Data Report for the T.F. Green Air Monitoring Program

Reporting Period: January 2012 – March 2012

Prepared for:

Rhode Island Airport Corporation

ADVANCED MONITORING METHODS, LLC

June 2012

Transmittal Letter

FIRST QUARTER 2012 MONITORING REPORT

FROM:

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710 Golf Club Drive
Castle Rock, CO 80108

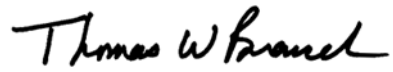
TO:

Jay Brolin
Manager of Environmental Programs
Rhode Island Airport Corporation
2000 Post Road Warwick, RI 02886-8204

Dear Jay,

This document represents Advanced Monitoring Methods (AMM) summary of the data collection efforts at T.F. Green for the period of January 2012 through March 2012.

Best Regards,



Thomas W. Brauch
President
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FIRST QUARTER 2012 REPORT

PREPARED FOR: RIAC
PREPARED BY: Tom Brauch, Ph.D.
COPIES: 1
DATE: June 28, 2012

Section 1: Introduction and Short Summary of the Quarter

Under Section 1-7-1 of the State of Rhode Island General Law (The Permanent Air Quality Monitoring Act, or "the Act"), RIAC is required to ""design, acquire, install, operate, and maintain a long-term air monitoring program in the vicinity of T.F. Green Airport."" Advanced Monitoring Methods (AMM) was retained by RIAC to manage the air-monitoring network to collect the data required by the Act. This report summarizes the monitoring activities and results of the RIAC Air Monitoring Program.

The RIAC Air Monitoring Program (RAMP) includes ambient air monitoring for black carbon, polycyclic aromatic hydrocarbons, VOCs, SVOVCs, and particulate matter ($PM_{2.5}$, and $PM_{0.1}$) at four stations around T.F. Green airport. In addition, select meteorological parameters (wind speed, wind direction, ambient temperature, relative humidity, solar radiation, and barometric pressure) are retrieved from the National Weather Service site at the airport. Flight data is obtained quarterly from RIAC.

Sampling for this period began on January 1, 2012 at 0000 hours and was completed on March 31, 2012 at 2400 hours. Sampling was conducted according to the RIAC Quality Assurance Project Plan (QAPP). The results of this 3-month monitoring work, including comparison to the National Ambient Air Quality Standards (NAAQS), and quality control and quality assurance activities are presented in this report.

1.1 Quarterly Summary

Data capture for the quarter is less than specified in the QAPP. Samples for Method TO-13 and TO-15 were not collected during the period. The sample collection system was contaminated. Replacement systems were installed prior to April 1, 2012 for sample collection in the second quarter. In addition, there is no aethalometer, ultrafine (<0.1 micron) or polyaromatic hydrocarbon (PAS) data for any of the stations as the instruments were at the manufacturer for repair and service.

Section 2: Sampling Program

2.1 Station Locations

The four Warwick, RI sites where the monitoring is being conducted are described below:

1. South Site (former location of 138 Fieldview Drive) – Located south-southwest of the airfield approximately 450 feet from Taxiway S and 900 feet from the end of Runway 5. Adjoining land uses include single-family residential to the west and south, long-term parking for airport patrons to the north and the taxiway/runway system to the east.

2. North Site (western end of Lydick Avenue) – Located adjacent to the Spring Green neighborhood and the airport''s northeastern property line, approximately 3⁄4 mile (3,680 feet) from the end of Runway 23. Adjoining land uses include single-family residential to the north, east and south. To the west is the runway protection zone (RPZ). This site is approximately 900 meters northeast of the main runway.

3. West Site (behind Fire Station No. 8, on California Avenue off Post Road) – Located west-northwest of the airport approximately 1⁄2 mile (2,250 feet) from the end of Runway 16. Adjoining land uses include an open field and single family residential to the north and west, commercial development to the south and the fire station and Post Road to the east.

4. East Site (Pembroke Avenue, between Rowe Avenue and Wells Avenue) – Located due east of the airport approximately 1⁄4 mile (1,425 feet) from the intersection of Runways 5/23 and 16/34. Adjoining land uses are the airport to the west and residential or vacant land to the north, east and south.

The locations of the monitoring sites are shown on Figure 2.1 (aerial photograph).

Figure 2-1. Monitoring Station Location.

2.2 Program Description

Table 2.1 presents the monitoring configurations of each of the RIAC monitoring stations.

Table 2.1. Sampling and Configuration of the Four Monitoring Stations in the RIAC Air Quality Monitoring Program.

Parameters and Target Compounds[1]	Sampling and Analysis Equipment/Methods[2]	Summary Description
Particulate Matter		
Fine PM ($PM_{2.5}$) < 2.5 microns	EPA Reference Method for $PM_{2.5}$	Time-integrated (24-hr) sample collected on filters and based on sample weight
Ultra-fine PM ($PM_{0.1}$) < 0.1 microns	Water-based Condensation Particle Counter[4]	Real-time measurements based on light (infrared) scattering characteristics of airborne PM.
Black Carbon	Aethalometer monitors	Real-time measurements based on the light absorbing characteristics of soot.
Volatile Organic Compounds (VOCs)[3]		
Benzene[4]	EPA Method TO-15	Time-integrated (24-hr) sample collected in canisters and based on laboratory GC/MS analysis.
1,3 butadiene[4]	EPA Method TO-15	(same as above)
Semi-Volatile Organic Compounds (SVOCs)3		
Napthalene[4]	EPA Method TO-13 (with XAD-2 resin)	(same as above)
Carbonyls[3]		
Aetaldehyde[4]	EPA Method TO-11A	Time-integrated (24-hr) sample collected on adsorbent cartridges and based on laboratory HPLC analysis.
Formaldehyde[4]	EPA Method TO-11A	(same as above)
Other		
Polycyclic Aromatic Hydrocarbons (PAH) bound to particulate matter[3].	Monitors for particle-bound PAH's.	Real-time measurements based on photoionization of particle-bound PAH.
Wind Direction and Speed	Wind vane and anemometer instrumentation	Direction and speed from National Weather Service at the airport.

[1] Parameters taken from the State of Rhode Island General Law Section 1-7-1 (The Permanent Air Quality Monitoring Act).
[2] Methods cited include the following:

- Federal Register Notice (04/22/99) "Revisions to Reference Method for the Determination of Fine Particulate Matter as PM2.5 in the Atmosphere" (Direct Final Rule).
- EPA Method TO-11A, *Determination of Formaldehyde in Ambient Air Using Adsorbent Cartridge Followed by High Performance Liquid Chromatography (HPLC) [Active Sampling Methodology*].
- EPA Method TO-13A (*Determination of Polycyclic Aromatic Hydrocarbons in Ambient Air Using GC/MS*).
- EPA Method TO-15 (*Determination of VOCs in Air Collected in Specially-Prepared Canisters and Analyzed by GC/MS*).

[3] Because of the limited applications of this instrumentation, the use of water-based condensation particle counters will remain under evaluation by RIAC and RIDEM.
[4] Includes the assessment of all the compounds in the classification, not just the ones identified as "target compounds". For example, EPA Method TO-15 includes additional VOCs other than benzene and 1,3 butadiene.

2.3 Sampling Methods

Sampling of ambient air for the measurement of pollutant concentrations and atmospheric conditions was performed by appropriate monitoring methods. This assures that the air sampled is representative of the ambient air and that the measurements are representative of the actual pollutant concentrations.

2.3.1 Reference and Acceptable Methods

Only the $PM_{2.5}$ monitoring for this program is designated by EPA as a Reference Method. The VOC, SVOC, and carbonyl monitoring are conducted in accordance with EPA Methods TO-15, TO-13A, and TO-11A respectively. The ultrafine particulate ($PM_{0.1}$), the black carbon (aethalometer), and the polycyclic aromatic hydrocarbons (PAHs) are acceptable, real-time samplers for pollution measurements but they are not EPA certified. Descriptions of each of these monitoring methods are presented below.

2.3.1.1. Fine particulate matter

$PM_{2.5}$ measurements are being collected with a ThermoFisher Partisol-FRM 2000 air sampler. The sampler collects air with a low-volume sampler equipped with a size-segregating cyclone and pre-weighed filters. Post sample weighing of the filters provides a gravimetric determination of particulate.

2.3.1.2. Semi-volatile organic compounds

SVOC samples were collected on a pre- treated polyurethane foam (PUF) plug and XAD resin cartridge with a quartz filter. A Tisch TE-1000 PUF+BL high-volume air sampler was used. The brushless version of this sampler was deployed, which does not require motor or brush replacement. The particulate phase was collected on a quartz filter, followed by a PUF plug sandwiched around a XAD resin to capture the more volatile compounds, such as naphthalene. Concentrations were determined in accordance with EPA Method TO-11A. No samples were collected this quarter.

2.3.1.3. Volatile organic compounds and carbonyls

VOC samples were collected in six-liter stainless steel SUMMA® canisters. The VOC samples were collected using a passive Entech sampler timing system. The Entech CS1200 sampler was configured to allow the collection of 24-hour VOC samples, including duplicate sampling. The samplers record start and stop times, final canister pressure, and temporal canister pressure data, which are downloaded after each run. Concentrations were determined in accordance with EPA Method TO-15.

2.3.1.4. Carbonyls

Carbonyl (e.g., formaldehyde, acetaldehyde) samples were collected on a Sep-Pak cartridge coated with 2,4-dinitrophenylhydrazine (DNPH). The cartridges are exposed using an active SKC Aircheck 2000 system. The sampler consists of a sampling pump and a digital timer. The sampler is configured to allow collection of 24-hour carbonyl samples, including duplicate sampling. The

samplers record start and stop times, final flow rate, and time averaged flow data, which are downloaded after each run.

2.3.1.5. Black carbon

Optically-absorbing BC aerosol particles, which are characteristic of diesel and jet exhaust, are being continuously measured by a Magee Scientific Model AE-22 aethelometer. The aethelometer is equipped with a $PM_{2.5}$ inlet to ensure BC in the respirable size range is measured.

2.3.1.6. Particle-bound polycyclic aromatic hydrocarbons

Particle-bound PAHs are being measured continuously with a Desktop Photoelectric Aerosol Sensor (PAS) 2000, manufactured by EcoChem Analytics. Carbonaceous particles are collected in an electrically insulated filter, and PAH-coated aerosols are charged. An electrometer measures the resulting electric current, which is proportional to the PAH concentration.

2.3.1.7. Ultrafine particles

Total particle count is being measured using two different, real-time, water- based condensation particle counters (CPC). Due to the limited durability of these samplers, they were at the manufacturer for repair. The CPC is equipped with an inlet cyclone to screen out particles larger than 3 mm. The majority of particles counted by the CPC will have a diameter of 0.1 mm or less (i.e., UFP).

2.4 Environmental Control

To help insure proper performance of the gas and particulate samplers, all analyzers and supporting equipment were installed and operated in a temperature-controlled environment. An insulated enclosure with a thermostatically controlled heater was installed to house the analyzers, samplers, data acquisition system, materials, supplies, and storage of project documentation. During the warmer months a built-in Environmental Condition Unit (ECU) maintains appropriate temperatures in the shelter. The shelter is maintained between 20 and 30 ^{0}C and is designed to minimize rapid fluctuations in temperature. Daily fluctuations for this period did not exceed $\pm$ 5^{0}C. Data collected during periods outside of these parameters were flagged to indicate abnormalities.

2.5 Sample Handling and Custody

The field technicians fill out Chain of Custody (COC) forms documenting each sample, and label the samples themselves. Sample COCs are kept at each of the sites, and each individual sample travels with a paper document from the field to the lab.

