MFC Serial No. 2	714199	Operator (Filter Collection): 5	B. Abernathy / A. Luna
		Date: 6	8/19/15

Average Conditions During Sampling Period (from met tower data)			
Avg Monthly Pressure (in. Hg)	30.77	Corrected Avg Monthly Pressure (mm Hg)	781.558
Avg Monthly Temp (deg. C) 7	26.45	Corrected Avg Monthly Temperature (deg. K)	299.61

Hi Vol Calibration Curve Relationships (station-specific)		
8	Slope (mhv) =	0.3539
9	Intercept (bhv) =	11.4688
10	Correlation Coefficient (rhv) =	0.9938

Set Points During Sampling Period		
11	SFR =	38.29
12	SSP =	40.1

lost 4,316 minutes

Start of Current Sampling (loading)			End of Current Sampling (collection)				
Start Date/Time	13	7/23/15 8:18	Stop Date/Time	16	8/19/15 8:24	Elapsed Time (min)	34,570
Flow Rate (cfm)	14	40	Flow Rate (cfm)	15	38	Avg Flow Rate (cfm)	39

I cfm	I ml/min	I total ml
39	1,104,357	38,177,622,100

Is the collection flow rate within 10% of the loading flow rate? (Y) N

H_2S reading at collection:	0.0 ppm

Reviewed by: Cecilia Greene

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PM2.5 FIELD DATA FORM

Auxier & Associates, Inc.
9821 Cogdill Road, Suite 1
Knoxville, TN 37932
(865) 675-3669

Project Name:	ENG-WES	Filter No.	TFAQ102
Station Location: 1	A5	Operator (Filter Loading): 5	B. Abernathy / A. Luna
Sampler Model:	PM2.5	Date: 6	7/22/15
MFC Serial No. 2	714200	Operator (Filter Collection): 5	B. Abernathy / A. Luna
		Date: 6	8/19/15

Average Conditions During Sampling Period (from met tower data)			
Avg Monthly Pressure (in. Hg)	30.77	Corrected Avg Monthly Pressure (mm Hg)	781.558
Avg Monthly Temp (deg. C) 7	26.38	Corrected Avg Monthly Temperature (deg. K)	299.54

Hi Vol Calibration Curve Relationships (station-specific)		
8	Slope (mhv) =	0.3661
9	Intercept (bhv) =	10.2935
10	Correlation Coefficient (rhv) =	0.9975

Set Points During Sampling Period		
11	SFR =	38.06
12	SSP =	39.0

Start of Current Sampling (loading)			End of Current Sampling (collection)				
Start Date/Time	13	7/22/15 11:00	Stop Date/Time	16	8/19/15 9:56	Elapsed Time (min)	40,256
Flow Rate (cfm)	14	39	Flow Rate (cfm)	15	39	Avg Flow Rate (cfm)	39

I cfm	I ml/min	I total ml
39	1,104,357	44,456,996,100

Is the collection flow rate within 10% of the loading flow rate? (Y) N

H_2S reading at collection:	0.0 ppm

Reviewed by: Cecilia Greene

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PM2.5 FIELD DATA FORM

Auxier & Associates, Inc.
9821 Cogdill Road, Suite 1
Knoxville, TN 37932
(865) 675-3669

Project Name:	ENG-WES	Filter No.	TFAQ102
Station Location: 1	A6	Operator (Filter Loading): 5	B. Abernathy / A. Luna
Sampler Model:	PM2.5	Date: 6	7/22/15
MFC Serial No. 2	714201	Operator (Filter Collection): 5	B. Abernathy / A. Luna
		Date: 6	8/19/15

Average Conditions During Sampling Period (from met tower data)			
Avg Monthly Pressure (in. Hg)	30.77	Corrected Avg Monthly Pressure (mm Hg)	781.558
Avg Monthly Temp (deg. C) 7	26.38	Corrected Avg Monthly Temperature (deg. K)	299.54

Hi Vol Calibration Curve Relationships (station-specific)		
8	Slope (mhv) =	0.3685
9	Intercept (bhv) =	10.2801
10	Correlation Coefficient (rhv) =	0.9981

Set Points During Sampling Period		
11	SFR =	38.06
12	SSP =	39.1

lost 3,084 minutes

Start of Current Sampling (loading)			End of Current Sampling (collection)				
Start Date/Time	13	7/22/15 13:56	Stop Date/Time	16	8/19/15 11:00	Elapsed Time (min)	37,060
Flow Rate (cfm)	14	39	Flow Rate (cfm)	15	35	Avg Flow Rate (cfm)	37

I cfm	I ml/min	I total ml
37	1,047,723	38,828,626,400

Is the collection flow rate within 10% of the loading flow rate? (Y) N

H_2S reading at collection: 0.0 ppm

Reviewed by: Cecilia Greene

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PM2.5 FIELD DATA FORM

Auxier & Associates, Inc.
9821 Cogdill Road, Suite 1
Knoxville, TN 37932
(865) 675-3669

Project Name:	ENG-WES	Filter No.	TFAQ102
Station Location: 1	A7	Operator (Filter Loading): 5	B. Abernathy / A. Luna
Sampler Model:	PM2.5	Date: 6	7/22/15
MFC Serial No. 2	714202	Operator (Filter Collection): 5	B. Abernathy / A. Luna
		Date: 6	8/19/15

Average Conditions During Sampling Period (from met tower data)			
Avg Monthly Pressure (in. Hg)	30.77	Corrected Avg Monthly Pressure (mm Hg)	781.558
Avg Monthly Temp (deg. C) 7	26.38	Corrected Avg Monthly Temperature (deg. K)	299.54

Hi Vol Calibration Curve Relationships (station-specific)		
8	Slope (mhv) =	0.3644
9	Intercept (bhv) =	10.1895
10	Correlation Coefficient (rhv) =	-0.9905

Set Points During Sampling Period		
11	SFR =	38.06
12	SSP =	38.7

Start of Current Sampling (loading)			End of Current Sampling (collection)				
Start Date/Time	13	7/22/15 10:32	Stop Date/Time	16	8/19/15 9:40	Elapsed Time (min)	40,268
Flow Rate (cfm)	14	39	Flow Rate (cfm)	15	38	Avg Flow Rate (cfm)	39

I cfm	I ml/min	I total ml
39	1,090,199	43,900,117,000

Is the collection flow rate within 10% of the loading flow rate? (Y) N

H_2S reading at collection:	0.0 ppm

Reviewed by: Cecilia Greene

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A USA Environment, L.P. Company

PM2.5 FIELD DATA FORM

Auxier & Associates, Inc.
9821 Cogdill Road, Suite 1
Knoxville, TN 37932
(865) 675-3669

Project Name:	ENG-WES	Filter No.	TFAQ102
Station Location: 1	A8	Operator (Filter Loading): 5	B. Abernathy / A. Luna
Sampler Model:	PM2.5	Date: 6	7/22/15
MFC Serial No. 2	714203	Operator (Filter Collection): 5	B. Abernathy / A. Luna
		Date: 6	8/19/15

Average Conditions During Sampling Period (from met tower data)

Avg Monthly Pressure (in. Hg)	30.77	Corrected Avg Monthly Pressure (mm Hg)	781.558
Avg Monthly Temp (deg. C) 7	26.38	Corrected Avg Monthly Temperature (deg. K)	299.54

Hi Vol Calibration Curve Relationships (station-specific)

8	Slope (mhv) =	0.3918
9	Intercept (bhv) =	8.4611
10	Correlation Coefficient (rhv) =	-0.9977

Set Points During Sampling Period

11	SFR =	38.06
12	SSP =	37.6

Start of Current Sampling (loading)			End of Current Sampling (collection)				
Start Date/Time	13	**7/22/15 11:20**	**Stop Date/Time**	16	**8/19/15 10:12**	**Elapsed Time (min)**	**40,252**
Flow Rate (cfm)	14	**38**	**Flow Rate (cfm)**	15	**38**	**Avg Flow Rate (cfm)**	**38**

I cfm	I ml/min	I total ml
38	1,076,040	43,312,769,000

Is the collection flow rate within 10% of the loading flow rate? (Y) N

H_2S reading at collection: 0.0 ppm

Reviewed by: Cecilia Greene

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PM2.5 FIELD DATA FORM

Auxier & Associates, Inc.
9821 Cogdill Road, Suite 1
Knoxville, TN 37932
(865) 675-3669

Project Name:	ENG-WES	Filter No.	TFAQ102
Station Location: 1	A9	Operator (Filter Loading): 5	B. Abernathy / A. Luna
Sampler Model:	PM2.5	Date: 6	7/22/15
MFC Serial No. 2	714204	Operator (Filter Collection): 5	B. Abernathy / A. Luna
		Date: 6	8/19/15

Average Conditions During Sampling Period (from met tower data)			
Avg Monthly Pressure (in. Hg)	30.77	Corrected Avg Monthly Pressure (mm Hg)	781.558
Avg Monthly Temp (deg. C) 7	26.45	Corrected Avg Monthly Temperature (deg. K)	299.61

Hi Vol Calibration Curve Relationships (station-specific)		
8	Slope (mhv) =	0.4928
9	Intercept (bhv) =	4.2455
10	Correlation Coefficient (rhv) =	0.9958

Set Points During Sampling Period		
11	SFR =	38.29
12	SSP =	37.1

lost 4,374 minutes

Start of Current Sampling (loading)			End of Current Sampling (collection)				
Start Date/Time	13	7/23/15 8:39	Stop Date/Time	16	8/19/15 8:01	Elapsed Time (min)	34,468
Flow Rate (cfm)	14	37	Flow Rate (cfm)	15	40	Avg Flow Rate (cfm)	39

I cfm	I ml/min	I total ml
39	1,090,199	37,576,965,100

Is the collection flow rate within 10% of the loading flow rate? (Y) N

H_2S reading at collection:	0.0 ppm

Reviewed by: Cecilia Greene

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PM2.5 FIELD DATA FORM

Auxier & Associates, Inc.
9821 Cogdill Road, Suite 1
Knoxville, TN 37932
(865) 675-3669

Project Name:	ENG-WES	Filter No.	TFAQ102
Station Location: 1	A10	Operator (Filter Loading): 5	B. Abernathy / A. Luna
Sampler Model:	PM2.5	Date: 6	7/22/15
MFC Serial No. 2	714205	Operator (Filter Collection): 5	B. Abernathy / A. Luna
		Date: 6	8/19/15

Average Conditions During Sampling Period (from met tower data)			
Avg Monthly Pressure (in. Hg)	30.77	Corrected Avg Monthly Pressure (mm Hg)	781.558
Avg Monthly Temp (deg. C) 7	26.38	Corrected Avg Monthly Temperature (deg. K)	299.54

Hi Vol Calibration Curve Relationships (station-specific)		
8	Slope (mhv) =	0.3752
9	Intercept (bhv) =	9.8568
10	Correlation Coefficient (rhv) =	0.9902

Set Points During Sampling Period		
11	SFR =	38.06
12	SSP =	38.8

Start of Current Sampling (loading)			End of Current Sampling (collection)				
Start Date/Time	**13**	**7/22/15 10:11**	**Stop Date/Time**	**16**	**8/19/15 9:24**	**Elapsed Time (min)**	**40,273**
Flow Rate (cfm)	**14**	**39**	**Flow Rate (cfm)**	**15**	**39**	**Avg Flow Rate (cfm)**	**39**

I cfm	I ml/min	I total ml
39	1,104,357	44,475,770,200

Is the collection flow rate within 10% of the loading flow rate? (Y) N

H_2S reading at collection:	0.0 ppm

Reviewed by: Cecilia Greene

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PM2.5 FIELD DATA FORM

Auxier & Associates, Inc.
9821 Cogdill Road, Suite 1
Knoxville, TN 37932
(865) 675-3669