A chain-of-custody (COC) is included with each sampling round. The purpose of the COC is to document the history of each sample from collection to analysis. The form lists the sample identifier, matrix, date and time collected and the requested analyses. The chain also includes the name of the sampler and the time, date and name of all sample transfers until acceptance at the laboratory.

AMM retains the COCs as long-term records, as well as scanning them for electronic retention. Returning from the field, the technicians hand the samples and COC forms to the laboratory staff, put them in designated areas, or put them in the laboratory refrigerator, as appropriate.

2.6 Analytical Methods Requirements

This section provides a description of the analytical methods to be used for the time-integrated samples (i.e., VOCs, carbonyls, SVOCs, and $PM_{2.5}$) by the laboratories.

2.6.1. VOC Analysis

VOCs are being analyzed by Alpha Labs in accordance with USEPA guidelines outlined in *Compendium Method TO-15: Determination of Volatile Organic Compounds (VOCs) in Air Collected in Specially Prepared Canisters and Analyzed by Gas Chromatography/Mass Spectrometry (GC/MS).*

2.6.2. Carbonyl Analysis

Carbonyls (e.g., formaldehyde, acetaldehyde) are being analyzed by Alpha Labs in accordance with *Compendium Method TO-11A: Determination of Formaldehyde in Ambient Air Using Adsorbent Cartridge Followed by High Performance Liquid Chromatography (HPLC)*.

2.6.3. SVOC Analysis

SVOCs (e.g., naphthalene) from the PUF plug and XAD filter are being analyzed by Alpha in accordance with *Compendium Method TO-13A: Determination of Polycyclic Aromatic Hydrocarbons in Ambient Air Using GC/MS (USEPA 1999c)*.

2.6.4. $PM_{2.5}$ Analysis

$PM_{2.5}$ is being analyzed by Chester LabNet in accordance with the *Federal Reference Method for the Determination of Fine Particulate Matter as $PM_{2.5}$ in the Atmosphere (40 CFR Part 50, Appendix L)*.

Section 3: Summary of Monitoring Data

3.1 Overview

The Clean Air Act requires EPA to set National Ambient Air Quality Standards (NAAQS). Below is an overview of the relevant NAAQS for the RIAC Monitoring Project.

There are two NAAQS for $PM_{2.5}$:

- The 24-hour standard is 35 µg/m^3. EPA's form of the standard is the 98th percentile, averaged over 3 years.
- The annual standard is 15 µg/m^3. EPA's form of this standard is as an annual mean averaged over 3 years.

In this report, the first and second maximum 24-hour concentrations are reported as well as the annual average measured during the period.

All other data will be reported as follows:

- SVOC data will be reported as µg/m^3 of naphthalene.
- VOC data will be reported as part per billion by volume (ppbv) of benzene and 1,3 butadiene.
- Carbonyl data will be reported in µg/m^3.
- Black carbon data will be reported in ng/m^3.

- Polycyclic aromatic hydrocarbons will be reported in
- $PM_{0.1}$ data will be reported in particles/cm^3.

Meteorological data obtained from the local National Weather Service Station at the T.F. Green Airport is summarized in Section 3.8.

Runway usage data will be summarized in Section 3.9.

3.1.1 Data Completeness

Data capture for the quarter is less than the projected recovery specified in the QAPP. There is no valid data for the quarter for the aethalometers, PAH, CPC, VOCs, and Carbonyls. These samplers were received from the manufacturer late in the quarter and were installed and thoroughly tested in preparation for the second quarter. Data recovery for the $PM_{2.5}$ and SVOC parameters is presented in Table 3-1.

3.2 Summary of $PM_{2.5}$ Data

3.2.1 24-Hour Average $PM_{2.5}$ Data.

Table 3-2 presents a comparison of the 1st high 24-hour average $PM_{2.5}$ concentrations for all four RIAC stations relative to the 24-hour average $PM_{2.5}$ NAAQS for each month from January 2012 through March 2012. Figure 3-1 presents a plot of the 24-hour average $PM_{2.5}$ concentrations for all sites for each sampling event from January 2012 through March 2011. Table 3-3 presents all of the 24-hour $PM_{2.5}$ concentrations for the period. The highest 24-hour value of 25.5 µg/m^3 was recorded on February 15, 2012 at the Fieldview station.

Table 3-2. Comparison of the 24-Hour Average $PM_{2.5}$ Concentration (µg/m^3) and NAAQS.

Period	Maximum 24-Hour Average $PM_{2.5}$ Concentrations and NAAQS (µg/m^3)				
	NAAQS	Fieldview	Fire Station	Lydick	Pembroke
January 2012	35.0	12.9	13.1	13.8	15.0
February 2012	35.0	25.5	21.3	22.3	23.3
March 2012	35.0	10.6	10.0	10.4	11.6
Quarterly Value	35.0	25.5	21.3	22.3	23.3

Figure 3-1. Plot of 24-Hour PM2.5 Concentrations for all Stations from January 2012 through March 2012 in µg/m^3.

Table 3.3. All 24-Hour PM2.5 Concentrations for all Stations from January 2012 through March 2012 in µg/m^3.

	$PM_{2.5}$ Concentratrion (µg/m^3)			
Sampling Date	**Fieldview**	**Fire Station**	**Lydick**	**Pembroke**
01/04/12	6.8	6.5	6.8	No sample
01/10/12	12.9	13.1	13.8	15.0
01/16/12	5.9	6.0	5.9	5.7
01/22/12	8.0	7.8	9.0	7.8
01/28/12	4.7	4.6	4.5	4.8
02/03/12	5.3	5.7	5.4	4.4
02/09/12	10.3	9.0	9.6	7.1
02/15/12	25.5	21.3	22.3	23.3
02/21/12	6.5	5.4	6.9	5.4
02/27/12	13.3	12.1	10.8	12.1
03/04/12	7.3	6.0	8.4	7.3
03/10/12	7.1	5.8	5.5	6.3
03/16/12	7.6	7.2	6.8	11.6
03/22/12	6.5	7.2	6.8	7.5
03/28/12	10.6	10.0	10.4	10.0
Average	**9.2**	**8.5**	**8.9**	**9.2**

3.3 Summary of SVOC Data

3.3.1 24-Hour Average SVOC Data.

Table 3-4 presents a comparison of the 1st high 24-hour average Napthalene concentration for all four RIAC stations for each month from January 2012 through March 2012. Samples on January 4th, 10th were missed due to a lack of filters shipped from the lab. The sample of January 22nd was missed due to damage to the filter media when shipped from the lab. A new lab was contracted at the end of January to alleviate further issues. Figure 3-2 presents a plot of the 24-hour average $PM_{2.5}$ concentrations for all sites for each sampling event from January 2012 through March 2012. Table 3-4 presents all of the 24-hour $PM_{2.5}$ concentrations for the period. The highest 24-hour value of 0.18 µg/m^3 was recorded on February 15, 2012 at the Pembroke station.

Table 3-4. Comparison of the 24-Hour Average Naphthalene Concentrations from all Four Stations in µg/m^3.

Period	Maximum 24-Hour Average Napthalene Concentrations (µg/m^3)			
	Fieldview	Fire Station	Lydick	Pembroke
January 2012	0.02	0.03	0.04	0.03
February 2012	0.16	0.16	0.16	0.18
March 2012	0.07	0.07	0.07	0.07
Quarterly Value	0.16	0.16	0.16	0.18

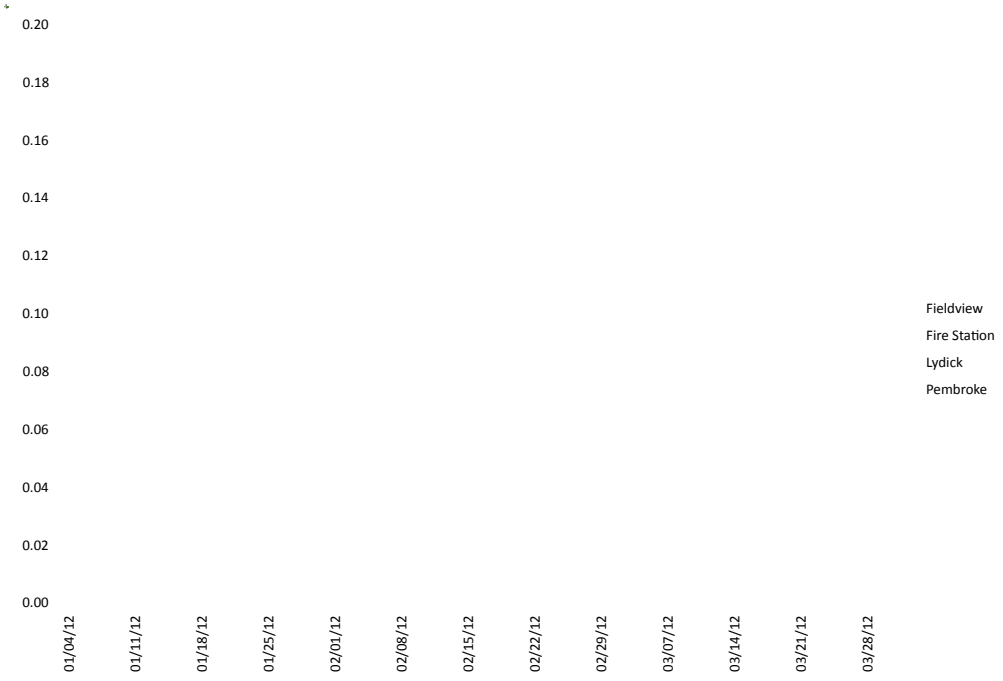

Figure 3-2. Plot 24-Hour Average Naphthalene Concentrations.

Table 3-5. All Measured Napthalene Concentrations for the period January 2012 through March 2012 in ng/m^3.

TO-13	Naphthalene Concentration (µg/m^3)			
Sample Date	Fieldview	Fire Station	Lydick	Pembroke
01/04/12	No Sample	No Sample	No Sample	No Sample
01/10/12	No Sample	No Sample	No Sample	No Sample
01/16/12	0.02	0.03	0.04	0.03
01/22/12	No Sample	No Sample	No Sample	No Sample
01/28/12	0.02	0.02	0.03	0.01
02/03/12	0.04	0.04	0.04	0.04
02/09/12	0.06	0.08	0.08	0.09
02/15/12	0.16	0.16	0.16	0.18
02/21/12	0.05	0.04	0.04	0.05
02/27/12	0.09	0.08	0.08	0.10
03/04/12	0.04	0.04	0.04	0.06
03/10/12	0.03	0.03	0.03	0.05
03/16/12	0.04	0.07	0.04	0.04
03/22/12	0.03	0.02	0.03	0.03
03/28/12	0.07	0.02	0.07	0.07

3.4 Summary of VOC Data

3.4.1 24-Hour Average VOC Data.

The VOC data is acquired via a once a month, 24-Hour canister sample. After initial inspection, it was determined that the sampling lines were contaminated. The lines and sample collection systems were all replaced in March to begin sample collection in the second quarter.

3.5 Summary of Carbonyl Data

3.5.1 24-Hour Average Carbonyl Data.

The carbonyl data is acquired via a once a month, 24-Hour cartridge sample. After initial inspection, it was determined that the sampling lines were contaminated. The lines and sample collection systems were all replaced in March to begin sample collection in the second quarter.

3.5 Summary of Black Carbon Data

3.5.1 Real-Time Black Carbon Data.

The black carbon data will not be reported for this period. An initial audit of the aethalometers at the beginning of December 2011 indicated that the flow rates and/or lamp intensities were below acceptable limits. The instruments were shipped to the manufacturer for refurbishment in December 2012. They were returned and reinstalled at the end of the quarter.

3.6 Summary of Particle-Bound Polycyclic Aromatic Hydrocarbon Data

3.6.1 Real-Time PAH Data.

The PAH data will not be reported for this period. An initial audit of the PAS samplers at the beginning of December 2011 indicated that the flow rates were below acceptable limits in three of the samplers and contamination was an issue with the fourth sampler. The instruments were shipped to the manufacturer for refurbishment in December 2011. They were returned and reinstalled at the end of the quarter.

3.7 Summary of Ultra-Fine Particulate Data

3.7.1 Real-Time Ultra-Fine Particulate Data.

The CPC data will not be reported for this period. When we arrived on site in early December all of the CPC samplers were out for repair. In addition, we observed that the sample inlets exceeded the manufacturer recommended three-foot maximum. The sample inlet system was replaced to meet manufacturer's recommendations. The samplers were returned and reinstalled at the end of the quarter.

3.8 Summary of Meteorological Data

3.8.1. Hourly Average Meterological Data.

The meteorological data was provided by the National Weather Service station at T. F. Green Airport. The parameters summarized below include; wind speed, wind direction, temperature, and relative humidity.

3.8.2. Wind Rose Summary

Overall, the 10-meter winds for the period January 2012 through March 2012 come primarily out of the north and west.

Wind roses for the 10-meter wind sensor for each month of the period as well as for the entire period are presented in Figure 3-3 through Figure 3-7 respectively.

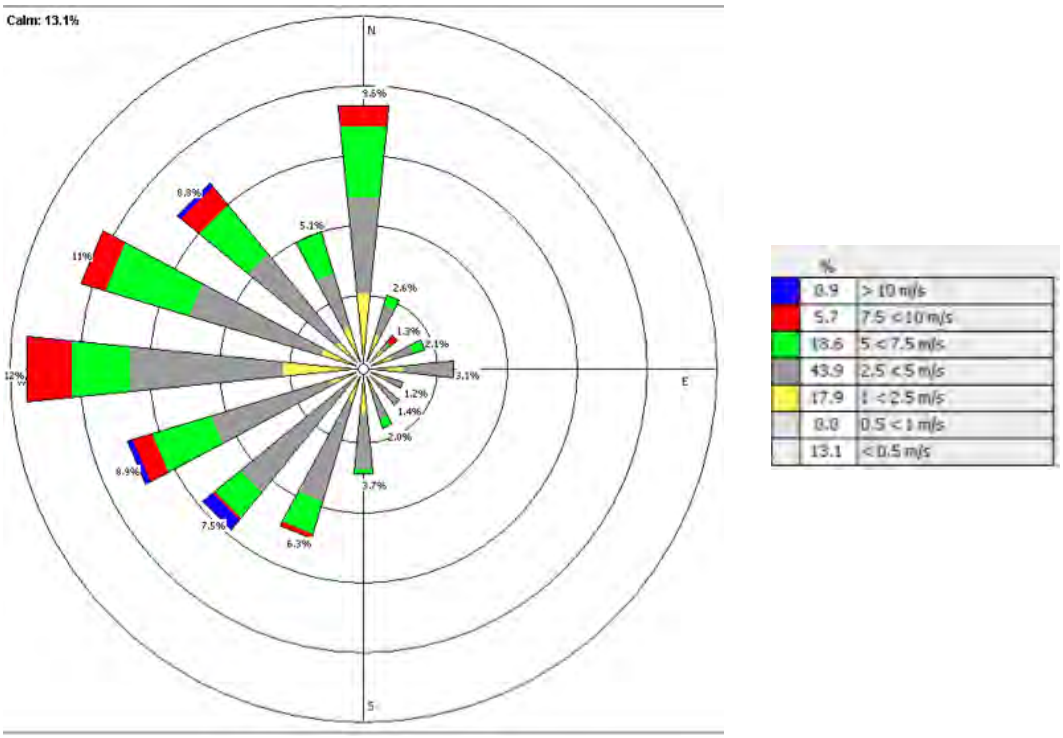

Figure 3-3. Wind Rose for the 10-meter Wind Sensor for January 2012.

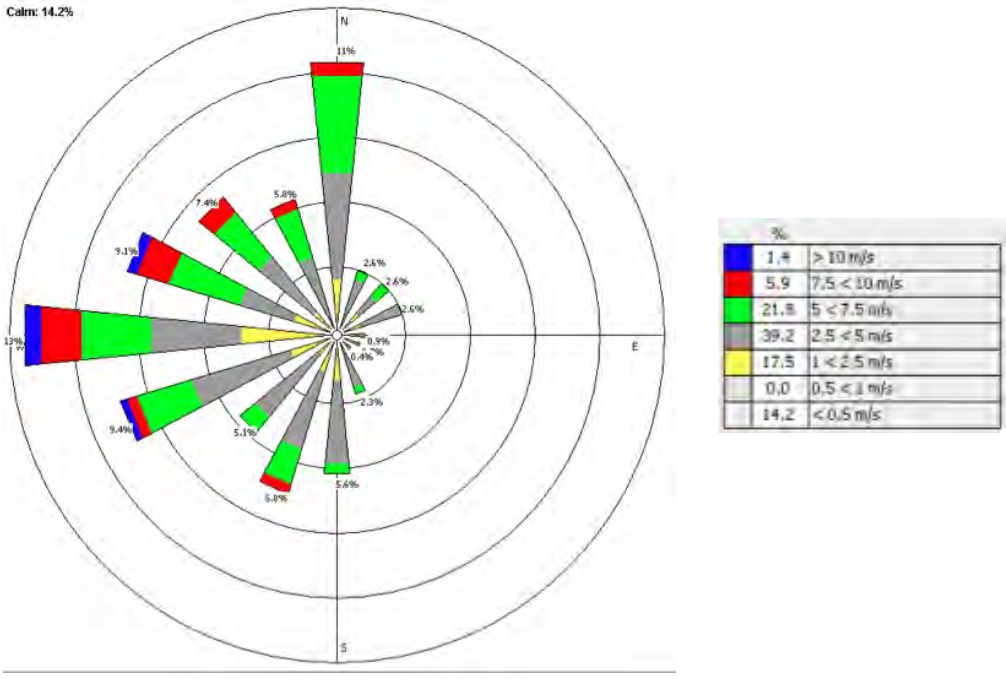

Figure 3-4. Wind Rose for the 10-meter Wind Sensor for November 2011.

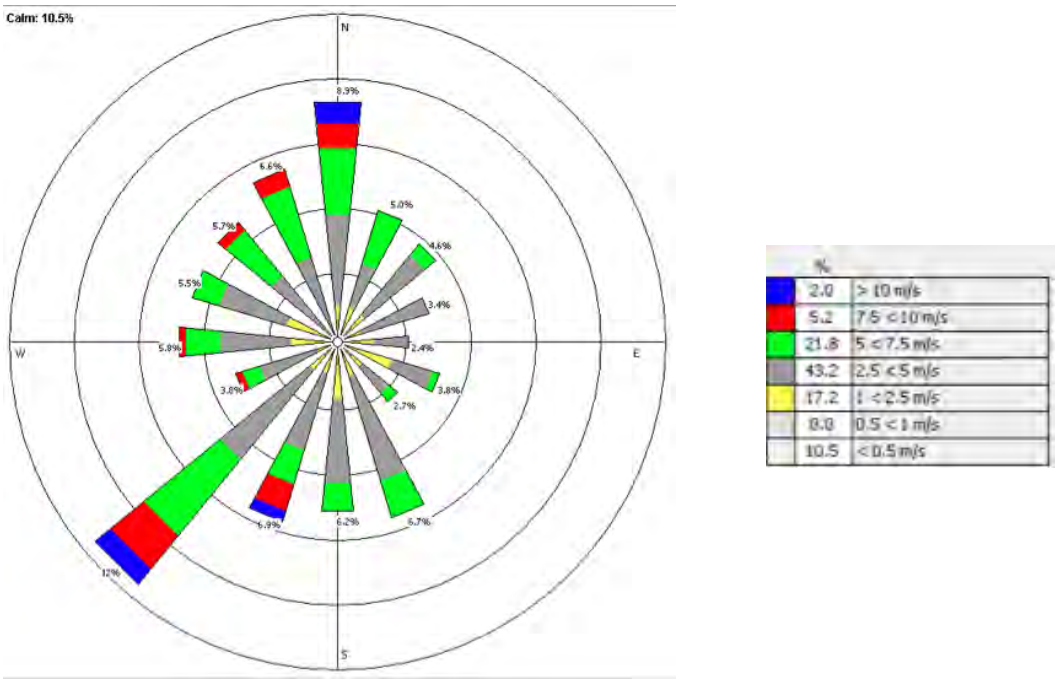

Figure 3-5. Wind Rose for the 10-meter Wind Sensor for March 2012.

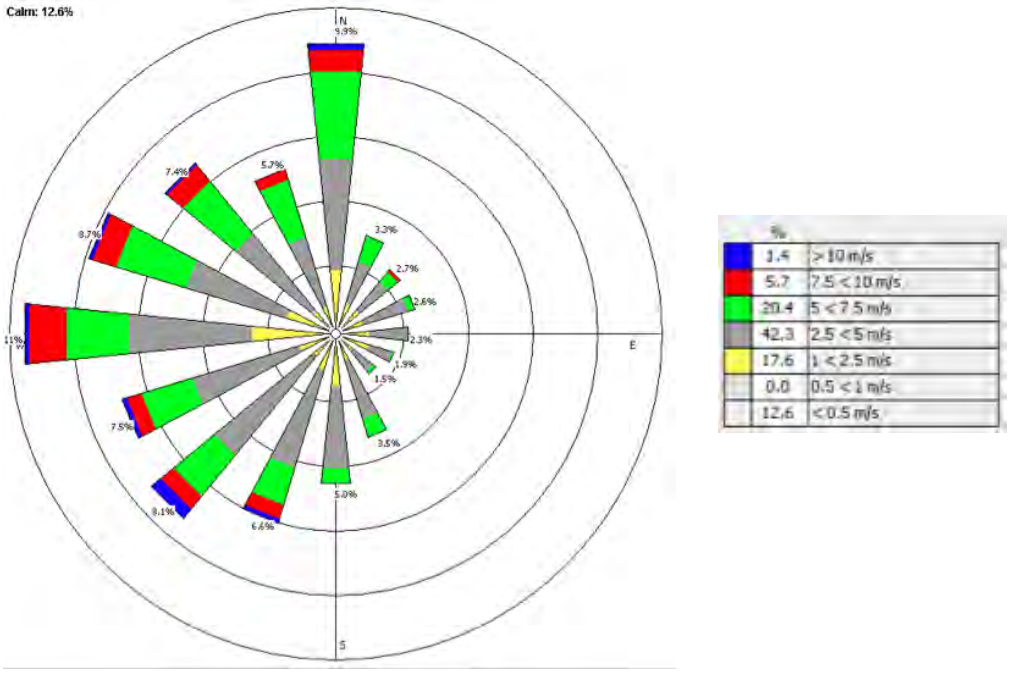

Figure 3-6. Wind Rose for 10-meter Wind Sensor January 2012 through March 2012.

3.8.3. Wind Frequency Distribution

The wind frequency distributions for all the wind sensors (10-meter) for the period January 2012 through March 2012 are presented in Table 3-6 and Figure 3-7.

Table 3-6. Wind Frequency Distribution (%) for all Winds from January 2012 through March 2012.