Project Name:	ENG-WES	Filter No.	TFAQ102
Station Location: 1	A11	Operator (Filter Loading): 5	B. Abernathy / A. Luna
Sampler Model:	PM2.5	Date: 6	7/22/15
MFC Serial No. 2	714206	Operator (Filter Collection): 5	B. Abernathy / A. Luna
		Date: 6	8/19/15

Average Conditions During Sampling Period (from met tower data)			
Avg Monthly Pressure (in. Hg)	30.77	Corrected Avg Monthly Pressure (mm Hg)	781.558
Avg Monthly Temp (deg. C) 7	26.38	Corrected Avg Monthly Temperature (deg. K)	299.54

Hi Vol Calibration Curve Relationships (station-specific)		
8	Slope (mhv) =	0.3385
9	Intercept (bhv) =	10.4031
10	Correlation Coefficient (rhv) =	0.9979

Set Points During Sampling Period		
11	SFR =	38.06
12	SSP =	37.5

Start of Current Sampling (loading)			End of Current Sampling (collection)				
Start Date/Time	13	**7/22/15 7:27**	**Stop Date/Time**	16	**8/19/15 10:35**	**Elapsed Time (min)**	**40,508**
Flow Rate (cfm)	14	**38**	**Flow Rate (cfm)**	15	**38**	**Avg Flow Rate (cfm)**	**38**

I cfm	I ml/min	I total ml
38	1,076,040	43,588,235,200

Is the collection flow rate within 10% of the loading flow rate? (Y) N

H_2S reading at collection:	0.0 ppm

Reviewed by: Cecilia Greene

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A USA Environment, L.P. Company

PM2.5 FIELD DATA FORM

Auxier & Associates, Inc.
9821 Cogdill Road, Suite 1
Knoxville, TN 37932
(865) 675-3669

Project Name:	ENG-WES	Filter No.	TFAQ102
Station Location: 1	A12	Operator (Filter Loading): 5	B. Abernathy / A. Luna
Sampler Model:	PM2.5	Date: 6	7/22/15
MFC Serial No. 2	714207	Operator (Filter Collection): 5	B. Abernathy / A. Luna
		Date: 6	8/19/15

Average Conditions During Sampling Period (from met tower data)			
Avg Monthly Pressure (in. Hg)	30.77	Corrected Avg Monthly Pressure (mm Hg)	781.558
Avg Monthly Temp (deg. C) 7	26.38	Corrected Avg Monthly Temperature (deg. K)	299.54

Hi Vol Calibration Curve Relationships (station-specific)		
8	Slope (mhv) =	0.3421
9	Intercept (bhv) =	10.4426
10	Correlation Coefficient (rhv) =	0.9995

Set Points During Sampling Period		
11	SFR =	38.06
12	SSP =	37.7

Start of Current Sampling (loading)			End of Current Sampling (collection)				
Start Date/Time	13	**7/22/15 8:14**	**Stop Date/Time**	16	**8/19/15 7:13**	**Elapsed Time (min)**	**40,259**
Flow Rate (cfm)	14	**38**	**Flow Rate (cfm)**	15	**40**	**Avg Flow Rate (cfm)**	**39**

I cfm	I ml/min	I total ml
39	1,104,357	44,460,309,200

Is the collection flow rate within 10% of the loading flow rate? (Y) N

H_2S reading at collection:	0.0 ppm

Reviewed by: Cecilia Greene

Auxier & Associates, Inc.
Radiological Health, Safety and Environmental Consulting
A USA Environment, L.P. Company

PM2.5 FIELD DATA FORM

Auxier & Associates, Inc.
9821 Cogdill Road, Suite 1
Knoxville, TN 37932
(865) 675-3669

Project Name:	ENG-WES	Filter No.	TFAQ102
Station Location: 1	A13	Operator (Filter Loading): 5	B. Abernathy / A. Luna
Sampler Model:	PM2.5	Date: 6	7/22/15
MFC Serial No. 2	714208	Operator (Filter Collection): 5	B. Abernathy / A. Luna
		Date: 6	8/19/15

Average Conditions During Sampling Period (from met tower data)			
Avg Monthly Pressure (in. Hg)	30.77	Corrected Avg Monthly Pressure (mm Hg)	781.558
Avg Monthly Temp (deg. C) 7	26.38	Corrected Avg Monthly Temperature (deg. K)	299.54

Hi Vol Calibration Curve Relationships (station-specific)		
8	Slope (mhv) =	0.3896
9	Intercept (bhv) =	9.1088
10	Correlation Coefficient (rhv) =	0.9974

Set Points During Sampling Period		
11	SFR =	38.06
12	SSP =	38.5

lost 4,774 minutes

Start of Current Sampling (loading)			End of Current Sampling (collection)				
Start Date/Time	13	7/22/15 8:34	Stop Date/Time	16	8/19/15 7:39	Elapsed Time (min)	35,491
Flow Rate (cfm)	14	39	Flow Rate (cfm)	15	37	Avg Flow Rate (cfm)	38

I cfm	I ml/min	I total ml
38	1,076,040	38,189,741,700

Is the collection flow rate within 10% of the loading flow rate? (Y) N

H_2S reading at collection:	0.0 ppm

Reviewed by: Cecilia Greene

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PM2.5 FIELD DATA FORM

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Knoxville, TN 37932
(865) 675-3669

Project Name:	ENG-WES	Filter No.	TFAQ102
Station Location: 1	A1	Operator (Filter Loading): 5	B. Abernathy / A. Luna
Sampler Model:	PM2.5	Date: 6	8/19/15
MFC Serial No. 2	713282	Operator (Filter Collection): 5	B. Abernathy / A. Luna
		Date: 6	9/16/15

Average Conditions During Sampling Period (from met tower data)			
Avg Monthly Pressure (in. Hg)	30.79	Corrected Avg Monthly Pressure (mm Hg)	782.066
Avg Monthly Temp (deg. C) 7	23.64	Corrected Avg Monthly Temperature (deg. K)	296.8

Hi Vol Calibration Curve Relationships (station-specific)		
8	Slope (mhv) =	0.3273
9	Intercept (bhv) =	12.3732
10	Correlation Coefficient (rhv) =	-0.9934

Set Points During Sampling Period		
11	SFR =	38.74
12	SSP =	40.3

Start of Current Sampling (loading)			End of Current Sampling (collection)				
Start Date/Time	**13**	**8/19/15 11:13**	**Stop Date/Time**	**16**	**9/16/15 11:17**	**Elapsed Time (min)**	**40,324**
Flow Rate (cfm)	**14**	**40**	**Flow Rate (cfm)**	**15**	**37**	**Avg Flow Rate (cfm)**	**39**

I cfm	I ml/min	I total ml
39	1,090,199	43,961,168,100

Is the collection flow rate within 10% of the loading flow rate? (Y) N

H_2S reading at collection:	0.0 ppm

Reviewed by: Cecilia Greene

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Project Name:	ENG-WES	Filter No.	TFAQ102
Station Location: 1	A2	Operator (Filter Loading): 5	
Sampler Model:	PM2.5	Date: 6	
MFC Serial No. 2	714197	Operator (Filter Collection): 5	
		Date: 6	

Average Conditions During Sampling Period (from met tower data)			
Avg Monthly Pressure (in. Hg)	30.79	Corrected Avg Monthly Pressure (mm Hg)	782.066
Avg Monthly Temp (deg. C) 7	23.64	Corrected Avg Monthly Temperature (deg. K)	296.8

Hi Vol Calibration Curve Relationships (station-specific)		
8	Slope (mhv) =	0.3532
9	Intercept (bhv) =	10.4747
10	Correlation Coefficient (rhv) =	0.9962

Set Points During Sampling Period		
11	SFR =	*
12	SSP =	*

Start of Current Sampling (loading)			End of Current Sampling (collection)				
Start Date/Time	13	*	Stop Date/Time	16	*	Elapsed Time (min)	0
Flow Rate (cfm)	14	*	Flow Rate (cfm)	15	*	Avg Flow Rate (cfm)	0

*** Area around station flooded and inaccessible. Circuit turned off, no air filter installed. Station will be relocated.**

I cfm	I ml/min	I total ml
0	0	0

Is the collection flow rate within 10% of the loading flow rate? Y N (N/A)

H_2S reading at collection:	n/a

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Project Name:	ENG-WES	Filter No.	TFAQ102
Station Location: 1	A3	Operator (Filter Loading): 5	B. Abernathy / A. Luna
Sampler Model:	PM2.5	Date: 6	8/19/15
MFC Serial No. 2	714198	Operator (Filter Collection): 5	B. Abernathy / A. Luna
		Date: 6	9/17/15

Average Conditions During Sampling Period (from met tower data)			
Avg Monthly Pressure (in. Hg)	30.79	Corrected Avg Monthly Pressure (mm Hg)	782.066
Avg Monthly Temp (deg. C) 7	23.73	Corrected Avg Monthly Temperature (deg. K)	296.89

Hi Vol Calibration Curve Relationships (station-specific)		
8	Slope (mhv) =	0.3498
9	Intercept (bhv) =	10.7009
10	Correlation Coefficient (rhv) =	0.9977

Set Points During Sampling Period		
11	SFR =	38.74
12	SSP =	39.0

Start of Current Sampling (loading)			End of Current Sampling (collection)				
Start Date/Time	13	8/19/15 8:59	Stop Date/Time	16	9/17/15 8:46	Elapsed Time (min)	41,747
Flow Rate (cfm)	14	39	Flow Rate (cfm)	15	37	Avg Flow Rate (cfm)	38

I cfm	I ml/min	I total ml
38	1,076,040	44,921,449,000

Is the collection flow rate within 10% of the loading flow rate? (Y) N

H_2S reading at collection: 0.0 ppm

Reviewed by: Cecilia Greene

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Project Name:	ENG-WES	Filter No.	TFAQ102
Station Location: 1	A4	Operator (Filter Loading): 5	B. Abernathy / A. Luna
Sampler Model:	PM2.5	Date: 6	8/19/15
MFC Serial No. 2	714199	Operator (Filter Collection): 5	B. Abernathy / A. Luna
		Date: 6	9/17/15

Average Conditions During Sampling Period (from met tower data)			
Avg Monthly Pressure (in. Hg)	30.79	Corrected Avg Monthly Pressure (mm Hg)	782.066
Avg Monthly Temp (deg. C) 7	23.73	Corrected Avg Monthly Temperature (deg. K)	296.89

Hi Vol Calibration Curve Relationships (station-specific)		
8	Slope (mhv) =	0.3539
9	Intercept (bhv) =	11.4688
10	Correlation Coefficient (rhv) =	0.9938

Set Points During Sampling Period		
11	SFR =	38.74
12	SSP =	40.5

Start of Current Sampling (loading)			End of Current Sampling (collection)				
Start Date/Time	**13**	**8/19/15 8:26**	**Stop Date/Time**	**16**	**9/17/15 9:02**	**Elapsed Time (min)**	**41,796**
Flow Rate (cfm)	**14**	**41**	**Flow Rate (cfm)**	**15**	**38**	**Avg Flow Rate (cfm)**	**40**

I cfm	I ml/min	I total ml
40	1,118,515	46,749,471,400

Is the collection flow rate within 10% of the loading flow rate? (Y) N

H_2S reading at collection:	0.0 ppm

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Project Name:	ENG-WES	Filter No.	TFAQ102
Station Location: 1	A5	Operator (Filter Loading): 5	B. Abernathy / A. Luna
Sampler Model:	PM2.5	Date: 6	8/19/15
MFC Serial No. 2	714200	Operator (Filter Collection): 5	B. Abernathy / A. Luna
		Date: 6	9/16/15

Average Conditions During Sampling Period (from met tower data)			
Avg Monthly Pressure (in. Hg)	30.79	Corrected Avg Monthly Pressure (mm Hg)	782.066
Avg Monthly Temp (deg. C) 7	23.64	Corrected Avg Monthly Temperature (deg. K)	296.8