Range (m/s)			10m WS
0	<	3	39.7
3	<>	5	32.4
5	<>	7	17.5
7	<>	9	7.4
9	<>	11	2.1
11	<>	13	0.7
13	<>	15	0.2
15	<>	17	0.0
17	<>	19	0.0
19	>		0.0

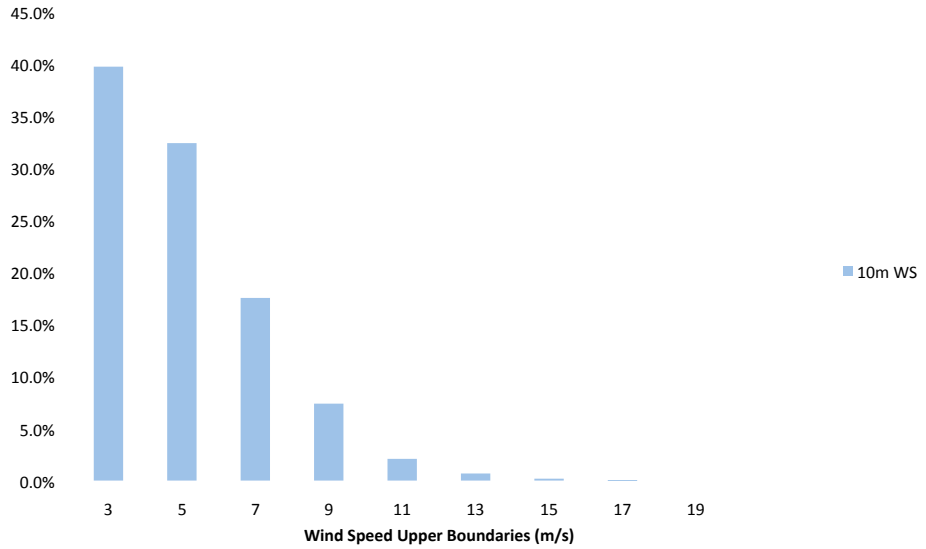

Figure 3-7. Wind Frequency Distribution for all Winds from January 2012 through March 2012.

The highest percentage of 10-meter winds occurs between 0 and 3-meters/second.

3.8.4. Wind Speed

The 10-meter wind speed summary for the period January 2012 through March 2012 is presented in Table 3-7 and Figure 3-8. The average wind speed for the period January 2012 through March 2012 was 7.6 m/s. The average winds for each of the months of the January-March period were roughly equivalent. The highest hourly average of 15.4 m/s occurred on February 25, 2012 at 9:00 AM.

Table 3-7. 10-meter Wind Speed (m/s) Summary for the Period of January 2012 through March 2012.

Month	Day	MAX	MIN	AVG	Month	Day	MAX	MIN	AVG	Month	Day	MAX	MIN	AVG
1	1	7.2	0.0	1.8	2	1	8.2	0.0	3.6	3	1	7.7	3.6	5.9
1	2	9.8	2.2	4.9	2	2	6.7	1.6	4.0	3	2	6.7	0.0	3.1
1	3	8.0	1.3	4.5	2	3	6.2	2.1	4.5	3	3	7.7	0.0	3.6
1	4	4.9	1.3	3.4	2	4	6.2	0.0	3.7	3	4	3.1	0.0	1.4
1	5	7.6	1.3	3.8	2	5	5.1	0.0	2.8	3	5	8.8	2.6	4.9
1	6	8.9	0.0	2.5	2	6	8.2	0.0	3.7	3	6	5.1	0.0	3.5
1	7	7.6	0.0	2.5	2	7	6.7	1.6	3.8	3	7	10.3	2.1	5.4
1	8	4.9	1.3	3.4	2	8	5.7	0.0	2.6	3	8	13.9	5.1	8.6
1	9	4.5	0.0	1.6	2	9	6.7	0.0	2.4	3	9	11.8	1.6	5.4
1	10	6.7	0.0	2.9	2	10	7.7	0.0	3.2	3	10	8.2	0.0	4.3
1	11	4.0	0.0	2.7	2	11	7.7	0.0	3.9	3	11	8.8	1.6	4.7
1	12	10.3	0.0	5.5	2	12	12.3	3.6	7.6	3	12	6.7	0.0	2.9
1	13	14.3	0.0	7.0	2	13	7.2	0.0	4.0	3	13	7.2	0.0	2.8
1	14	9.4	3.6	5.9	2	14	4.1	0.0	1.3	3	14	7.2	0.0	3.3
1	15	8.0	3.1	5.7	2	15	2.6	0.0	0.8	3	15	5.1	1.6	3.0
1	16	7.2	0.0	2.8	2	16	4.1	0.0	1.8	3	16	3.6	0.0	2.2
1	17	6.7	2.7	4.1	2	17	5.7	0.0	2.8	3	17	4.1	0.0	2.0
1	18	9.8	2.7	7.1	2	18	7.2	2.1	4.4	3	18	6.2	0.0	3.1
1	19	4.0	0.0	2.9	2	19	5.7	0.0	2.7	3	19	6.2	0.0	2.5
1	20	7.2	0.0	3.1	2	20	9.8	1.6	5.6	3	20	6.7	0.0	2.7
1	21	8.2	0.0	5.0	2	21	8.8	0.0	3.0	3	21	6.7	0.0	2.9
1	22	6.2	0.0	2.9	2	22	7.2	0.0	3.7	3	22	6.7	2.1	4.3
1	23	5.1	0.0	1.3	2	23	8.8	0.0	3.9	3	23	6.7	0.0	3.4
1	24	5.7	2.1	3.8	2	24	4.1	0.0	2.0	3	24	6.2	0.0	3.6
1	25	6.7	0.0	3.7	2	25	15.4	5.7	9.2	3	25	5.7	1.6	3.1
1	26	3.6	0.0	1.9	2	26	9.3	0.0	5.2	3	26	12.9	0.0	6.4
1	27	8.8	0.0	3.6	2	27	8.8	0.0	3.6	3	27	8.8	1.6	5.5
1	28	7.2	0.0	3.6	2	28	8.2	1.6	4.6	3	28	8.8	0.0	2.5
1	29	8.2	1.6	5.6	2	29	5.1	0.0	2.7	3	29	7.7	1.6	5.1
1	30	10.3	0.0	4.6						3	30	5.7	1.6	3.4
1	31	6.2	0.0	1.4						3	31	4.6	0.0	2.0
Average		3.7			Average		3.7			Average		3.8		

Figure 3-8. Plot of 10-meter Wind Speed (mph) Summary for the Period January 2012 through March 2012.

3.8.5. Temperature Summary

The average daily temperature data at 2-meters with corresponding maximums and minimums for the period January 2012 through March 2012, is presented in Table 3-8 and Figure 3-9. The highest hourly average temperature for the period of 26.7 ^{0}C was recorded on March 22, 2012. The lowest temperature for the period of -12.2 ^{0}C was recorded on January 16, 2012.

Table 3-8. Daily Average, Maximum and Minimum Temperatures for January through March 2012.

Month	Day	MAX	MIN	AVG	Month	Day	MAX	MIN	AVG	Month	Day	MAX	MIN	AVG
1	1	11.7	-0.6	3.3	2	1	15.6	0.6	8.9	3	1	2.8	-3.3	0.7
1	2	10.6	-0.6	4.8	2	2	6.1	0.0	3.3	3	2	1.7	-3.9	-0.9
1	3	-1.1	-9.4	-4.1	2	3	4.4	-3.9	0.5	3	3	12.8	2.2	6.9
1	4	-2.2	-11.7	-6.8	2	4	7.2	-2.2	2.3	3	4	5.0	0.0	3.2
1	5	2.8	-5.0	-1.3	2	5	2.8	-5.0	-1.9	3	5	4.4	-3.3	0.5
1	6	11.1	-2.8	4.0	2	6	10.0	-5.0	2.5	3	6	4.4	-6.7	-1.1
1	7	16.1	-1.1	7.9	2	7	8.3	-1.7	4.3	3	7	13.9	-0.6	7.5
1	8	6.1	-1.1	3.3	2	8	2.2	-5.6	-0.8	3	8	17.2	10.0	13.6
1	9	5.0	-3.3	-0.7	2	9	8.3	-2.8	2.4	3	9	14.4	1.7	5.4
1	10	7.8	-3.3	2.6	2	10	10.0	-3.9	3.3	3	10	4.4	-1.7	1.0
1	11	5.6	-1.1	2.3	2	11	3.3	0.0	1.2	3	11	11.7	-2.2	5.4
1	12	6.1	2.2	4.0	2	12	-1.1	-8.3	-4.8	3	12	21.7	2.2	11.4
1	13	11.7	-2.2	2.8	2	13	5.6	-7.8	-0.4	3	13	17.8	7.8	10.8
1	14	1.7	-6.7	-1.9	2	14	5.6	-3.9	1.2	3	14	17.2	5.0	9.4
1	15	-7.2	-11.7	-9.7	2	15	7.8	0.6	4.4	3	15	10.0	3.3	5.6
1	16	3.3	-12.2	-5.6	2	16	6.7	-1.7	3.3	3	16	6.1	1.7	4.4
1	17	8.9	1.1	4.7	2	17	10.6	0.0	5.7	3	17	11.7	4.4	8.4
1	18	11.1	-6.1	2.6	2	18	8.3	-0.6	3.5	3	18	16.1	2.2	9.2
1	19	-0.6	-8.9	-4.1	2	19	7.8	-1.7	2.6	3	19	21.7	6.1	13.7
1	20	-1.1	-6.1	-2.9	2	20	6.1	-2.2	1.0	3	20	25.0	7.8	14.3
1	21	-5.0	-7.2	-6.2	2	21	5.6	-5.0	1.4	3	21	23.9	8.3	16.0
1	22	-1.1	-10.0	-4.9	2	22	13.3	0.0	6.6	3	22	26.7	13.9	18.9
1	23	9.4	ID	2.5	2	23	13.9	0.6	8.2	3	23	21.1	15.6	17.6
1	24	13.3	5.6	9.3	2	24	4.4	0.0	2.1	3	24	16.1	7.8	11.3
1	25	5.6	1.1	3.1	2	25	7.2	0.0	3.7	3	25	9.4	6.7	8.1
1	26	4.4	0.0	2.3	2	26	5.0	-2.8	0.5	3	26	12.2	0.0	5.9
1	27	14.4	2.2	6.5	2	27	10.0	-5.6	3.6	3	27	8.9	-2.8	2.9
1	28	7.2	0.0	4.3	2	28	8.9	1.1	5.4	3	28	11.1	0.6	6.5
1	29	6.1	0.0	3.3	2	29	4.4	-1.1	0.9	3	29	11.7	3.9	8.1
1	30	3.9	-2.8	1.3						3	30	11.1	2.8	6.8
1	31	13.3	-1.7	4.6						3	31	5.6	1.7	3.9
Average		1.0			Average		2.6			Average		7.6		

Figure 3-9. Plot of Daily Averaged, Maximum, and Minimum Temperatures for the Period January 2012 through March 2012.

3.8.6 Relative Humidity Data

The average daily relative humidity data for the period January 2012 through March 2012 is presented in Table 3-9 and Figure 3-10. The monthly average relative humidity for the entire period was 59.8%. The highest hourly average relative humidity for the entire period of 100% was recorded on January 1st, 13th, 23rd, 24th, and 27th, February 22nd , and March 3rd, 14th, and 21st. The lowest hourly average relative humidity for the entire period of 9% was recorded on March 27, 2012.

Table 3-9. Daily Average Relative Humidity for the Period January 2012 through March 2012.

Month	Day	MAX	MIN	AVG	Month	Day	MAX	MIN	AVG	Month	Day	MAX	MIN	AVG
1	1	100.0	0.0	39.4	2	1	86.0	49.0	63.9	3	1	96.0	81.0	90.3
1	2	86.0	35.0	56.3	2	2	82.0	58.0	69.2	3	2	85.0	70.0	78.3
1	3	72.0	39.0	50.3	2	3	61.0	25.0	44.0	3	3	100.0	38.0	78.3
1	4	55.0	26.0	42.5	2	4	66.0	37.0	47.5	3	4	70.0	38.0	51.0
1	5	56.0	43.0	48.8	2	5	56.0	26.0	45.1	3	5	59.0	21.0	38.5
1	6	73.0	44.0	59.0	2	6	72.0	27.0	51.8	3	6	61.0	17.0	37.2
1	7	92.0	31.0	56.2	2	7	78.0	38.0	52.3	3	7	85.0	37.0	60.3
1	8	78.0	38.0	50.1	2	8	69.0	0.0	43.3	3	8	77.0	52.0	66.5
1	9	69.0	27.0	53.8	2	9	72.0	24.0	44.8	3	9	80.0	30.0	50.5
1	10	92.0	42.0	63.0	2	10	86.0	0.0	51.8	3	10	78.0	39.0	48.8
1	11	76.0	47.0	63.0	2	11	96.0	47.0	80.1	3	11	79.0	27.0	53.0
1	12	96.0	79.0	89.7	2	12	51.0	31.0	39.2	3	12	83.0	19.0	49.6
1	13	100.0	43.0	68.0	2	13	58.0	32.0	45.1	3	13	97.0	55.0	80.9
1	14	61.0	34.0	47.7	2	14	75.0	32.0	55.7	3	14	100.0	48.0	81.8
1	15	56.0	29.0	43.2	2	15	89.0	62.0	76.5	3	15	86.0	54.0	74.4
1	16	92.0	33.0	55.2	2	16	93.0	53.0	73.5	3	16	89.0	76.0	82.1
1	17	93.0	74.0	86.8	2	17	97.0	39.0	69.8	3	17	93.0	59.0	75.4
1	18	83.0	32.0	46.6	2	18	67.0	31.0	50.6	3	18	97.0	56.0	77.9
1	19	94.0	42.0	58.2	2	19	85.0	27.0	56.5	3	19	93.0	47.0	72.8
1	20	96.0	38.0	61.3	2	20	51.0	20.0	37.9	3	20	93.0	42.0	74.0
1	21	85.0	45.0	72.8	2	21	97.0	36.0	60.4	3	21	100.0	48.0	79.3
1	22	77.0	61.0	68.8	2	22	100.0	0.0	68.0	3	22	93.0	38.0	69.3
1	23	100.0	ID	85.5	2	23	93.0	31.0	61.9	3	23	84.0	24.0	53.3
1	24	100.0	51.0	74.9	2	24	97.0	64.0	88.2	3	24	61.0	23.0	40.0
1	25	67.0	49.0	57.5	2	25	86.0	32.0	51.0	3	25	83.0	58.0	67.0
1	26	93.0	58.0	72.8	2	26	47.0	21.0	33.0	3	26	93.0	22.0	52.2
1	27	100.0	62.0	88.1	2	27	71.0	43.0	56.7	3	27	29.0	9.0	20.5
1	28	79.0	48.0	63.6	2	28	65.0	29.0	40.1	3	28	93.0	31.0	63.8
1	29	65.0	27.0	41.8	2	29	96.0	39.0	70.8	3	29	97.0	48.0	62.8
1	30	66.0	30.0	48.1						3	30	71.0	18.0	42.3
1	31	79.0	32.0	57.2						3	31	97.0	62.0	81.3
Average		60.3			Average		56.2			Average		63.0		

Figure 3-10. Plot of Daily Averaged Relative Humidity for the Period January 2012 through March 2012.

3.9 Summary of Runway Usage Data

3.9.1 Runway Usage Data.

The runway data was acquired from RIAC. Figure 3-11 presents a map of the airport with the arrivals and departures for each runway for each month of the period as well as the cumulative total. Table 3-10 summarizes the same data.

Figure 3.11. Maps Presenting the Number of Flights by Arrival and Departure for Each Month of the Period as well as the Cumulative Total.

Table 3.10. Summary of all the Runway Usage for the Period January 2012 through March 2012.

		Period							
		JAN 2012		FEB 2012		MAR 2012		TOTAL	
Runway	Arrival/Depart	Flights	Percent	Flights	Percent	Flights	Percent	Flights	Percent
5	A	633	12.0%	700	13.7%	965	17.7%	2298	14.5%
5	D	691	13.1%	725	14.2%	976	17.9%	2392	15.1%
16	A	23	0.4%	18	0.4%	58	1.1%	99	0.6%
16	D	73	1.4%	64	1.3%	100	1.8%	237	1.5%
23	A	1519	28.9%	1212	23.8%	1271	23.3%	4002	25.3%
23	D	1362	25.9%	1348	26.5%	1356	24.8%	4066	25.7%
34	A	550	10.5%	558	10.9%	364	6.7%	1472	9.3%
34	D	411	7.8%	471	9.2%	373	6.8%	1255	7.9%
Total		5262		5096		5463		15821	

Section 4 Quality Control Activities

Quality controls (QC) were implemented in this program to insure the high quality of all collected data. QC activities included sampler calibrations (where possible) and weekly site checks. The QC checks performed during this period are described in the following sections.

4.1 Sampler Calibrations

4.1.1 $PM_{2.5}$ and PUF Samplers

The Partisol and PUF samplers were calibrated on a monthly basis.
Table 4-1 presents the dates the calibrations were performed on the Partisol samplers during the period.

Table 4.1. Partisol and PUF Calibrations.

Station	Partisol and PUF				Date
	Fieldview	Fire Station	Lydick	Pembroke	
RIAC Monitoring Stations	X	X	X	X	1/5/12
	X	X	X	X	2/4/12
	X	X	X	X	3/5/12

4.1.2 Site Checks

Site checks were conducted during every site visit. Site visits typically occurred immediately after a sample run. Media was exchanged in the Partisol and PUF samplers and performance checks were conducted on the operational, real-time samplers. The weekly Site Check forms are presented in Addendum A. The monthly Site Check forms are presented in Addendum B.

Table 4-3. Site Check Dates.

Station	Site Check Date
RIAC Monitoring Program	1/5/12
	1/11/12
	1/17/12
	1/23/12
	1/29/12
	2/4/12
	2/10/12
	2/16/12
	2/22/12
	2/28/12
	3/5/12
	3/12/12
	3/17/12
	3/23/12
	3/29/12

ADDENDUM A: SITE CHECK FORMS

Brian Smith <brian@advm2.com>

New Submission: RIAC Weekly System Check Sheets

Laura Ernst <noreply@jotform.com> **Thu, Jan 5, 2012 at 3:08 PM**
Reply-To: Laura Ernst <noreply@jotform.com>
To: brian@advm2.com

JotForm

Question	Answer
Site Operator	Laura Ernst
Site	Fieldview
AETHALOMETER	
**********	
Select Date & Time	01-05-2012 3:14 PM
Display Date & Time +/- 5 mins of PC time?	Yes
Display Flow between 4.7LPM-5.3LPM?	Yes
Flow rate is:	4.8
Display screen indicating normal operation (reasonable readings, no error messages, etc)?	Yes
Filter tape supply checked? Re-tension spool if needed. Filter tape spots visible & should have distinct , uniform borders.	Yes
Percent Filter Tape remaining?	87
Comments	
PAS 2000	
**********	
Select Date & Time	01-05-2012 3:16 PM
Date & Time +/- 5 mins of PC time?	Yes
Lamp Intensity between 95-105?	Yes
Lamp Intensity is:	98.2

Lamp Frequency between 8kHz-15kHz?	Yes
Lamp Frequency is:	9.9
Pump Flow rate between 1.9LPM-2.1LPM?	Yes
Pump Flow rate is:	2.0
Pump "Actual Value" between 40%-55%?	48
Pump Actual Value is:	48
Comments	

PUF SAMPLER

****

Select Date & Time	01-05-2012 4:04 PM
Sampler is intact & inlet head unobstructed?	
PUF Sampler reading correct time and day?	
Exposed cartridge ran for 24 hours?	
Sampler left in Run Mode?	
STR	
STP	
Duration	
QSTD	
AVG	
MAX	
MIN	
Sample ID	
Sample Date	
Sample ID	
Sample Date	
Comments	no samples were run and no new filters were installed the unit was calibrated.

PARTISOL SAMPLER

****

Select Date & Time	01-05-2012 3:31 PM
Sampler is intact & inlet head unobstructed?	Yes
Temp shield is intact & sensor seated inside?	Yes

Partisol is reading correct time and day?	No
Exposed filter ran for 24 hours?	Yes
Sampler was left in Run Mode?	Yes
Next or New Sample Date Set?	Yes
Next or New Sample Date is:	1-10-12
Leak Check mmHg/min	28
Flow Check l/min	16.7
Exposed Filter ID	11T4842
Pass/Fail	Pass
Pass/Fail	Pass
Leak Check mmHg/min	13
Flow Check l/min	16.7
New Filter ID	12T0030
Pass/Fail	Pass
Pass/Fail	Pass
Comments	sampler was on upon arrival; field blank run 12T0033; unit calibrated

Brian Smith <brian@advm2.com>

New Submission: RIAC Weekly System Check Sheets

Laura Ernst <noreply@jotform.com> **Thu, Jan 5, 2012 at 1:52 PM**
Reply-To: Laura Ernst <noreply@jotform.com>
To: brian@advm2.com

JotForm

Question	Answer
Site Operator	Laura Ernst
Site	Fire Station
AETHALOMETER	
**********	
Select Date & Time	01-05-2012 1:58 PM
Display Date & Time +/- 5 mins of PC time?	Yes
Display Flow between 4.7LPM-5.3LPM?	Yes
Flow rate is:	4.9
Display screen indicating normal operation (reasonable readings, no error messages, etc)?	Yes
Filter tape supply checked? Re-tension spool if needed. Filter tape spots visible & should have distinct , uniform borders.	Yes
Percent Filter Tape remaining?	50
Comments	
PAS 2000	
**********	
Select Date & Time	01-05-2012 1:59 PM
Date & Time +/- 5 mins of PC time?	Yes
Lamp Intensity between 95-105?	Yes
Lamp Intensity is:	98.4

Lamp Frequency between 8kHz-15kHz?	No
Lamp Frequency is:	6.7
Pump Flow rate between 1.9LPM-2.1LPM?	No
Pump Flow rate is:	1.74
Pump "Actual Value" between 40%-55%?	100
Pump Actual Value is:	100
Comments	

PUF SAMPLER

****

Select Date & Time	01-05-2012 2:48 PM
Sampler is intact & inlet head unobstructed?	
PUF Sampler reading correct time and day?	
Exposed cartridge ran for 24 hours?	
Sampler left in Run Mode?	
STR	
STP	
Duration	
QSTD	
AVG	
MAX	
MIN	
Sample ID	
Sample Date	
Sample ID	
Sample Date	
Comments	no samples were run and no filters to install

PARTISOL SAMPLER

****

Select Date & Time	01-05-2012 2:17 PM
Sampler is intact & inlet head unobstructed?	Yes
Temp shield is intact & sensor seated inside?	Yes

Partisol is reading correct time and day?	Yes
Exposed filter ran for 24 hours?	Yes
Sampler was left in Run Mode?	Yes
Next or New Sample Date Set?	Yes
Next or New Sample Date is:	1-10-12
Leak Check mmHg/min	50
Flow Check l/min	16.7
Exposed Filter ID	11T4849
Pass/Fail	Pass
Pass/Fail	Pass
Leak Check mmHg/min	73
Flow Check l/min	16.7
New Filter ID	12T0029
Pass/Fail	Pass
Pass/Fail	Pass
Comments	sampler was on upon arrival; new filters are not good, would not pass flow check with new filters. had one left of the kind that works so installed.