Hi Vol Calibration Curve Relationships (station-specific)		
8	Slope (mhv) =	0.3661
9	Intercept (bhv) =	10.2935
10	Correlation Coefficient (rhv) =	0.9975

Set Points During Sampling Period		
11	SFR =	38.74
12	SSP =	39.4

Start of Current Sampling (loading)			End of Current Sampling (collection)				
Start Date/Time	13	8/19/15 9:58	Stop Date/Time	16	9/16/15 13:05	Elapsed Time (min)	40,507
Flow Rate (cfm)	14	39	Flow Rate (cfm)	15	38	Avg Flow Rate (cfm)	39

I cfm	I ml/min	I total ml
39	1,090,199	44,160,674,500

Is the collection flow rate within 10% of the loading flow rate? (Y) N

H_2S reading at collection:	0.0 ppm

Reviewed by: Cecilia Greene

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Project Name:	ENG-WES	Filter No.	TFAQ102
Station Location: 1	A6	Operator (Filter Loading): 5	B. Abernathy / A. Luna
Sampler Model:	PM2.5	Date: 6	8/19/15
MFC Serial No. 2	714201	Operator (Filter Collection): 5	B. Abernathy / A. Luna
		Date: 6	9/16/15

Average Conditions During Sampling Period (from met tower data)			
Avg Monthly Pressure (in. Hg)	30.79	Corrected Avg Monthly Pressure (mm Hg)	782.066
Avg Monthly Temp (deg. C) 7	23.64	Corrected Avg Monthly Temperature (deg. K)	296.8

Hi Vol Calibration Curve Relationships (station-specific)		
8	Slope (mhv) =	0.3685
9	Intercept (bhv) =	10.2801
10	Correlation Coefficient (rhv) =	0.9981

Set Points During Sampling Period		
11	SFR =	38.74
12	SSP =	39.5

Start of Current Sampling (loading)			End of Current Sampling (collection)				
Start Date/Time	13	**8/19/15 11:02**	**Stop Date/Time**	16	**9/16/15 11:40**	**Elapsed Time (min)**	**40,358**
Flow Rate (cfm)	14	**40**	**Flow Rate (cfm)**	15	**40**	**Avg Flow Rate (cfm)**	**40**

I cfm	I ml/min	I total ml
40	1,132,674	45,712,451,800

Is the collection flow rate within 10% of the loading flow rate? (Y) N

H_2S reading at collection: 0.0 ppm

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Project Name:	ENG-WES	Filter No.	TFAQ102
Station Location: 1	A7	Operator (Filter Loading): 5	B. Abernathy / A. Luna
Sampler Model:	PM2.5	Date: 6	8/19/15
MFC Serial No. 2	714202	Operator (Filter Collection): 5	B. Abernathy / A. Luna
		Date: 6	9/16/15

Average Conditions During Sampling Period (from met tower data)

Avg Monthly Pressure (in. Hg)	30.79	Corrected Avg Monthly Pressure (mm Hg)	782.066
Avg Monthly Temp (deg. C) 7	23.64	Corrected Avg Monthly Temperature (deg. K)	296.8

Hi Vol Calibration Curve Relationships (station-specific)

8	Slope (mhv) =	0.3644
9	Intercept (bhv) =	10.1895
10	Correlation Coefficient (rhv) =	-0.9905

Set Points During Sampling Period

11	SFR =	38.74
12	SSP =	39.1

Start of Current Sampling (loading)			End of Current Sampling (collection)				
Start Date/Time	**13**	**8/19/15 9:42**	**Stop Date/Time**	**16**	**9/16/15 13:20**	**Elapsed Time (min)**	**40,538**
Flow Rate (cfm)	**14**	**39**	**Flow Rate (cfm)**	**15**	**35**	**Avg Flow Rate (cfm)**	**37**

I cfm	I ml/min	I total ml
37	1,047,723	42,472,608,100

Is the collection flow rate within 10% of the loading flow rate? Y (N)

H_2S reading at collection: 0.0 ppm

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Project Name:	ENG-WES	Filter No.	TFAQ102
Station Location: 1	A8	Operator (Filter Loading): 5	B. Abernathy / A. Luna
Sampler Model:	PM2.5	Date: 6	8/19/15
MFC Serial No. 2	714203	Operator (Filter Collection): 5	B. Abernathy / A. Luna
		Date: 6	9/16/15

Average Conditions During Sampling Period (from met tower data)			
Avg Monthly Pressure (in. Hg)	30.79	Corrected Avg Monthly Pressure (mm Hg)	782.066
Avg Monthly Temp (deg. C) 7	23.64	Corrected Avg Monthly Temperature (deg. K)	296.8

Hi Vol Calibration Curve Relationships (station-specific)		
8	Slope (mhv) =	0.3918
9	Intercept (bhv) =	8.4611
10	Correlation Coefficient (rhv) =	-0.9977

Set Points During Sampling Period		
11	SFR =	38.74
12	SSP =	38.0

Start of Current Sampling (loading)			End of Current Sampling (collection)				
Start Date/Time	13	8/19/15 10:14	Stop Date/Time	16	9/16/15 12:50	Elapsed Time (min)	40,476
Flow Rate (cfm)	14	38	Flow Rate (cfm)	15	40	Avg Flow Rate (cfm)	39

I cfm	I ml/min	I total ml
39	1,104,357	44,699,954,600

Is the collection flow rate within 10% of the loading flow rate? (Y) N

H_2S reading at collection:	0.0 ppm

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Project Name:	ENG-WES	Filter No.	TFAQ102
Station Location: 1	A9	Operator (Filter Loading): 5	B. Abernathy / A. Luna
Sampler Model:	PM2.5	Date: 6	8/19/15
MFC Serial No. 2	714204	Operator (Filter Collection): 5	B. Abernathy / A. Luna
		Date: 6	9/17/15

Average Conditions During Sampling Period (from met tower data)			
Avg Monthly Pressure (in. Hg)	30.79	Corrected Avg Monthly Pressure (mm Hg)	782.066
Avg Monthly Temp (deg. C) 7	23.73	Corrected Avg Monthly Temperature (deg. K)	296.89

Hi Vol Calibration Curve Relationships (station-specific)		
8	Slope (mhv) =	0.4928
9	Intercept (bhv) =	4.2455
10	Correlation Coefficient (rhv) =	0.9958

Set Points During Sampling Period		
11	SFR =	38.74
12	SSP =	37.5

Start of Current Sampling (loading)			End of Current Sampling (collection)				
Start Date/Time	**13**	**8/19/15 8:03**	**Stop Date/Time**	**16**	**9/17/15 9:20**	**Elapsed Time (min)**	**41,837**
Flow Rate (cfm)	**14**	**38**	**Flow Rate (cfm)**	**15**	**45**	**Avg Flow Rate (cfm)**	**42**

I cfm	I ml/min	I total ml
42	1,175,149	49,164,714,300

Is the collection flow rate within 10% of the loading flow rate? Y (N)

H_2S reading at collection:	0.0 ppm

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Project Name:	ENG-WES	Filter No.	TFAQ102
Station Location: 1	A10	Operator (Filter Loading): 5	B. Abernathy / A. Luna
Sampler Model:	PM2.5	Date: 6	8/19/15
MFC Serial No. 2	714205	Operator (Filter Collection): 5	B. Abernathy / A. Luna
		Date: 6	9/17/15

Average Conditions During Sampling Period (from met tower data)			
Avg Monthly Pressure (in. Hg)	30.79	Corrected Avg Monthly Pressure (mm Hg)	782.066
Avg Monthly Temp (deg. C) 7	23.73	Corrected Avg Monthly Temperature (deg. K)	296.89

Hi Vol Calibration Curve Relationships (station-specific)		
8	Slope (mhv) =	0.3752
9	Intercept (bhv) =	9.8568
10	Correlation Coefficient (rhv) =	0.9902

Set Points During Sampling Period		
11	SFR =	38.74
12	SSP =	39.2

Start of Current Sampling (loading)			End of Current Sampling (collection)				
Start Date/Time	**13**	**8/19/15 9:26**	**Stop Date/Time**	**16**	**9/17/15 9:46**	**Elapsed Time (min)**	**41,780**
Flow Rate (cfm)	**14**	**39**	**Flow Rate (cfm)**	**15**	**39**	**Avg Flow Rate (cfm)**	**39**

I cfm	I ml/min	I total ml
39	1,104,357	46,140,036,200

Is the collection flow rate within 10% of the loading flow rate? (Y) N

H_2S reading at collection:	0.0 ppm

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Project Name:	ENG-WES	Filter No.	TFAQ102
Station Location: 1	A11	Operator (Filter Loading): 5	B. Abernathy / A. Luna
Sampler Model:	PM2.5	Date: 6	8/19/15
MFC Serial No. 2	714206	Operator (Filter Collection): 5	B. Abernathy / A. Luna
		Date: 6	9/16/15

Average Conditions During Sampling Period (from met tower data)			
Avg Monthly Pressure (in. Hg)	30.79	Corrected Avg Monthly Pressure (mm Hg)	782.066
Avg Monthly Temp (deg. C) 7	23.64	Corrected Avg Monthly Temperature (deg. K)	296.8

Hi Vol Calibration Curve Relationships (station-specific)		
8	Slope (mhv) =	0.3385
9	Intercept (bhv) =	10.4031
10	Correlation Coefficient (rhv) =	0.9979

Set Points During Sampling Period		
11	SFR =	38.74
12	SSP =	37.8

Start of Current Sampling (loading)			End of Current Sampling (collection)				
Start Date/Time	**13**	**8/19/15 10:37**	**Stop Date/Time**	**16**	**9/16/15 13:36**	**Elapsed Time (min)**	**40,499**
Flow Rate (cfm)	**14**	**38**	**Flow Rate (cfm)**	**15**	**37**	**Avg Flow Rate (cfm)**	**38**

I cfm	I ml/min	I total ml
38	1,061,882	43,005,148,900

Is the collection flow rate within 10% of the loading flow rate? (Y) N

H_2S reading at collection:	0.0 ppm

Reviewed by: Cecilia Greene

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PM2.5 FIELD DATA FORM

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Project Name:	ENG-WES	Filter No.	TFAQ102
Station Location: 1	A12	Operator (Filter Loading): 5	B. Abernathy / A. Luna
Sampler Model:	PM2.5	Date: 6	8/19/15
MFC Serial No. 2	714207	Operator (Filter Collection): 5	B. Abernathy / A. Luna
		Date: 6	9/17/15

Average Conditions During Sampling Period (from met tower data)			
Avg Monthly Pressure (in. Hg)	30.79	Corrected Avg Monthly Pressure (mm Hg)	782.066
Avg Monthly Temp (deg. C) 7	23.73	Corrected Avg Monthly Temperature (deg. K)	296.89

Hi Vol Calibration Curve Relationships (station-specific)		
8	Slope (mhv) =	0.3421
9	Intercept (bhv) =	10.4426
10	Correlation Coefficient (rhv) =	0.9995

Set Points During Sampling Period		
11	SFR =	38.74
12	SSP =	38.1

Start of Current Sampling (loading)			End of Current Sampling (collection)				
Start Date/Time	13	8/19/15 7:15	Stop Date/Time	16	9/17/15 8:02	Elapsed Time (min)	41,807
Flow Rate (cfm)	14	38	Flow Rate (cfm)	15	38	Avg Flow Rate (cfm)	38

I cfm	I ml/min	I total ml
38	1,076,040	44,986,011,400

Is the collection flow rate within 10% of the loading flow rate? (Y) N

H_2S reading at collection:	0.0 ppm

Reviewed by: Cecilia Greene

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Project Name:	ENG-WES	Filter No.	TFAQ102
Station Location: 1	A13	Operator (Filter Loading): 5	B. Abernathy / A. Luna
Sampler Model:	PM2.5	Date: 6	8/19/15
MFC Serial No. 2	714208	Operator (Filter Collection): 5	B. Abernathy / A. Luna
		Date: 6	9/17/15