Brian Smith <brian@advm2.com>

New Submission: RIAC Weekly System Check Sheets

Laura Ernst <noreply@jotform.com> **Thu, Jan 5, 2012 at 10:42 AM**
Reply-To: Laura Ernst <noreply@jotform.com>
To: brian@advm2.com

JotForm

Question	Answer
Site Operator	Laura Ernst
Site	Lydick
AETHALOMETER	
**********	
Select Date & Time	01-05-2012 10:08 AM
Display Date & Time +/- 5 mins of PC time?	Yes
Display Flow between 4.7LPM-5.3LPM?	Yes
Flow rate is:	5
Display screen indicating normal operation (reasonable readings, no error messages, etc)?	Yes
Filter tape supply checked? Re-tension spool if needed. Filter tape spots visible & should have distinct , uniform borders.	Yes
Percent Filter Tape remaining?	2
Comments	will need to change tape soon
PAS 2000	
**********	
Select Date & Time	01-05-2012 10:08 AM
Date & Time +/- 5 mins of PC time?	Yes
Lamp Intensity between 95-105?	Yes
Lamp Intensity is:	98.1

Lamp Frequency between 8kHz-15kHz?	No
Lamp Frequency is:	7.6
Pump Flow rate between 1.9LPM-2.1LPM?	No
Pump Flow rate is:	.18
Pump "Actual Value" between 40%-55%?	100
Pump Actual Value is:	100
Comments	

PUF SAMPLER

****

Select Date & Time	01-05-2012 11:36 AM
Sampler is intact & inlet head unobstructed?	
PUF Sampler reading correct time and day?	
Exposed cartridge ran for 24 hours?	
Sampler left in Run Mode?	
STR	
STP	
Duration	
QSTD	
AVG	
MAX	
MIN	
Sample ID	
Sample Date	
Sample ID	
Sample Date	
Comments	no filters were run last time and no new ones were installed this time; unavailable.

PARTISOL SAMPLER

****

Select Date & Time	01-05-2012 10:41 AM
Sampler is intact & inlet head unobstructed?	Yes
Temp shield is intact & sensor seated inside?	Yes

Partisol is reading correct time and day?	Yes
Exposed filter ran for 24 hours?	Yes
Sampler was left in Run Mode?	Yes
Next or New Sample Date Set?	Yes
Next or New Sample Date is:	1/10/12
Leak Check mmHg/min	9
Flow Check l/min	16.7
Exposed Filter ID	11T4843
Pass/Fail	Pass
Pass/Fail	Pass
Leak Check mmHg/min	11
Flow Check l/min	16.7
New Filter ID	12T0034
Pass/Fail	Pass
Pass/Fail	Pass
Comments	Sampler was in ERR mode upon arrival

Brian Smith <brian@advm2.com>

New Submission: RIAC Weekly System Check Sheets

Laura Ernst <noreply@jotform.com> **Thu, Jan 5, 2012 at 12:25 PM**
Reply-To: Laura Ernst <noreply@jotform.com>
To: brian@advm2.com

JotForm

Question	Answer
Site Operator	Laura Ernst
Site	Pembroke
AETHALOMETER	
**********	
Select Date & Time	01-05-2012 12:29 PM
Display Date & Time +/- 5 mins of PC time?	Yes
Display Flow between 4.7LPM-5.3LPM?	Yes
Flow rate is:	4.8
Display screen indicating normal operation (reasonable readings, no error messages, etc)?	Yes
Filter tape supply checked? Re-tension spool if needed. Filter tape spots visible & should have distinct , uniform borders.	Yes
Percent Filter Tape remaining?	61
Comments	
PAS 2000	
**********	
Select Date & Time	01-05-2012 12:30 PM
Date & Time +/- 5 mins of PC time?	Yes
Lamp Intensity between 95-105?	Yes
Lamp Intensity is:	99

Lamp Frequency between 8kHz-15kHz?	Yes
Lamp Frequency is:	8.3
Pump Flow rate between 1.9LPM-2.1LPM?	No
Pump Flow rate is:	.10
Pump "Actual Value" between 40%-55%?	100
Pump Actual Value is:	100
Comments	

PUF SAMPLER

****

Select Date & Time	01-05-2012 1:19 PM
Sampler is intact & inlet head unobstructed?	
PUF Sampler reading correct time and day?	
Exposed cartridge ran for 24 hours?	
Sampler left in Run Mode?	
STR	
STP	
Duration	
QSTD	
AVG	
MAX	
MIN	
Sample ID	
Sample Date	
Sample ID	
Sample Date	
Comments	no samples were run or new filters put in but calibration completed

PARTISOL SAMPLER

****

Select Date & Time	01-05-2012 1:19 PM
Sampler is intact & inlet head unobstructed?	Yes
Temp shield is intact & sensor seated inside?	

Partisol is reading correct time and day?	No
Exposed filter ran for 24 hours?	No
Sampler was left in Run Mode?	Yes
Next or New Sample Date Set?	Yes
Next or New Sample Date is:	1/10/12
Leak Check mmHg/min	13
Flow Check l/min	16.6
Exposed Filter ID	11T4844
Pass/Fail	Pass
Pass/Fail	Pass
Leak Check mmHg/min	12
Flow Check l/min	16.7
New Filter ID	12T0031
Pass/Fail	Pass
Pass/Fail	Pass
Comments	Partisol was inERR mode upon arrival and the status was XE; volume was 6.5 m3 and sample time was 6.3 m3 when i put it in stop mode the status was OK.

Brian Smith <brian@advm2.com>

New Submission: RIAC Weekly System Check Sheets

Laura Ernst <noreply@jotform.com> **Wed, Jan 11, 2012 at 1:38 PM**
Reply-To: Laura Ernst <noreply@jotform.com>
To: brian@advm2.com

JotForm

Question	Answer
Site Operator	Laura Ernst
Site	Fieldview
AETHALOMETER	
**********	
Select Date & Time	01-11-2012 1:56 PM
Display Date & Time +/- 5 mins of PC time?	Yes
Display Flow between 4.7LPM-5.3LPM?	Yes
Flow rate is:	4.8
Display screen indicating normal operation (reasonable readings, no error messages, etc)?	Yes
Filter tape supply checked? Re-tension spool if needed. Filter tape spots visible & should have distinct , uniform borders.	Yes
Percent Filter Tape remaining?	86
Comments	
PAS 2000	
**********	
Select Date & Time	01-11-2012 2:34 PM
Date & Time +/- 5 mins of PC time?	
Lamp Intensity between 95-105?	
Lamp Intensity is:	

Lamp Frequency between 8kHz-15kHz?	
Lamp Frequency is:	
Pump Flow rate between 1.9LPM-2.1LPM?	
Pump Flow rate is:	
Pump "Actual Value" between 40%-55%?	
Pump Actual Value is:	
Comments	not operational

PUF SAMPLER

****

Select Date & Time	01-11-2012 2:00 PM
Sampler is intact & inlet head unobstructed?	Yes
PUF Sampler reading correct time and day?	No
Exposed cartridge ran for 24 hours?	Yes
Sampler left in Run Mode?	Yes
STR	1-10-12
STP	1-11-12
Duration	24
QSTD	0
AVG	216
MAX	227
MIN	209
Sample ID	FV-P-120110
Sample Date	1-10-12
Sample ID	FV-P-120116
Sample Date	1-16-12
Comments	

PARTISOL SAMPLER

****

Select Date & Time	01-11-2012 2:21 PM
Sampler is intact & inlet head unobstructed?	Yes
Temp shield is intact & sensor seated inside?	Yes

Partisol is reading correct time and day?	Yes
Exposed filter ran for 24 hours?	Yes
Sampler was left in Run Mode?	Yes
Next or New Sample Date Set?	Yes
Next or New Sample Date is:	1-16-12
Leak Check mmHg/min	11
Flow Check l/min	16.7
Exposed Filter ID	12T0030
Pass/Fail	Pass
Pass/Fail	Pass
Leak Check mmHg/min	8
Flow Check l/min	16.7
New Filter ID	12T0024
Pass/Fail	Pass
Pass/Fail	Pass
Comments	

Brian Smith <brian@advm2.com>

New Submission: RIAC Weekly System Check Sheets

Laura Ernst <noreply@jotform.com> **Wed, Jan 11, 2012 at 12:33 PM**
Reply-To: Laura Ernst <noreply@jotform.com>
To: brian@advm2.com

JotForm

Question	Answer
Site Operator	Laura Ernst
Site	Fire Station
AETHALOMETER	
**********	
Select Date & Time	01-11-2012 12:48 PM
Display Date & Time +/- 5 mins of PC time?	Yes
Display Flow between 4.7LPM-5.3LPM?	Yes
Flow rate is:	4.8
Display screen indicating normal operation (reasonable readings, no error messages, etc)?	Yes
Filter tape supply checked? Re-tension spool if needed. Filter tape spots visible & should have distinct , uniform borders.	Yes
Percent Filter Tape remaining?	50
Comments	
PAS 2000	
**********	
Select Date & Time	01-11-2012 1:28 PM
Date & Time +/- 5 mins of PC time?	
Lamp Intensity between 95-105?	
Lamp Intensity is:	

Lamp Frequency between 8kHz-15kHz?	
Lamp Frequency is:	
Pump Flow rate between 1.9LPM-2.1LPM?	
Pump Flow rate is:	
Pump "Actual Value" between 40%-55%?	
Pump Actual Value is:	
Comments	not operational sent for repair

PUF SAMPLER

****

Select Date & Time	01-11-2012 12:51 PM
Sampler is intact & inlet head unobstructed?	Yes
PUF Sampler reading correct time and day?	Yes
Exposed cartridge ran for 24 hours?	Yes
Sampler left in Run Mode?	Yes
STR	01-10-12
STP	01-11-12
Duration	24
QSTD	0
AVG	219
MAX	229
MIN	213
Sample ID	FS-P-120110
Sample Date	01-10-12
Sample ID	FS-P-120116
Sample Date	01-16-12
Comments	2 quartz filters were on top

PARTISOL SAMPLER

****

Select Date & Time	01-11-2012 1:11 PM
Sampler is intact & inlet head unobstructed?	Yes
Temp shield is intact & sensor seated inside?	Yes

Partisol is reading correct time and day?	Yes
Exposed filter ran for 24 hours?	Yes
Sampler was left in Run Mode?	Yes
Next or New Sample Date Set?	Yes
Next or New Sample Date is:	1-16-12
Leak Check mmHg/min	71
Flow Check l/min	16.7
Exposed Filter ID	12T0029
Pass/Fail	Pass
Pass/Fail	Pass
Leak Check mmHg/min	47
Flow Check l/min	16.7
New Filter ID	12T0025
Pass/Fail	Pass
Pass/Fail	Pass
Comments	sampler was in ERR mode upon arrival

Brian Smith <brian@advm2.com>

New Submission: RIAC Weekly System Check Sheets

Laura Ernst <noreply@jotform.com> **Wed, Jan 11, 2012 at 10:15 AM**
Reply-To: Laura Ernst <noreply@jotform.com>
To: brian@advm2.com

JotForm

Question	Answer
Site Operator	Laura Ernst
Site	Lydick
AETHALOMETER	
**********	
Select Date & Time	01-11-2012 10:45 AM
Display Date & Time +/- 5 mins of PC time?	Yes
Display Flow between 4.7LPM-5.3LPM?	Yes
Flow rate is:	5.0
Display screen indicating normal operation (reasonable readings, no error messages, etc)?	Yes
Filter tape supply checked? Re-tension spool if needed. Filter tape spots visible & should have distinct , uniform borders.	Yes
Percent Filter Tape remaining?	1
Comments	
PAS 2000	
**********	
Select Date & Time	01-11-2012 10:45 AM
Date & Time +/- 5 mins of PC time?	
Lamp Intensity between 95-105?	
Lamp Intensity is:	