Average Conditions During Sampling Period (from met tower data)			
Avg Monthly Pressure (in. Hg)	30.79	Corrected Avg Monthly Pressure (mm Hg)	782.066
Avg Monthly Temp (deg. C) 7	23.73	Corrected Avg Monthly Temperature (deg. K)	296.89

Hi Vol Calibration Curve Relationships (station-specific)		
8	Slope (mhv) =	0.3896
9	Intercept (bhv) =	9.1088
10	Correlation Coefficient (rhv) =	0.9974

Set Points During Sampling Period		
11	SFR =	38.74
12	SSP =	38.9

Start of Current Sampling (loading)			End of Current Sampling (collection)				
Start Date/Time	13	8/19/15 7:41	Stop Date/Time	16	9/17/15 8:20	Elapsed Time (min)	41,799
Flow Rate (cfm)	14	39	Flow Rate (cfm)	15	35	Avg Flow Rate (cfm)	37

I cfm	I ml/min	I total ml
37	1,047,723	43,793,787,200

Is the collection flow rate within 10% of the loading flow rate? (Y) N

H_2S reading at collection: 0.0 ppm

Reviewed by: Cecilia Greene

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Project Name:	ENG-WES	Filter No.	TFAQ102
Station Location: 1	A1	Operator (Filter Loading): 5	B. Abernathy / A. Luna
Sampler Model:	PM2.5	Date: 6	9/16/15
MFC Serial No. 2	713282	Operator (Filter Collection): 5	Bill Abernathy
		Date: 6	10/14/15

Average Conditions During Sampling Period (from met tower data)			
Avg Monthly Pressure (in. Hg)	30.80	Corrected Avg Monthly Pressure (mm Hg)	782.32
Avg Monthly Temp (deg. C) 7	19.44	Corrected Avg Monthly Temperature (deg. K)	292.6

Hi Vol Calibration Curve Relationships (station-specific)			
8	Slope (mhv) =	**0.3781**	9/30/2015
9	Intercept (bhv) =	**10.0159**	9/30/2015
10	Correlation Coefficient (rhv) =	**-0.9987**	9/30/2015

Set Points During Sampling Period		
11	SFR =	**39.54**
12	SSP =	**40.7**

Start of Current Sampling (loading)			End of Current Sampling (collection)				
Start Date/Time	13	**9/16/15 11:19**	**Stop Date/Time**	16	**10/14/15 14:00**	**Elapsed Time (min)**	**40,481**
Flow Rate (cfm)	14	**41**	**Flow Rate (cfm)**	15	**39**	**Avg Flow Rate (cfm)**	**40**

I cfm	I ml/min	I total ml
40	1,132,674	45,851,770,700

Is the collection flow rate within 10% of the loading flow rate? (Y) **N**

H_2S reading at collection:	<10.0 ppm

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Station relocated; power made available and new MFC calibration performed 10/6/15. New filter loaded 10/15/15 @ 11:03. NF - No filter to collect for sampling period.

Project Name:	ENG-WES	Filter No.	TFAQ102
Station Location: 1	A2	Operator (Filter Loading): 5	Bill Abernathy
Sampler Model:	PM2.5	Date: 6	10/15/15 11:03
MFC Serial No. 2	710989	Operator (Filter Collection): 5	NF
		Date: 6	NF

Average Conditions During Sampling Period (from met tower data)			
Avg Monthly Pressure (in. Hg)	NF	Corrected Avg Monthly Pressure (mm Hg)	#VALUE!
Avg Monthly Temp (deg. C) 7	NF	Corrected Avg Monthly Temperature (deg. K)	#VALUE!

Hi Vol Calibration Curve Relationships (station-specific)			
8	Slope (mhv) =	**0.3939**	10/6/2015
9	Intercept (bhv) =	**8.9471**	10/6/2015
10	Correlation Coefficient (rhv) =	**-0.9996**	10/6/2015

Set Points During Sampling Period		
11	SFR =	**NF**
12	SSP =	**NF**

Start of Current Sampling (loading)			End of Current Sampling (collection)				
Start Date/Time	13	**NF**	**Stop Date/Time**	16	**NF**	**Elapsed Time (min)**	**0**
Flow Rate (cfm)	14	**NF**	**Flow Rate (cfm)**	15	**NF**	**Avg Flow Rate (cfm)**	**0**

I cfm	I ml/min	I total ml
0	0	0

Is the collection flow rate within 10% of the loading flow rate? **Y** **N** **(N/A)**

H_2S reading at collection:	n/a

Reviewed by: Cecilia Greene

Auxier & Associates, Inc.
Radiological Health, Safety and Environmental Consulting
A USA Environment, L.P. Company

PM2.5 FIELD DATA FORM

Auxier & Associates, Inc.
9821 Cogdill Road, Suite 1
Knoxville, TN 37932
(865) 675-3669

Project Name:	ENG-WES	Filter No.	TFAQ102
Station Location: 1	A3	Operator (Filter Loading): 5	B. Abernathy / A. Luna
Sampler Model:	PM2.5	Date: 6	9/17/15
MFC Serial No. 2	714198	Operator (Filter Collection): 5	Bill Abernathy
		Date: 6	10/15/15

Average Conditions During Sampling Period (from met tower data)			
Avg Monthly Pressure (in. Hg)	30.80	Corrected Avg Monthly Pressure (mm Hg)	782.32
Avg Monthly Temp (deg. C) 7	19.44	Corrected Avg Monthly Temperature (deg. K)	292.6

Hi Vol Calibration Curve Relationships (station-specific)			
8	Slope (mhv) =	**0.4110**	9/30/2015
9	Intercept (bhv) =	**7.6685**	9/30/2015
10	Correlation Coefficient (rhv) =	**-0.9990**	9/30/2015

Set Points During Sampling Period		
11	SFR =	**39.39**
12	SSP =	**39.4**

Start of Current Sampling (loading)			End of Current Sampling (collection)				
Start Date/Time	13	**9/17/15 8:48**	**Stop Date/Time**	16	**10/15/15 10:40**	**Elapsed Time (min)**	**40,432**
Flow Rate (cfm)	14	**39**	**Flow Rate (cfm)**	15	**37**	**Avg Flow Rate (cfm)**	**38**

I cfm	I ml/min	I total ml
38	1,076,040	43,506,456,200

Is the collection flow rate within 10% of the loading flow rate? (Y) N

H_2S reading at collection: <10.0 ppm

Reviewed by: Cecilia Greene

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PM2.5 FIELD DATA FORM

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9821 Cogdill Road, Suite 1
Knoxville, TN 37932
(865) 675-3669

Project Name:	ENG-WES	Filter No.	TFAQ102
Station Location: 1	A4	Operator (Filter Loading): 5	B. Abernathy / A. Luna
Sampler Model:	PM2.5	Date: 6	9/17/15
MFC Serial No. 2	714199	Operator (Filter Collection): 5	Bill Abernathy
		Date: 6	10/15/15

Average Conditions During Sampling Period (from met tower data)			
Avg Monthly Pressure (in. Hg)	30.80	Corrected Avg Monthly Pressure (mm Hg)	782.32
Avg Monthly Temp (deg. C) 7	19.44	Corrected Avg Monthly Temperature (deg. K)	292.6

Hi Vol Calibration Curve Relationships (station-specific)			
8	Slope (mhv) =	**0.3658**	9/30/2015
9	Intercept (bhv) =	**10.3229**	9/30/2015
10	Correlation Coefficient (rhv) =	**-0.9991**	9/30/2015

Set Points During Sampling Period		
11	SFR =	**39.39**
12	SSP =	**40.9**

Start of Current Sampling (loading)			End of Current Sampling (collection)				
Start Date/Time	13	**9/17/15 9:04**	**Stop Date/Time**	16	**10/15/15 10:10**	**Elapsed Time (min)**	**40,386**
Flow Rate (cfm)	14	**41**	**Flow Rate (cfm)**	15	**39**	**Avg Flow Rate (cfm)**	**40**

I cfm	I ml/min	I total ml
40	1,132,674	45,744,166,700

Is the collection flow rate within 10% of the loading flow rate? (Y) **N**

H_2S reading at collection: <10.0 ppm

Reviewed by: Cecilia Greene

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PM2.5 FIELD DATA FORM

Auxier & Associates, Inc.
9821 Cogdill Road, Suite 1
Knoxville, TN 37932
(865) 675-3669

Project Name:	ENG-WES	Filter No.	TFAQ102
Station Location: 1	A5	Operator (Filter Loading): 5	B. Abernathy / A. Luna
Sampler Model:	PM2.5	Date: 6	9/16/15
MFC Serial No. 2	714200	Operator (Filter Collection): 5	Bill Abernathy
		Date: 6	10/14/15

Average Conditions During Sampling Period (from met tower data)			
Avg Monthly Pressure (in. Hg)	30.80	Corrected Avg Monthly Pressure (mm Hg)	782.32
Avg Monthly Temp (deg. C) 7	19.44	Corrected Avg Monthly Temperature (deg. K)	292.6

Hi Vol Calibration Curve Relationships (station-specific)			
8	Slope (mhv) =	**0.3815**	9/29/2015
9	Intercept (bhv) =	**9.8325**	9/29/2015
10	Correlation Coefficient (rhv) =	**-0.9994**	9/29/2015

Set Points During Sampling Period		
11	SFR =	**39.54**
12	SSP =	**39.8**

Start of Current Sampling (loading)			End of Current Sampling (collection)				
Start Date/Time	13	**9/16/15 13:07**	**Stop Date/Time**	16	**10/14/15 15:30**	**Elapsed Time (min)**	**40,463**
Flow Rate (cfm)	14	**40**	**Flow Rate (cfm)**	15	**39**	**Avg Flow Rate (cfm)**	**40**

I cfm	I ml/min	I total ml
40	1,118,515	45,258,490,300

Is the collection flow rate within 10% of the loading flow rate? (Y) **N**

H_2S reading at collection:	<10.0 ppm

Reviewed by: Cecilia Greene

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PM2.5 FIELD DATA FORM

Auxier & Associates, Inc.
9821 Cogdill Road, Suite 1
Knoxville, TN 37932
(865) 675-3669

Project Name:	ENG-WES	Filter No.	TFAQ102
Station Location: 1	A6	Operator (Filter Loading): 5	B. Abernathy / A. Luna
Sampler Model:	PM2.5	Date: 6	9/16/15
MFC Serial No. 2	714201	Operator (Filter Collection): 5	Bill Abernathy
		Date: 6	10/14/15

Average Conditions During Sampling Period (from met tower data)			
Avg Monthly Pressure (in. Hg)	30.80	Corrected Avg Monthly Pressure (mm Hg)	782.32
Avg Monthly Temp (deg. C) 7	19.44	Corrected Avg Monthly Temperature (deg. K)	292.6

Hi Vol Calibration Curve Relationships (station-specific)			
8	Slope (mhv) =	**0.3984**	9/30/2015
9	Intercept (bhv) =	**8.8211**	9/30/2015
10	Correlation Coefficient (rhv) =	**-0.9994**	9/30/2015

Set Points During Sampling Period		
11	SFR =	**39.54**
12	SSP =	**40.0**

Start of Current Sampling (loading)			End of Current Sampling (collection)				
Start Date/Time	13	**9/16/15 11:42**	**Stop Date/Time**	16	**10/14/15 13:20**	**Elapsed Time (min)**	**40,418**
Flow Rate (cfm)	14	**40**	**Flow Rate (cfm)**	15	**37**	**Avg Flow Rate (cfm)**	**39**