Lamp Frequency between 8kHz-15kHz?	
Lamp Frequency is:	
Pump Flow rate between 1.9LPM-2.1LPM?	
Pump Flow rate is:	
Pump "Actual Value" between 40%-55%?	
Pump Actual Value is:	
Comments	not operational

PUF SAMPLER

****

Select Date & Time	01-11-2012 10:20 AM
Sampler is intact & inlet head unobstructed?	Yes
PUF Sampler reading correct time and day?	Yes
Exposed cartridge ran for 24 hours?	Yes
Sampler left in Run Mode?	Yes
STR	1-10-12
STP	1-11-12
Duration	24
QSTD	0
AVG	229
MAX	231
MIN	229
Sample ID	LD-P-120110
Sample Date	01-10-12
Sample ID	LD-P-120116
Sample Date	01-16-12
Comments	

PARTISOL SAMPLER

****

Select Date & Time	01-11-2012 10:02 AM
Sampler is intact & inlet head unobstructed?	Yes
Temp shield is intact & sensor seated inside?	Yes

Partisol is reading correct time and day?	Yes
Exposed filter ran for 24 hours?	Yes
Sampler was left in Run Mode?	Yes
Next or New Sample Date Set?	Yes
Next or New Sample Date is:	01-16-12
Leak Check mmHg/min	10
Flow Check l/min	16.7
Exposed Filter ID	12T0034
Pass/Fail	Pass
Pass/Fail	Pass
Leak Check mmHg/min	43
Flow Check l/min	16.7
New Filter ID	12T0026
Pass/Fail	Pass
Pass/Fail	Pass
Comments	was in ERR mode upon arrival

Brian Smith <brian@advm2.com>

New Submission: RIAC Weekly System Check Sheets

Laura Ernst <noreply@jotform.com> **Wed, Jan 11, 2012 at 11:26 AM**
Reply-To: Laura Ernst <noreply@jotform.com>
To: brian@advm2.com

JotForm

Question	Answer
Site Operator	Laura Ernst
Site	Pembroke
AETHALOMETER	
**********	
Select Date & Time	01-11-2012 11:37 PM
Display Date & Time +/- 5 mins of PC time?	Yes
Display Flow between 4.7LPM-5.3LPM?	Yes
Flow rate is:	4.8
Display screen indicating normal operation (reasonable readings, no error messages, etc)?	Yes
Filter tape supply checked? Re-tension spool if needed. Filter tape spots visible & should have distinct , uniform borders.	Yes
Percent Filter Tape remaining?	61
Comments	
PAS 2000	
**********	
Select Date & Time	01-11-2012 12:21 PM
Date & Time +/- 5 mins of PC time?	Yes
Lamp Intensity between 95-105?	Yes
Lamp Intensity is:	98.9

Lamp Frequency between 8kHz-15kHz?	Yes
Lamp Frequency is:	8.3
Pump Flow rate between 1.9LPM-2.1LPM?	No
Pump Flow rate is:	.10
Pump "Actual Value" between 40%-55%?	100
Pump Actual Value is:	100
Comments	instrument removed after reading taken for servicing

PUF SAMPLER

****

Select Date & Time	01-11-2012 11:43 PM
Sampler is intact & inlet head unobstructed?	Yes
PUF Sampler reading correct time and day?	Yes
Exposed cartridge ran for 24 hours?	Yes
Sampler left in Run Mode?	Yes
STR	1/10/12
STP	1/12/10
Duration	24
QSTD	0
AVG	229
MAX	234
MIN	227
Sample ID	PB-P-120110
Sample Date	1/10/12
Sample ID	PB-P-120116
Sample Date	1/16/12
Comments	

PARTISOL SAMPLER

****

Select Date & Time	01-11-2012 12:21 PM
Sampler is intact & inlet head unobstructed?	Yes
Temp shield is intact & sensor seated inside?	Yes

Partisol is reading correct time and day?	Yes
Exposed filter ran for 24 hours?	Yes
Sampler was left in Run Mode?	Yes
Next or New Sample Date Set?	Yes
Next or New Sample Date is:	1/16/12
Leak Check mmHg/min	11
Flow Check l/min	16.7
Exposed Filter ID	12T0031
Pass/Fail	Pass
Pass/Fail	Pass
Leak Check mmHg/min	10
Flow Check l/min	16.7
New Filter ID	12T0023
Pass/Fail	Pass
Pass/Fail	Pass
Comments	

Brian Smith <brian@advm2.com>

New Submission: RIAC Weekly System Check Sheets

Laura Ernst <noreply@jotform.com> **Tue, Jan 17, 2012 at 1:05 PM**
Reply-To: Laura Ernst <noreply@jotform.com>
To: brian@advm2.com

JotForm

Question	Answer
Site Operator	Laura Ernst
Site	Fieldview
AETHALOMETER	
**********	
Select Date & Time	01-17-2012 1:37 PM
Display Date & Time +/- 5 mins of PC time?	Yes
Display Flow between 4.7LPM-5.3LPM?	Yes
Flow rate is:	4.8
Display screen indicating normal operation (reasonable readings, no error messages, etc)?	Yes
Filter tape supply checked? Re-tension spool if needed. Filter tape spots visible & should have distinct , uniform borders.	Yes
Percent Filter Tape remaining?	86
Comments	
PAS 2000	
**********	
Select Date & Time	01-17-2012 2:00 PM
Date & Time +/- 5 mins of PC time?	
Lamp Intensity between 95-105?	
Lamp Intensity is:	

Lamp Frequency between 8kHz-15kHz?	
Lamp Frequency is:	
Pump Flow rate between 1.9LPM-2.1LPM?	
Pump Flow rate is:	
Pump "Actual Value" between 40%-55%?	
Pump Actual Value is:	
Comments	not operational.

PUF SAMPLER

****

Select Date & Time	01-17-2012 1:40 PM
Sampler is intact & inlet head unobstructed?	Yes
PUF Sampler reading correct time and day?	Yes
Exposed cartridge ran for 24 hours?	Yes
Sampler left in Run Mode?	Yes
STR	1/16/12
STP	1/17/12
Duration	24
QSTD	0
AVG	229
MAX	231
MIN	229
Sample ID	FV-P-120116
Sample Date	1/16/12
Sample ID	
Sample Date	
Comments	no new filter available for installation

PARTISOL SAMPLER

****

Select Date & Time	01-17-2012 1:49 PM
Sampler is intact & inlet head unobstructed?	Yes
Temp shield is intact & sensor seated inside?	Yes

Partisol is reading correct time and day?	Yes
Exposed filter ran for 24 hours?	Yes
Sampler was left in Run Mode?	Yes
Next or New Sample Date Set?	Yes
Next or New Sample Date is:	1/22/12
Leak Check mmHg/min	8
Flow Check l/min	16.7
Exposed Filter ID	12T0024
Pass/Fail	Pass
Pass/Fail	Pass
Leak Check mmHg/min	25
Flow Check l/min	16.7
New Filter ID	12T0027
Pass/Fail	Pass
Pass/Fail	Pass
Comments	

Brian Smith <brian@advm2.com>

New Submission: RIAC Weekly System Check Sheets

Laura Ernst <noreply@jotform.com> **Tue, Jan 17, 2012 at 12:21 PM**
Reply-To: Laura Ernst <noreply@jotform.com>
To: brian@advm2.com

JotForm

Question	Answer
Site Operator	Laura Ernst
Site	Fire Station
AETHALOMETER	
**********	
Select Date & Time	01-17-2012 12:49 PM
Display Date & Time +/- 5 mins of PC time?	Yes
Display Flow between 4.7LPM-5.3LPM?	Yes
Flow rate is:	4.8
Display screen indicating normal operation (reasonable readings, no error messages, etc)?	Yes
Filter tape supply checked? Re-tension spool if needed. Filter tape spots visible & should have distinct , uniform borders.	Yes
Percent Filter Tape remaining?	50
Comments	
PAS 2000	
**********	
Select Date & Time	01-17-2012 1:17 PM
Date & Time +/- 5 mins of PC time?	
Lamp Intensity between 95-105?	
Lamp Intensity is:	

Lamp Frequency between 8kHz-15kHz?	
Lamp Frequency is:	
Pump Flow rate between 1.9LPM-2.1LPM?	
Pump Flow rate is:	
Pump "Actual Value" between 40%-55%?	
Pump Actual Value is:	
Comments	not operational

PUF SAMPLER

****

Select Date & Time	01-17-2012 12:51 PM
Sampler is intact & inlet head unobstructed?	Yes
PUF Sampler reading correct time and day?	No
Exposed cartridge ran for 24 hours?	Yes
Sampler left in Run Mode?	Yes
STR	1/16/12
STP	1/17/12
Duration	24
QSTD	0
AVG	229
MAX	231
MIN	229
Sample ID	FS-P-120116
Sample Date	1-16-12
Sample ID	
Sample Date	
Comments	no new filter to install

PARTISOL SAMPLER

****

Select Date & Time	01-17-2012 1:04 PM
Sampler is intact & inlet head unobstructed?	Yes
Temp shield is intact & sensor seated inside?	Yes

Partisol is reading correct time and day?	Yes
Exposed filter ran for 24 hours?	Yes
Sampler was left in Run Mode?	Yes
Next or New Sample Date Set?	Yes
Next or New Sample Date is:	1/22/12
Leak Check mmHg/min	48
Flow Check l/min	16.7
Exposed Filter ID	12T0025
Pass/Fail	Pass
Pass/Fail	Pass
Leak Check mmHg/min	46
Flow Check l/min	16.7
New Filter ID	12T0032
Pass/Fail	Pass
Pass/Fail	Pass
Comments	In Err mode upon arrival

Brian Smith <brian@advm2.com>

New Submission: RIAC Weekly System Check Sheets

Laura Ernst <noreply@jotform.com> **Tue, Jan 17, 2012 at 10:16 AM**
Reply-To: Laura Ernst <noreply@jotform.com>
To: brian@advm2.com

JotForm

Question	Answer
Site Operator	Laura Ernst
Site	Lydick
AETHALOMETER	
**********	
Select Date & Time	01-17-2012 9:58 AM
Display Date & Time +/- 5 mins of PC time?	Yes
Display Flow between 4.7LPM-5.3LPM?	Yes
Flow rate is:	5.0
Display screen indicating normal operation (reasonable readings, no error messages, etc)?	Yes
Filter tape supply checked? Re-tension spool if needed. Filter tape spots visible & should have distinct , uniform borders.	Yes
Percent Filter Tape remaining?	1
Comments	filter tape will need to be changed soon. Less than 1/2 an inch in width
PAS 2000	
**********	
Select Date & Time	01-17-2012 10:49 AM
Date & Time +/- 5 mins of PC time?	
Lamp Intensity between 95-105?	
Lamp Intensity is:	

Lamp Frequency between 8kHz-15kHz?	
Lamp Frequency is:	
Pump Flow rate between 1.9LPM-2.1LPM?	
Pump Flow rate is:	
Pump "Actual Value" between 40%-55%?	
Pump Actual Value is:	
Comments	not operational

PUF SAMPLER

****

Select Date & Time	01-17-2012 10:07 AM
Sampler is intact & inlet head unobstructed?	Yes
PUF Sampler reading correct time and day?	Yes
Exposed cartridge ran for 24 hours?	Yes
Sampler left in Run Mode?	Yes
STR	1/16/12
STP	1/17/12
Duration	24
QSTD	0
AVG	229
MAX	231
MIN	229
Sample ID	LD-P-120116
Sample Date	1/16/12
Sample ID	
Sample Date	
Comments	no new filter available to be installed

PARTISOL SAMPLER

****

Select Date & Time	01-17-2012 10:17 AM
Sampler is intact & inlet head unobstructed?	Yes
Temp shield is intact & sensor seated inside?	Yes