I cfm	I ml/min	I total ml
39	1,090,199	44,063,646,800

Is the collection flow rate within 10% of the loading flow rate? (Y) N

H_2S reading at collection: <10.0 ppm

Reviewed by: Cecilia Greene

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PM2.5 FIELD DATA FORM

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9821 Cogdill Road, Suite 1
Knoxville, TN 37932
(865) 675-3669

Project Name:	ENG-WES	Filter No.	TFAQ102
Station Location: 1	A7	Operator (Filter Loading): 5	B. Abernathy / A. Luna
Sampler Model:	PM2.5	Date: 6	9/16/15
MFC Serial No. 2	714202	Operator (Filter Collection): 5	Bill Abernathy
		Date: 6	10/14/15

Average Conditions During Sampling Period (from met tower data)			
Avg Monthly Pressure (in. Hg)	30.80	Corrected Avg Monthly Pressure (mm Hg)	782.32
Avg Monthly Temp (deg. C) 7	19.44	Corrected Avg Monthly Temperature (deg. K)	292.6

Hi Vol Calibration Curve Relationships (station-specific)			
8	Slope (mhv) =	**0.4029**	9/29/2015
9	Intercept (bhv) =	**8.0948**	9/29/2015
10	Correlation Coefficient (rhv) =	**-0.9989**	9/29/2015

Set Points During Sampling Period		
11	SFR =	**39.54**
12	SSP =	**39.6**

Start of Current Sampling (loading)			End of Current Sampling (collection)				
Start Date/Time	13	**9/16/15 13:22**	**Stop Date/Time**	16	**10/14/15 15:06**	**Elapsed Time (min)**	**40,424**
Flow Rate (cfm)	14	**40**	**Flow Rate (cfm)**	15	**39**	**Avg Flow Rate (cfm)**	**40**

I cfm	I ml/min	I total ml
40	1,118,515	45,214,868,200

Is the collection flow rate within 10% of the loading flow rate? (Y) **N**

H_2S reading at collection: <10.0 ppm

Reviewed by: Cecilia Greene

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PM2.5 FIELD DATA FORM

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Knoxville, TN 37932
(865) 675-3669

Project Name:	ENG-WES	Filter No.	TFAQ102
Station Location: 1	A8	Operator (Filter Loading): 5	B. Abernathy / A. Luna
Sampler Model:	PM2.5	Date: 6	9/16/15
MFC Serial No. 2	714203	Operator (Filter Collection): 5	Bill Abernathy
		Date: 6	10/14/15

Average Conditions During Sampling Period (from met tower data)			
Avg Monthly Pressure (in. Hg)	30.80	Corrected Avg Monthly Pressure (mm Hg)	782.32
Avg Monthly Temp (deg. C) 7	19.44	Corrected Avg Monthly Temperature (deg. K)	292.6

Hi Vol Calibration Curve Relationships (station-specific)			
8	Slope (mhv) =	**0.3924**	9/29/2015
9	Intercept (bhv) =	**8.7365**	9/29/2015
10	Correlation Coefficient (rhv) =	**-0.9994**	9/29/2015

Set Points During Sampling Period		
11	SFR =	**39.54**
12	SSP =	**38.5**

Start of Current Sampling (loading)			End of Current Sampling (collection)				
Start Date/Time	13	**9/16/15 12:52**	**Stop Date/Time**	16	**10/14/15 16:28**	**Elapsed Time (min)**	**40,536**
Flow Rate (cfm)	14	**39**	**Flow Rate (cfm)**	15	**40**	**Avg Flow Rate (cfm)**	**40**

I cfm	I ml/min	I total ml
40	1,118,515	45,340,141,900

Is the collection flow rate within 10% of the loading flow rate? (Y) N

H_2S reading at collection:	<10.0 ppm

Reviewed by: Cecilia Greene

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PM2.5 FIELD DATA FORM

Auxier & Associates, Inc.
9821 Cogdill Road, Suite 1
Knoxville, TN 37932
(865) 675-3669

Project Name:	ENG-WES	Filter No.	TFAQ102
Station Location: 1	A9	Operator (Filter Loading): 5	B. Abernathy / A. Luna
Sampler Model:	PM2.5	Date: 6	9/17/15
MFC Serial No. 2	714204	Operator (Filter Collection): 5	Bill Abernathy
		Date: 6	10/15/15

Average Conditions During Sampling Period (from met tower data)			
Avg Monthly Pressure (in. Hg)	30.80	Corrected Avg Monthly Pressure (mm Hg)	782.32
Avg Monthly Temp (deg. C) 7	19.44	Corrected Avg Monthly Temperature (deg. K)	292.6

Hi Vol Calibration Curve Relationships (station-specific)			
8	Slope (mhv) =	**0.3788**	9/30/2015
9	Intercept (bhv) =	**9.2254**	9/30/2015
10	Correlation Coefficient (rhv) =	**-0.9980**	9/30/2015

Set Points During Sampling Period		
11	SFR =	**39.39**
12	SSP =	**38.1**

Start of Current Sampling (loading)			End of Current Sampling (collection)				
Start Date/Time	13	**9/17/15 9:22**	**Stop Date/Time**	16	**10/15/15 9:46**	**Elapsed Time (min)**	**40,344**
Flow Rate (cfm)	14	**38**	**Flow Rate (cfm)**	15	**47**	**Avg Flow Rate (cfm)**	**43**

I cfm	I ml/min	I total ml
43	1,203,466	48,552,631,500

Is the collection flow rate within 10% of the loading flow rate? **Y** (**N**)

H_2S reading at collection: <10.0 ppm

Reviewed by: Cecilia Greene

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PM2.5 FIELD DATA FORM

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9821 Cogdill Road, Suite 1
Knoxville, TN 37932
(865) 675-3669

Project Name:	ENG-WES	Filter No.	TFAQ102
Station Location: 1	A10	Operator (Filter Loading): 5	B. Abernathy / A. Luna
Sampler Model:	PM2.5	Date: 6	9/17/15
MFC Serial No. 2	714205	Operator (Filter Collection): 5	Bill Abernathy
		Date: 6	10/15/15

Average Conditions During Sampling Period (from met tower data)			
Avg Monthly Pressure (in. Hg)	30.80	Corrected Avg Monthly Pressure (mm Hg)	782.32
Avg Monthly Temp (deg. C) 7	19.44	Corrected Avg Monthly Temperature (deg. K)	292.6

Hi Vol Calibration Curve Relationships (station-specific)			
8	Slope (mhv) =	**0.3422**	9/29/2015
9	Intercept (bhv) =	**10.7212**	9/29/2015
10	Correlation Coefficient (rhv) =	**-0.9983**	9/29/2015

Set Points During Sampling Period		
11	SFR =	**39.39**
12	SSP =	**39.7**

Start of Current Sampling (loading)			End of Current Sampling (collection)				
Start Date/Time	13	**9/17/15 9:48**	**Stop Date/Time**	16	**10/15/15 9:16**	**Elapsed Time (min)**	**40,288**
Flow Rate (cfm)	14	**40**	**Flow Rate (cfm)**	15	**35**	**Avg Flow Rate (cfm)**	**38**

I cfm	I ml/min	I total ml
38	1,061,882	42,781,091,800

Is the collection flow rate within 10% of the loading flow rate? **Y** (**N**)

H_2S reading at collection: <10.0 ppm

Reviewed by: Cecilia Greene

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PM2.5 FIELD DATA FORM

Auxier & Associates, Inc.
9821 Cogdill Road, Suite 1
Knoxville, TN 37932
(865) 675-3669

Project Name:	ENG-WES	Filter No.	TFAQ102
Station Location: 1	A11	Operator (Filter Loading): 5	B. Abernathy / A. Luna
Sampler Model:	PM2.5	Date: 6	9/16/15
MFC Serial No. 2	714206	Operator (Filter Collection): 5	Bill Abernathy
		Date: 6	10/14/15

Average Conditions During Sampling Period (from met tower data)			
Avg Monthly Pressure (in. Hg)	30.80	Corrected Avg Monthly Pressure (mm Hg)	782.32
Avg Monthly Temp (deg. C) 7	19.44	Corrected Avg Monthly Temperature (deg. K)	292.6

Hi Vol Calibration Curve Relationships (station-specific)			
8	Slope (mhv) =	**0.4157**	9/29/2015
9	Intercept (bhv) =	**7.3309**	9/29/2015
10	Correlation Coefficient (rhv) =	**-0.9997**	9/29/2015

Set Points During Sampling Period		
11	SFR =	**39.54**
12	SSP =	**38.3**

Start of Current Sampling (loading)			End of Current Sampling (collection)				
Start Date/Time	13	**9/16/15 13:38**	**Stop Date/Time**	16	**10/14/15 14:40**	**Elapsed Time (min)**	**40,382**
Flow Rate (cfm)	14	**38**	**Flow Rate (cfm)**	15	**36**	**Avg Flow Rate (cfm)**	**37**

I cfm	I ml/min	I total ml
37	1,047,723	42,309,163,300

Is the collection flow rate within 10% of the loading flow rate? (Y) **N**

H_2S reading at collection:	<10.0 ppm

Reviewed by: Cecilia Greene

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PM2.5 FIELD DATA FORM

Auxier & Associates, Inc.
9821 Cogdill Road, Suite 1
Knoxville, TN 37932
(865) 675-3669

Project Name:	ENG-WES	Filter No.	TFAQ102
Station Location: 1	A12	Operator (Filter Loading): 5	B. Abernathy / A. Luna
Sampler Model:	PM2.5	Date: 6	9/17/15
MFC Serial No. 2	714207	Operator (Filter Collection): 5	Bill Abernathy
		Date: 6	10/15/15

Average Conditions During Sampling Period (from met tower data)			
Avg Monthly Pressure (in. Hg)	30.80	Corrected Avg Monthly Pressure (mm Hg)	782.32
Avg Monthly Temp (deg. C) 7	19.44	Corrected Avg Monthly Temperature (deg. K)	292.6

Hi Vol Calibration Curve Relationships (station-specific)			
8	Slope (mhv) =	**0.3132**	9/29/2015
9	Intercept (bhv) =	**11.9178**	9/29/2015
10	Correlation Coefficient (rhv) =	**-0.9989**	9/29/2015

Set Points During Sampling Period		
11	SFR =	**39.39**
12	SSP =	**38.5**

Start of Current Sampling (loading)			End of Current Sampling (collection)				
Start Date/Time	13	**9/17/15 8:04**	**Stop Date/Time**	16	**10/15/15 8:20**	**Elapsed Time (min)**	**40,336**
Flow Rate (cfm)	14	**39**	**Flow Rate (cfm)**	15	**38**	**Avg Flow Rate (cfm)**	**39**

I cfm	I ml/min	I total ml
39	1,090,199	43,974,250,500

Is the collection flow rate within 10% of the loading flow rate? (Y) **N**

H_2S reading at collection:	<10.0 ppm

Reviewed by: Cecilia Greene

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PM2.5 FIELD DATA FORM

Auxier & Associates, Inc.
9821 Cogdill Road, Suite 1
Knoxville, TN 37932
(865) 675-3669

Project Name:	ENG-WES	Filter No.	TFAQ102
Station Location: 1	A13	Operator (Filter Loading): 5	B. Abernathy / A. Luna
Sampler Model:	PM2.5	Date: 6	9/17/15
MFC Serial No. 2	714208	Operator (Filter Collection): 5	Bill Abernathy
		Date: 6	10/15/15

Average Conditions During Sampling Period (from met tower data)			
Avg Monthly Pressure (in. Hg)	30.80	Corrected Avg Monthly Pressure (mm Hg)	782.32
Avg Monthly Temp (deg. C) 7	19.44	Corrected Avg Monthly Temperature (deg. K)	292.6

Hi Vol Calibration Curve Relationships (station-specific)			
8	Slope (mhv) =	**0.3146**	9/29/2015
9	Intercept (bhv) =	**12.1135**	9/29/2015
10	Correlation Coefficient (rhv) =	**-0.9985**	9/29/2015

Set Points During Sampling Period		
11	SFR =	**39.39**
12	SSP =	**39.4**

Start of Current Sampling (loading)			End of Current Sampling (collection)				
Start Date/Time	13	**9/17/15 8:22**	**Stop Date/Time**	16	**10/15/15 8:47**	**Elapsed Time (min)**	**40,345**
Flow Rate (cfm)	14	**39**	**Flow Rate (cfm)**	15	**41**	**Avg Flow Rate (cfm)**	**40**

I cfm	I ml/min	I total ml
40	1,132,674	45,697,727,000

Is the collection flow rate within 10% of the loading flow rate? (Y) **N**

H_2S reading at collection:	<10.0 ppm

Reviewed by: Cecilia Greene

APPENDIX J

CHAINS OF CUSTODY

tody Record

№ 1604

Eberline Services
601 Scarboro Road
Oak Ridge, TN 37830
(865) 481-0683 Phone • (865) 483-4621 Fax

EBERLINE SERVICES

Assoc.
t, Inc.
75-3669
3677

Project Number:
Sampler (Print Name): BILL ABERNATHY 1
Sampler (Print Name): ALEX LUNA
Shipment Method: FedEx
Airbill Number: 7743 2810 1457 2
Laboratory Receiving: 601 Scarboro Road, Oak Ridge, TN 37830 (865) 481-0683

Analysis Requested: Gross alpha, Gross beta

Purchase Order #:

3 Sample Date	4 Sample Time	Sample Matrix	Number of Containers	Gross alpha	Gross beta	Comments, Special Instructions, etc.	Lab Sample ID (to be completed by lab)
8/19/15	1111	air filter	1	X	X	lab : select one of the filters at random (not the field blank) and split it for a field duplicate.	
~~8/19/15~~	~~1111~~	~~air filter~~	~~1~~	~~X~~	~~X~~		
8/19/15	0857	air filter	1	X	X		
8/19/15	0824	air filter	1	X	X		
8/19/15	0956	air filter	1	X	X		
8/19/15	1100	air filter	1	X	X		
8/19/15	0940	air filter	1	X	X		
8/19/15	1012	air filter	1	X	X		
8/19/15	0801	air filter	1	X	X		
8/19/15	0924	air filter	1	X	X		
8/19/15	1035	air filter	1	X	X		
8/19/15	0713	air filter	1	X	X		
8/19/15	0739	air filter	1	X	X		
8/19/15	1035	air filter	1	X	X		

Received by: (Signature)	Date: 7	Time: 8
6 FEDEX 7743 2810 1457	8/20/15	1500
Received by: (Signature)	Date:	Time:
Received by: (Signature)	Date:	Time:

Sample Custodian Remarks (Completed By Laboratory):

QA/QC Level		Turnaround	
Level IV	☒		
Level I	☐	Routine	☒
Level II	☐	24 Hour	☐
Level III	☐	1 Week	☐
Other	☐	Other _____	

Sample Receipt	
Total # Containers Received?	
COC Seals Present?	
COC Seals Intact?	
Received Containers Intact?	
Temperature?	

Chain of Custody Record

№ 1604

Eberline Services
601 Scarboro Road
Oak Ridge, TN 37830
(865) 481-0683 Phone • (865) 483-4621 Fax

Project Name: Westlake Landfill	Project Number:
Send Report To: EMSI / Auxier & Assoc.	Sampler (Print Name): BILL ABERNATHY 1
Address: Environmental Management Support, Inc. 7220 W. Jefferson Ave., Suite 406 Lakewood, CO 80235	Sampler (Print Name): ALEX LUNA
Auxier & Associates, Inc. 9821 Cogdill Road, Suite 1 Knoxville, TN 37932	Shipment Method: FedEx
Phone: EMSI (303) 940-3426 / A & A (865) 675-3669	Airbill Number: 7745 3175 4014 2
Fax: EMSI (303) 940-3422 / A & A (865) 675-3677	Laboratory Receiving: 601 Scarboro Road Oak Ridge, TN 37830 (865) 481-0683

Field Sample ID	3 Sample Date	4 Sample Time	Sample Matrix	Number of Containers	Analysis Requested: Gross alpha	Gross beta	Purc Orde	Comment Instructi
ENGWESA001	9/16/15	1117	air filter	1	X	X		
~~ENGWESA002~~			~~air filter~~	~~1~~	~~X~~	~~X~~		
ENGWESA003	9/17/15	846	air filter	1	X	X		
ENGWESA004	9/17/15	902	air filter	1	X	X		
ENGWESA005	9/16/15	1305	air filter	1	X	X		
ENGWESA006	9/16/15	1140	air filter	1	X	X		
ENGWESA007	9/16/15	1320	air filter	1	X	X		
ENGWESA008	9/16/15	1250	air filter	1	X	X		
ENGWESA009	9/17/15	920	air filter	1	X	X		
ENGWESA010	9/17/15	946	air filter	1	X	X		
ENGWESA011	9/16/15	1336	air filter	1	X	X		
ENGWESA012	9/17/15	802	air filter	1	X	X		
ENGWESA013	9/17/15	820	air filter	1	X	X		
Field Blank	9/16/15	1140	air filter	1	X	X		

lab : select one of the filters at random (not the

Relinquished by: (Signature)	Received by: (Signature)	Date: 7	Time: 8
5	6 FEDEX 7745 3175 4014	9/17/15	1130
Relinquished by: (Signature)	Received by: (Signature)	Date:	Time:
Relinquished by: (Signature)	Received by: (Signature)	Date:	Time:

Sample Custodian Remarks (Completed By Labora

QA/QC Level		Turnaround		
Level IV	☒			Total # Contair
Level I	☐	Routine	☒	COC Seals Pr
Level II	☐	24 Hour	☐	COC Seals Int
Level III	☐	1 Week	☐	Received Cont
Other	☐	Other _____		Temperature?

Chain of Custody Record

№ 1604

Eberline Services
601 Scarboro Road
Oak Ridge, TN 37830
(865) 481-0683 Phone • (865) 483-4621 Fax

Project Name: Westlake Landfill	Project Number:
Send Report To: EMSI / Auxier & Assoc.	Sampler (Print Name): WILLIAM ABERNATHY 1
Address: Environmental Management Support, Inc. 7220 W. Jefferson Ave., Suite 406	Sampler (Print Name):
Lakewood, CO 80235 Auxier & Associates, Inc.	Shipment Method: FedEx
9821 Cogdill Road, Suite 1 Knoxville, TN 37932	Airbill Number: 7747 2558 9973 2
Phone: EMSI (303) 940-3426 / A & A (865) 675-3669	Laboratory Receiving: 601 Scarboro Road Oak Ridge, TN 37830
Fax: EMSI (303) 940-3422 / A & A (865) 675-3677	(865) 481-0683

Analysis Requested: Gross alpha, Gross beta

Field Sample ID	3 Sample Date	4 Sample Time	Sample Matrix	Number of Containers	Gross alpha	Gross beta	Comments / Instructions
ENGWESA001	10/14/15	1400	air filter	1	X	X	
~~ENGWESA002~~			~~air filter~~	~~1~~	~~X~~	~~X~~	
ENGWESA003	10/15/15	1040	air filter	1	X	X	
ENGWESA004	10/15/15	1010	air filter	1	X	X	
ENGWESA005	10/14/15	1530	air filter	1	X	X	
ENGWESA006	10/14/15	1320	air filter	1	X	X	
ENGWESA007	10/14/15	1506	air filter	1	X	X	
ENGWESA008	10/14/15	1628	air filter	1	X	X	
ENGWESA009	10/15/15	0946	air filter	1	X	X	
ENGWESA010	10/15/15	0916	air filter	1	X	X	
ENGWESA011	10/14/15	1440	air filter	1	X	X	
ENGWESA012	10/15/15	0820	air filter	1	X	X	
ENGWESA013	10/15/15	0847	air filter	1	X	X	
Field Blank	10/15/15	0820	air filter	1	X	X	

lab : select one of the filters at random (not the

Relinquished by: (Signature)	Received by: (Signature)	Date:	Time:
5	6 FEDEX 7747 2558 9973	7 10/15/15	8 1500
Relinquished by: (Signature)	Received by: (Signature)	Date:	Time:
Relinquished by: (Signature)	Received by: (Signature)	Date:	Time:

Sample Custodian Remarks (Completed By Laborat

QA/QC Level		Turnaround	
Level IV	[X]		Total # Contain
Level I	[ ]	Routine [X]	COC Seals Pre
Level II	[ ]	24 Hour [ ]	COC Seals Inta
Level III	[ ]	1 Week [ ]	Received Conta
Other	[ ]	Other _____	Temperature?

Sample Transportation Notice

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TD.
ORD

180 BLUE RAVINE ROAD, SUITE B
FOLSOM, CA 95630-4719
(916) 985-1000 FAX (916) 985-1020

Inc. / Environ. Management Support, Inc.
Eastvold Paula Easty
cgreene@auxier.com
Email paulrosasco@emsidenver.com
Knoxville TN 37932
Lakewood State CO Zip 80235
Fax A & A - (865) 675-3677 EMSI - (303) 940-3422

Project Info:
P.O. #
Project #
Project Name Westlake Landfill

Turn Around Time:
☒ Normal
☐ Rush
specify

Lab Use Only
Pressurized by:
Date:
Pressurization Gas: N_2 He

cation)	Radiello130 # 2 ~~Can #~~	Date 3 of Collection	Time 4 of Collection	Analyses Requested	Canister Pressure/Vacuum Initial	Final	Receipt	Final (psi)
	476NR	8/5/15	0917	See Appendix F sheet	na	na		
	474NR	8/5/15	0930	"	na	na		
	473NR	8/5/15	0929	"	na	na		
	475NR	8/5/15	0936	"	na	na		
	472NR	8/5/15	0943	"	na	na		
	477NR	8/5/15	0930	"	na	na		
K	525NR	—	—	"	N/A	N/A		

5 0924

Received by: (signature) Date/Time
6 FEDEX 8070 7641 0996

Received by: (signature) Date/Time

Received by: (signature) Date/Time

Notes:
7 #1 – 7/22/15 1426
#5 – 7/22/15 1107
#7 – 7/22/15 1049
#8 – 7/22/15 1130
#11 – 7/22/15 0741
DUP – 7/22/15 1107

Air Bill #	Temp (°C)	Condition	Custody Seals Intact? Yes No None	Work Order #

Form 1293 rev.11

@Air Toxics LTD.

CHAIN-OF-CUSTODY RECORD

Sample Transportation Notice

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180

(916

Project Manager: Auxier & Associates, Inc. / Environ. Management Support, Inc.

Collected by: (Print and Sign) 1 WILLIAM ABERNATHY

Company: A & A / EMSI Email: cgreene@auxier.com, paulrosasco@emsidenver.com

Address: A & A - 9821 Cogdill Rd, Suite 1 Knoxville TN 37932 / EMSI - 7220 W. Jefferson Ave, Ste 406 City: Lakewood State: CO Zip: 80235

Phone: A & A - (865) 675-3669 EMSI - (303) 940-3426 Fax: A & A - (865) 675-3677 EMSI - (303) 940-3422

Project Info:

P.O. #

Project #

Project Name: Westlake Landfill

Turn A Ti

☒ No

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Lab I.D.	Field Sample I.D. (Location)	Radiello130 # 2 ~~Can #~~	Date 3 of Collection	Time 4 of Collection	Analyses Requested
	ENGWESA001	376MU	8/19/15	1115	See Appendix F sheet
	ENGWESA005	377MU	8/19/15	1000	"
	ENGWESA007	378MU	8/19/15	0945	"
	ENGWESA008	469NR	8/19/15	1018	"
	ENGWESA011	471NR	8/19/15	1036	"
	Duplicate	470NR	8/19/15	1018	"
	TRIP BLANK	768NQ	—	—	"

Relinquished by: (signature)	Date/Time	Received by: (signature)	Date/Time
5	8/20/15 1500	6 FEDEX 7743 2824 1383	
Relinquished by: (signature)	Date/Time	Received by: (signature)	Date/Time
Relinquished by: (signature)	Date/Time	Received by: (signature)	Date/Time

Notes:

7 1 - 8/5/15 0917
5 - 8/5/15 0930
7 - 8/5/15 0929
8 - 8/5/15 0936
11 - 8/5/15 0943
DUP - 8/5/15 0936

Lab Use Only	Shipper Name	Air Bill #	Temp (°C)	Condition	Custody Seals Intac
					Yes No Nor

S LTD.
RECORD

Sample Transportation Notice

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FOLSOM, CA 95630-4719
(916) 985-1000 FAX (916) 985-1020

ciates, Inc. / Environ. Management Support, Inc.

IAIN ABERNATHY cgreene@auxier.com

Email paulrosasco@emsidenver.com

Knoxville TN 37932

06 City Lakewood State CO Zip 80235

940-3426 Fax A & A - (865) 675-3677 EMSI - (303) 940-3422

Project Info:

P.O. #

Project #

Project Name Westlake Landfill

Turn Around Time:

☒ Normal

☐ Rush

specify

Lab Use Only

Pressurized by:

Date:

Pressurization Gas: N_2 He

D. (Location)	Radiello130 # ~~Can #~~ (2)	Date (3) of Collection	Time (4) of Collection	Analyses Requested	Canister Pressure/Vacuum Initial	Final	Receipt	Final (psi)
1001	770NQ	9/2/15	0950	See Appendix F sheet	na	na		
1005	773NQ	9/2/15	1015	"	na	na		
1007	774NQ	9/2/15	1005	"	na	na		
1008	772NQ	9/2/15	1026	"	na	na		
1011	771NQ	9/2/15	1033	"	na	na		
e	769NQ	9/2/15	0950	"	na	na		
ANK	760NQ							

e/Time	Received by: (signature)	Date/Time
/2/15 1500	(6) FEDEX 7744 2096 2647	
e/Time	Received by: (signature)	Date/Time
e/Time	Received by: (signature)	Date/Time

Notes:

(7) 1 – 8/19/15 1115
5 – 8/19/15 1000
7 – 8/19/15 0945
8 – 8/19/15 1018
11 – 8/19/15 1036
DUP – 8/19/15 1115

Air Bill #	Temp (°C)	Condition	Custody Seals Intact?	Work Order #
			Yes No None	

Form 1293 rev.11

Air Toxics LTD.

CHAIN-OF-CUSTODY RECORD

Sample Transportation Notice

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Project Manager: Auxier & Associates, Inc. / Environ. Management Support, Inc.

Collected by: (Print and Sign) 1 WILLIAM ABERNATHY

Company: A & A / EMSI — Email: cgreene@auxier.com, paulrosasco@emsidenver.com

Address: A & A - 9821 Cogdill Rd, Suite 1 — Knoxville — TN — 37932; EMSI - 7220 W. Jefferson Ave, Ste 406 — City: Lakewood — State: CO — Zip: 80235

Phone: A & A - (865) 675-3669 EMSI - (303) 940-3426 — Fax: A & A - (865) 675-3677 EMSI - (303) 940-3422

Project Info:

P.O. #

Project #

Project Name: Westlake Landfill

Lab I.D.	Field Sample I.D. (Location)	Radiello130 # 2 ~~Can #~~	Date 3 of Collection	Time 4 of Collection	Analyses Reque
	ENGWESA001	754NQ	9/16/15	1118	See Appendix F sheet
	ENGWESA005	755NQ	9/16/15	1307	"
	ENGWESA007	756NQ	9/16/15	1322	"
	ENGWESA008	757NQ	9/16/15	1251	"
	ENGWESA011	758NQ	9/16/15	1337	"
	Duplicate	759NQ	9/16/15	1322	"
	TRIP BLANK	767NQ			"

Relinquished by: (signature)	Date/Time	Received by: (signature)	Date/Time
5	9/16/15 1545	6 FEDEX 7745 2594 6542	9/16/15 1545
Relinquished by: (signature)	Date/Time	Received by: (signature)	Date/Time
Relinquished by: (signature)	Date/Time	Received by: (signature)	Date/Time

Notes 7 1-9 5-9 7-6 8-9 11-9 DUP-

Lab Use Only	Shipper Name	Air Bill #	Temp (°C)	Condition	Custo
					Yes

Air Toxics LTD.

CHAIN-OF-CUSTODY RECORD

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(91

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Address: A & A - 9821 Cogdill Rd, Suite 1 Knoxville TN 37932
EMSI - 7220 W. Jefferson Ave, Ste 406 City Lakewood State CO Zip 80235

Phone: A & A - (865) 675-3669 EMSI - (303) 940-3426 Fax: A & A - (865) 675-3677 EMSI - (303) 940-3422

Project Info:

P.O. #

Project #

Project Name: Westlake Landfill

Turn A
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☒ No
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Lab I.D.	Field Sample I.D. (Location)	Radiello130 # 2 ~~Can #~~	Date 3 of Collection	Time 4 of Collection	Analyses Requested
	ENGWESA001	761NQ	9/30/15	1203	See Appendix F sheet
	ENGWESA005	762NQ	9/30/15	1011	"
	ENGWESA007	763NQ	9/30/15	1019	"
	ENGWESA008	764NQ	9/30/15	1004	"
	ENGWESA011	765NQ	9/30/15	1028	"
	Duplicate	766NQ	9/30/15	1028	"
	TRIP BLANK	430NS	—	—	"

Relinquished by: (signature)	Date/Time	Received by: (signature)	Date/Time
5	9/30/15 1400	6 FEDEX 7746 3142 7493	
Relinquished by: (signature)	Date/Time	Received by: (signature)	Date/Time
Relinquished by: (signature)	Date/Time	Received by: (signature)	Date/Time

Notes:
7 1 - 9/16/15 @ 1120
5 - @ 1309
7 - @ 1324
8 - @ 1252
11 - @ 1339
DUP - @ 1339

Lab Use Only	Shipper Name	Air Bill #	Temp (°C)	Condition	Custody Seals Inta
					Yes No Nor

Air Toxics LTD.

CHAIN-OF-CUSTODY RECORD

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Phone: A & A - (865) 675-3669 EMSI - (303) 940-3426 — Fax: A & A - (865) 675-3677 EMSI - (303) 940-3422

Project Info:

P.O. #

Project #

Project Name: Westlake Landfill

Turn A
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☒ No
☐ Ru
sp

Lab I.D.	Field Sample I.D. (Location)	Radiello130 # ~~Can #~~ 2	Date 3 of Collection	Time 4 of Collection	Analyses Requested
	ENGWESA001	424NS	10/14/15	1356	See Appendix F sheet
	ENGWESA005	425NS	10/14/15	1525	"
	ENGWESA007	426NS	10/14/15	1500	"
	ENGWESA008	427NS	10/14/15	1624	"
	ENGWESA011	428NS	10/14/15	1430	"
	Duplicate	429NS	10/14/15	1525	"
	TRIP BLANK	433NS	—	—	"

Relinquished by: (signature) Date/Time	Received by: (signature) Date/Time
5 10/15/15 1500	6 FEDEX 7747 2547 9969
Relinquished by: (signature) Date/Time	Received by: (signature) Date/Time
Relinquished by: (signature) Date/Time	Received by: (signature) Date/Time

Notes:
7
1 - 9/30 1205
5 - " 1013 D
7 - " 1021
8 - " 1006
11 - " 1030
~~2nd~~

Lab Use Only	Shipper Name	Air Bill #	Temp (°C)	Condition	Custody Seals Inta
					Yes No Nor

INSPECTUSA

LONG TERM (Alpha Track) Radon Test Kit INSTRUCTIONS
91 Days - 12 Month Exposure Period

For your convenience, record device #'s here

Device 1#: _____

Device 2#: _____

Device 3#: _____

DO NOT OPEN SEALED BAG UNTIL YOU ARE READY TO TEST!

Instructions are provided to you with specific steps that must be followed. InspectUSA, National Safety Products, Accustar Labs, or any of its affiliates, cannot provide any warranty remedy to you for any claims, which arise due to the failure to follow instructions.

1. **Check the expiration date on each device.** Start your test before the expiration date or results are invalid.
2. When you are ready to start the test, cut or tear open the sealed bag that contains the black device; discard the sorbit (*little cloth looking bag*). As soon as you open the bag the device is "ON" and the test has begun. **Do NOT remove the VOID sticker** or open the black plastic housing or results will be invalid.

   Save the bag, this sheet & mailing envelope for returning to lab.
3. Write each device number (or place bar code) along with your name, test address, and email address on the **INFORMATION FORM** below . **Write in the test BEGINNING date!** Also indicate the location, floor level & the name of room (IE basement, living room, bedroom etc) where the device is being exposed.
4. **PLACE THE RADON DEVICE.** Device should be placed in the lowest level of the house that is regularly used for 8-10 hours per week. If you are making a follow-up measurement, the US EPA recommends placing a device on each level that is used for living space. Do NOT test in garage, porch, kitchen, closet, bathroom, furnace room, laundry room, root cellar, crawl space or sump. DO NOT place devices where they will be exposed to high humidity &/or noticeable drafts from open doors, windows, fireplace, heat/air conditioning vents etc. Hang or place each device at least 3 feet from exterior doors or windows & at least 2 feet off the floor. The device may be placed face-up or face-down. If performing a duplicate test, place 2 devices side by side, 4" apart. Leave each device in place & undisturbed for at least 91 days and up to 1 year.
5. **END THE RADON TEST.** Place device back in the bag (or use a zip lock bag), write the test ENDING date on the INFORMATION FORM below **(necessary for analysis). Make sure the INFORMATION FORM is complete and LEGIBLE.**
6. Record the device number(s) for your reference and ability to retrieve results online. Online results are typically available within 14 to 21 days of the lab receiving the device(s). **Get Results at: www.InspectUSA.com/results**
7. Place the device(s) & information form in the mailing package. **Write your return address & seal the mailing package closed.**

Affix proper postage! **Return IMMEDIATELY to: RADON LAB, 11 AWL STREET, MEDWAY, MA 02053**

US Priority Mail with DELIVERY CONFIRMATION is recommended.

Devices must be returned within 8 days of ending the test. 508-533-8812

If delivery of your kit is lost or delayed, we will not be responsible for invalid results or for a free replacement kit.

Reports are emailed within 2 weeks after we receive your devices.

You may access your test results on our website **www.InspectUSA.com/results**

INSPECTUSA ↑ CUT HERE **INFORMATION FORM** CUT HERE ↑

Send Report To:↓		Test address: ↓
Name: Cecilia Greene - Auxier & Associates, Inc.		Name: Westlake Landfill
Address: 9821 Cogdill Road, Suite 1		Address: 13570 St. Charles Rock Road
City, State, Zip: Knoxville, TN 37932		City, State, Zip: Bridgeton, MO 63044
eMail address: cgreene@auxier.com		Tech Certification (if required):
☐ Check here if devices were placed 4" apart		☐ Check here if this test is a Post Mitigation test

Notes: 1 BILL ABERNATHY PG 1 OF 5

Device #: 2 *2850705*	Device #: *2850703*	Device #: *2850706*
Floor level:	Floor level:	Floor level:
Name of room: 3 #1	Name of room: #3	Name of room: #2
Date Opened: 4 7/23/15	Date Opened: 7/23/15	Date Opened: 7/24/15
Date Closed: 5 10/14/15	Date Closed: 10/15/15	Date Closed: 10/15/15

Remember to affix proper postage or Post Office will not deliver to the Lab.

INSPECTUSA

LONG TERM (Alpha Track) Radon Test Kit INSTRUCTIONS
91 Days - 12 Month Exposure Period

For your convenience, record device # s here

Device 1#: _____

Device 2#: _____

Device 3#: _____

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Save the bag, this sheet & mailing envelope for returning to lab.

3. Write each device number (or place bar code) along with your name, test address, and email address on the **INFORMATION FORM** below . **Write in the test BEGINNING date!** Also indicate the location, floor level & the name of room (IE basement, living room, bedroom etc) where the device is being exposed.

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Affix proper postage! **Return IMMEDIATELY to: RADON LAB, 11 AWL STREET, MEDWAY, MA 02053**

US Priority Mail with DELIVERY CONFIRMATION is recommended.

Devices must be returned within 8 days of ending the test.

If delivery of your kit is lost or delayed, we will not be responsible for invalid results or for a free replacement kit.

Reports are emailed within 2 weeks after we receive your devices.

You may access your test results on our website **www.InspectUSA.com/results**

INSPECTUSA ↑ CUT HERE **INFORMATION FORM** CUT HERE ↑

Send Report To: ↓		**Test address:** ↓
Name: Cecilia Greene - Auxier & Associates, Inc.		Name: Westlake Landfill
Address: 9821 Cogdill Road, Suite 1		Address: 13570 St. Charles Rock Road
City, State, Zip: Knoxville, TN 37932		City, State, Zip: Bridgeton, MO 63044
eMail address: cgreene@auxier.com		Tech Certification (if required):
☐ Check here if devices were placed 4" apart		☐ Check here if this test is a Post Mitigation test

Notes: 1	Pg 2 OF 5				
Device #: 2	*2850711*	Device #:	*2850709*	Device #:	*2850712*
Floor level:		Floor level:		Floor level:	
Name of room: 3	#4	Name of room:	#5	Name of room:	#6
Date Opened: 4	7/23/15	Date Opened:	7/23/15	Date Opened:	7/23/15
Date Closed: 5	10/15/15	Date Closed:	10/14/15	Date Closed:	10/14/15

Remember to affix proper postage or Post Office will not deliver to the Lab.

INSPECTUSA

LONG TERM (Alpha Track) Radon Test Kit INSTRUCTIONS
91 Days - 12 Month Exposure Period

For your convenience, record device # s here

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Device 2#: _____

Device 3#: _____

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Save the bag, this sheet & mailing envelope for returning to lab.

3. Write each device number (or place bar code) along with your name, test address, and email address on the **INFORMATION FORM** below . **Write in the test BEGINNING date!** Also indicate the location, floor level & the name of room (IE basement, living room, bedroom etc) where the device is being exposed.

4. **PLACE THE RADON DEVICE.** Device should be placed in the lowest level of the house that is regularly used for 8-10 hours per week. If you are making a follow-up measurement, the US EPA recommends placing a device on each level that is used for living space. Do NOT test in garage, porch, kitchen, closet, bathroom, furnace room, laundry room, root cellar, crawl space or sump. DO NOT place devices where they will be exposed to high humidity &/or noticeable drafts from open doors, windows, fireplace, heat/air conditioning vents etc. Hang or place each device at least 3 feet from exterior doors or windows & at least 2 feet off the floor. The device may be placed face-up or face-down. If performing a duplicate test, place 2 devices side by side, 4" apart. Leave each device in place & undisturbed for at least 91 days and up to 1 year.

5. **END THE RADON TEST.** Place device back in the bag (or use a zip lock bag), write the test ENDING date on the INFORMATION FORM below **(necessary for analysis). Make sure the INFORMATION FORM is complete and LEGIBLE.**

6. Record the device number(s) for your reference and ability to retrieve results online. Online results are typically available within 14 to 21 days of the lab receiving the device(s). **Get Results at: www.InspectUSA.com/results**

7. Place the device(s) & information form in the mailing package. **Write your return address & seal the mailing package closed.**

Affix proper postage! **Return IMMEDIATELY to: RADON LAB, 11 AWL STREET, MEDWAY, MA 02053**

US Priority Mail with DELIVERY CONFIRMATION is recommended.

Devices must be returned within 8 days of ending the test.

If delivery of your kit is lost or delayed, we will not be responsible for invalid results or for a free replacement kit.

Reports are emailed within 2 weeks after we receive your devices.

You may access your test results on our website **www.InspectUSA.com/results**

INSPECTUSA ↑ CUT HERE **INFORMATION FORM** CUT HERE ↑

Send Report To: ↓		**Test address:** ↓
Name: Cecilia Greene - Auxier & Associates, Inc.		Name: Westlake Landfill
Address: 9821 Cogdill Road, Suite 1		Address: 13570 St. Charles Rock Road
City, State, Zip: Knoxville, TN 37932		City, State, Zip: Bridgeton, MO 63044
eMail address: cgreene@auxier.com		Tech Certification (if required):
☐ Check here if devices were placed 4" apart		☐ Check here if this test is a Post Mitigation test

Notes: 1 PG 3 OF 5

Device #: 2 *2850713*	Device #: *2850704*	Device #: *2850710*
Floor level:	Floor level:	Floor level:
Name of room: 3 #7	Name of room: #8	Name of room: #9
Date Opened: 4 7/23/15	Date Opened: 7/23/15	Date Opened: 7/23/15
Date Closed: 5 10/14/15	Date Closed: 10/14/15	Date Closed: 10/15/15

Remember to affix proper postage or Post Office will not deliver to the Lab.

INSPECTUSA

LONG TERM (Alpha Track) Radon Test Kit INSTRUCTIONS
91 Days - 12 Month Exposure Period

For your convenience, record device #'s here

Device 1#: _____

Device 2#: _____

Device 3#: _____

DO NOT OPEN SEALED BAG UNTIL YOU ARE READY TO TEST!

Instructions are provided to you with specific steps that must be followed. InspectUSA, National Safety Products, Accustar Labs, or any of its affiliates, cannot provide any warranty remedy to you for any claims, which arise due to the failure to follow instructions.

1. **Check the expiration date on each device.** Start your test before the expiration date or results are invalid.
2. When you are ready to start the test, cut or tear open the sealed bag that contains the black device; discard the sorbit (*little cloth looking bag*). As soon as you open the bag the device is "ON" and the test has begun. **Do NOT remove the VOID sticker** or open the black plastic housing or results will be invalid.

   Save the bag, this sheet & mailing envelope for returning to lab.
3. Write each device number (or place bar code) along with your name, test address, and email address on the **INFORMATION FORM** below . **Write in the test BEGINNING date!** Also indicate the location, floor level & the name of room (IE basement, living room, bedroom etc) where the device is being exposed.

4. **PLACE THE RADON DEVICE.** Device should be placed in the lowest level of the house that is regularly used for 8-10 hours per week. If you are making a follow-up measurement, the US EPA recommends placing a device on each level that is used for living space. Do NOT test in garage, porch, kitchen, closet, bathroom, furnace room, laundry room, root cellar, crawl space or sump. DO NOT place devices where they will be exposed to high humidity &/or noticeable drafts from open doors, windows, fireplace, heat/air conditioning vents etc. Hang or place each device at least 3 feet from exterior doors or windows & at least 2 feet off the floor. The device may be placed face-up or face-down. If performing a duplicate test, place 2 devices side by side, 4" apart. Leave each device in place & undisturbed for at least 91 days and up to 1 year.

5. **END THE RADON TEST.** Place device back in the bag (or use a zip lock bag), write the test ENDING date on the INFORMATION FORM below **(necessary for analysis). Make sure the INFORMATION FORM is complete and LEGIBLE.**

6. Record the device number(s) for your reference and ability to retrieve results online. Online results are typically available within 14 to 21 days of the lab receiving the device(s). **Get Results at: www.InspectUSA.com/results**

7. Place the device(s) & information form in the mailing package. **Write your return address & seal the mailing package closed.**

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INSPECTUSA ↑ CUT HERE **INFORMATION FORM** CUT HERE ↑

Send Report To:↓		**Test address: ↓**
Name: Cecilia Greene - Auxier & Associates, Inc.		Name: Westlake Landfill
Address: 9821 Cogdill Road, Suite 1		Address: 13570 St. Charles Rock Road
City, State, Zip: Knoxville, TN 37932		City, State, Zip: Bridgeton, MO 63044
eMail address: cgreene@auxier.com		Tech Certification (if required):
☐ Check here if devices were placed 4" apart		☐ Check here if this test is a Post Mitigation test

Notes: 1 PG 4 OF 5

Device #: 2 *2850702*	Device #: *2850714*	Device #: *2850708*
Floor level:	Floor level:	Floor level:
Name of room: 3 #10	Name of room: #11	Name of room: #12
Date Opened: 4 7/23/15	Date Opened: 7/23/15	Date Opened: 7/23/15
Date Closed: 5 10/15/15	Date Closed: 10/14/15	Date Closed: 10/15/15

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INSPECTUSA

LONG TERM (Alpha Track) Radon Test Kit INSTRUCTIONS
91 Days - 12 Month Exposure Period

For your convenience, record device # s here

Device 1#: _____

Device 2#: _____

Device 3#: _____

DO NOT OPEN SEALED BAG UNTIL YOU ARE READY TO TEST!

Instructions are provided to you with specific steps that must be followed. InspectUSA, National Safety Products, Accustar Labs, or any of its affiliates, cannot provide any warranty remedy to you for any claims, which arise due to the failure to follow instructions.

1. **Check the expiration date on each device.** Start your test before the expiration date or results are invalid.
2. When you are ready to start the test, cut or tear open the sealed bag that contains the black device; discard the sorbit (*little cloth looking bag*). As soon as you open the bag the device is "ON" and the test has begun. **Do NOT remove the VOID sticker** or open the black plastic housing or results will be invalid.

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4. **PLACE THE RADON DEVICE.** Device should be placed in the lowest level of the house that is regularly used for 8-10 hours per week. If you are making a follow-up measurement, the US EPA recommends placing a device on each level that is used for living space. Do NOT test in garage, porch, kitchen, closet, bathroom, furnace room, laundry room, root cellar, crawl space or sump. DO NOT place devices where they will be exposed to high humidity &/or noticeable drafts from open doors, windows, fireplace, heat/air conditioning vents etc. Hang or place each device at least 3 feet from exterior doors or windows & at least 2 feet off the floor. The device may be placed face-up or face-down. If performing a duplicate test, place 2 devices side by side, 4" apart. Leave each device in place & undisturbed for at least 91 days and up to 1 year.

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INSPECTUSA ↑ CUT HERE **INFORMATION FORM** CUT HERE ↑

Send Report To: ↓		**Test address:** ↓
Name: Cecilia Greene - Auxier & Associates, Inc.		Name: Westlake Landfill
Address: 9821 Cogdill Road, Suite 1		Address: 13570 St. Charles Rock Road
City, State, Zip: Knoxville, TN 37932		City, State, Zip: Bridgeton, MO 63044
eMail address: cgreene@auxier.com		Tech Certification (if required):
☐ Check here if devices were placed 4" apart		☐ Check here if this test is a Post Mitigation test

Notes: 1	PG 5 OF 5				
Device #: 2	*2850715*	Device #:	*2850707*	Device #:	
Floor level:		Floor level:		Floor level:	
Name of room: 3	#13	Name of room:	DUPLICATE #11	Name of room:	
Date Opened: 4	7/23/15	Date Opened:	7/23/15	Date Opened:	
Date Closed: 5	10/15/15	Date Closed:	10/14/15	Date Closed:	

Remember to affix proper postage or Post Office will not deliver to the Lab.