Partisol is reading correct time and day?	No
Exposed filter ran for 24 hours?	Yes
Sampler was left in Run Mode?	Yes
Next or New Sample Date Set?	Yes
Next or New Sample Date is:	1/22/12
Leak Check mmHg/min	31
Flow Check l/min	16.7
Exposed Filter ID	12T0026
Pass/Fail	Pass
Pass/Fail	Pass
Leak Check mmHg/min	14
Flow Check l/min	16.7
New Filter ID	11T4850
Pass/Fail	Pass
Pass/Fail	Pass
Comments	note that filter 12T0028 did not pass the leak check and a new filter had to be used instead -- 11T4850 sampler was in ERR mode upon arrival sampler was off by one minute

Brian Smith <brian@advm2.com>

New Submission: RIAC Weekly System Check Sheets

noreply@jotform.com <noreply@jotform.com> **Tue, Jan 17, 2012 at 11:25 AM**
Reply-To: noreply@jotform.com
To: brian@advm2.com

JotForm

Question	Answer
Site Operator	
Site	
AETHALOMETER	
**********	
Select Date & Time	01-17-2012 12:21 PM
Display Date & Time +/- 5 mins of PC time?	
Display Flow between 4.7LPM-5.3LPM?	
Flow rate is:	
Display screen indicating normal operation (reasonable readings, no error messages, etc)?	
Filter tape supply checked? Re-tension spool if needed. Filter tape spots visible & should have distinct , uniform borders.	
Percent Filter Tape remaining?	
Comments	not operational
PAS 2000	
**********	
Select Date & Time	01-17-2012 12:21 PM
Date & Time +/- 5 mins of PC time?	
Lamp Intensity between 95-105?	
Lamp Intensity is:	

Lamp Frequency between 8kHz-15kHz?	
Lamp Frequency is:	
Pump Flow rate between 1.9LPM-2.1LPM?	
Pump Flow rate is:	
Pump "Actual Value" between 40%-55%?	
Pump Actual Value is:	
Comments	not operational

PUF SAMPLER

****

Select Date & Time	01-17-2012 11:58 PM
Sampler is intact & inlet head unobstructed?	Yes
PUF Sampler reading correct time and day?	No
Exposed cartridge ran for 24 hours?	Yes
Sampler left in Run Mode?	Yes
STR	1/16/12
STP	1/17/12
Duration	24
QSTD	0
AVG	229
MAX	232
MIN	229
Sample ID	PB-P-120116
Sample Date	1/16/12
Sample ID	
Sample Date	
Comments	no new filter available to install

PARTISOL SAMPLER

****

Select Date & Time	01-17-2012 11:58 PM
Sampler is intact & inlet head unobstructed?	Yes
Temp shield is intact & sensor seated inside?	Yes

Partisol is reading correct time and day?	No
Exposed filter ran for 24 hours?	Yes
Sampler was left in Run Mode?	Yes
Next or New Sample Date Set?	Yes
Next or New Sample Date is:	1/22/12
Leak Check mmHg/min	8
Flow Check l/min	16.7
Exposed Filter ID	12T0023
Pass/Fail	Pass
Pass/Fail	Pass
Leak Check mmHg/min	100
Flow Check l/min	16.7
New Filter ID	12T0035
Pass/Fail	Pass
Pass/Fail	Pass
Comments	new filter 12T0035 did not pass the leak check the first time.

Brian Smith <brian@advm2.com>

New Submission: RIAC Weekly System Check Sheets

Laura Ernst <noreply@jotform.com> **Mon, Jan 23, 2012 at 9:52 AM**
Reply-To: Laura Ernst <noreply@jotform.com>
To: brian@advm2.com

JotForm

Question	Answer
Site Operator	Laura Ernst
Site	Fieldview
AETHALOMETER	
**********	
Select Date & Time	01-23-2012 10:46 AM
Display Date & Time +/- 5 mins of PC time?	Yes
Display Flow between 4.7LPM-5.3LPM?	Yes
Flow rate is:	4.8
Display screen indicating normal operation (reasonable readings, no error messages, etc)?	Yes
Filter tape supply checked? Re-tension spool if needed. Filter tape spots visible & should have distinct , uniform borders.	Yes
Percent Filter Tape remaining?	85
Comments	Aethalometer was in check mode upon arrival; texted Brian and turned off; waited ten seconds and turned back on. Recorded readings 27 mins later.
PAS 2000	
**********	
Select Date & Time	01-23-2012 10:47 AM
Date & Time +/- 5 mins of PC time?	
Lamp Intensity between 95-105?	
Lamp Intensity is:	

Lamp Frequency between 8kHz-15kHz?	
Lamp Frequency is:	
Pump Flow rate between 1.9LPM-2.1LPM?	
Pump Flow rate is:	
Pump "Actual Value" between 40%-55%?	
Pump Actual Value is:	
Comments	not operational

PUF SAMPLER

****

Select Date & Time	01-23-2012 10:47 AM
Sampler is intact & inlet head unobstructed?	
PUF Sampler reading correct time and day?	
Exposed cartridge ran for 24 hours?	
Sampler left in Run Mode?	
STR	
STP	
Duration	
QSTD	
AVG	
MAX	
MIN	
Sample ID	
Sample Date	
Sample ID	
Sample Date	
Comments	no filter installed

PARTISOL SAMPLER

****

Select Date & Time	01-23-2012 10:47 AM
Sampler is intact & inlet head unobstructed?	Yes
Temp shield is intact & sensor seated inside?	Yes

Partisol is reading correct time and day?	Yes
Exposed filter ran for 24 hours?	Yes
Sampler was left in Run Mode?	Yes
Next or New Sample Date Set?	Yes
Next or New Sample Date is:	1/28/12
Leak Check mmHg/min	31
Flow Check l/min	16.7
Exposed Filter ID	12T0027
Pass/Fail	Pass
Pass/Fail	Pass
Leak Check mmHg/min	75
Flow Check l/min	16.7
New Filter ID	12T0290
Pass/Fail	Pass
Pass/Fail	Pass
Comments	note computer was down and rebooted. Snow on ground and on roof of shed; roof dripping inside onto desk.

Brian Smith <brian@advm2.com>

New Submission: RIAC Weekly System Check Sheets

Laura Ernst <noreply@jotform.com> **Mon, Jan 23, 2012 at 12:06 PM**
Reply-To: Laura Ernst <noreply@jotform.com>
To: brian@advm2.com

JotForm

Question	Answer
Site Operator	Laura Ernst
Site	Fire Station
AETHALOMETER	
**********	
Select Date & Time	01-23-2012 12:51 PM
Display Date & Time +/- 5 mins of PC time?	Yes
Display Flow between 4.7LPM-5.3LPM?	Yes
Flow rate is:	4.9
Display screen indicating normal operation (reasonable readings, no error messages, etc)?	Yes
Filter tape supply checked? Re-tension spool if needed. Filter tape spots visible & should have distinct , uniform borders.	Yes
Percent Filter Tape remaining?	50
Comments	
PAS 2000	
**********	
Select Date & Time	01-23-2012 1:04 PM
Date & Time +/- 5 mins of PC time?	
Lamp Intensity between 95-105?	
Lamp Intensity is:	

Lamp Frequency between 8kHz-15kHz?	
Lamp Frequency is:	
Pump Flow rate between 1.9LPM-2.1LPM?	
Pump Flow rate is:	
Pump "Actual Value" between 40%-55%?	
Pump Actual Value is:	
Comments	not operational

PUF SAMPLER

****

Select Date & Time	01-23-2012 1:04 PM
Sampler is intact & inlet head unobstructed?	
PUF Sampler reading correct time and day?	
Exposed cartridge ran for 24 hours?	
Sampler left in Run Mode?	
STR	
STP	
Duration	
QSTD	
AVG	
MAX	
MIN	
Sample ID	
Sample Date	
Sample ID	
Sample Date	
Comments	no filter

PARTISOL SAMPLER

****

Select Date & Time	01-23-2012 12:04 PM
Sampler is intact & inlet head unobstructed?	
Temp shield is intact & sensor seated inside?	

Partisol is reading correct time and day?

Exposed filter ran for 24 hours?

Sampler was left in Run Mode?

Next or New Sample Date Set?

Next or New Sample Date is:

Leak Check mmHg/min

Flow Check l/min

Exposed Filter ID

Pass/Fail

Pass/Fail

Leak Check mmHg/min

Flow Check l/min

New Filter ID

Pass/Fail

Pass/Fail

Comments

Brian Smith <brian@advm2.com>

New Submission: RIAC Weekly System Check Sheets

Laura Ernst <noreply@jotform.com> **Mon, Jan 23, 2012 at 10:42 AM**
Reply-To: Laura Ernst <noreply@jotform.com>
To: brian@advm2.com

Question	Answer
Site Operator	Laura Ernst
Site	Lydick
AETHALOMETER	
**********	
Select Date & Time	01-23-2012 11:15 AM
Display Date & Time +/- 5 mins of PC time?	Yes
Display Flow between 4.7LPM-5.3LPM?	Yes
Flow rate is:	5.0
Display screen indicating normal operation (reasonable readings, no error messages, etc)?	Yes
Filter tape supply checked? Re-tension spool if needed. Filter tape spots visible & should have distinct , uniform borders.	Yes
Percent Filter Tape remaining?	1
Comments	will need to change tape soon.
PAS 2000	
**********	
Select Date & Time	01-23-2012 11:37 AM
Date & Time +/- 5 mins of PC time?	
Lamp Intensity between 95-105?	
Lamp Intensity is:	

Lamp Frequency between 8kHz-15kHz?	
Lamp Frequency is:	
Pump Flow rate between 1.9LPM-2.1LPM?	
Pump Flow rate is:	
Pump "Actual Value" between 40%-55%?	
Pump Actual Value is:	
Comments	not operational

PUF SAMPLER

****

Select Date & Time	01-23-2012 11:37 AM
Sampler is intact & inlet head unobstructed?	
PUF Sampler reading correct time and day?	
Exposed cartridge ran for 24 hours?	
Sampler left in Run Mode?	
STR	
STP	
Duration	
QSTD	
AVG	
MAX	
MIN	
Sample ID	
Sample Date	
Sample ID	
Sample Date	
Comments	no filter installed

PARTISOL SAMPLER

****

Select Date & Time	01-23-2012 11:17 AM
Sampler is intact & inlet head unobstructed?	Yes
Temp shield is intact & sensor seated inside?	Yes

Partisol is reading correct time and day?	Yes
Exposed filter ran for 24 hours?	Yes
Sampler was left in Run Mode?	Yes
Next or New Sample Date Set?	Yes
Next or New Sample Date is:	1/28/12
Leak Check mmHg/min	14
Flow Check l/min	16.7
Exposed Filter ID	11T4850
Pass/Fail	Pass
Pass/Fail	Pass
Leak Check mmHg/min	88
Flow Check l/min	16.7
New Filter ID	12T0291
Pass/Fail	Pass
Pass/Fail	Pass
Comments	Status was "T"and mode was "ERR" upon arrival. first filter (12T0292) failed leak check.

Brian Smith <brian@advm2.com>

New Submission: RIAC Weekly System Check Sheets

Laura Ernst <noreply@jotform.com> **Mon, Jan 23, 2012 at 11:24 AM**
Reply-To: Laura Ernst <noreply@jotform.com>
To: brian@advm2.com

JotForm

Question	Answer
Site Operator	Laura Ernst
Site	Pembroke
AETHALOMETER	
**********	
Select Date & Time	01-23-2012 12:21 PM
Display Date & Time +/- 5 mins of PC time?	
Display Flow between 4.7LPM-5.3LPM?	
Flow rate is:	
Display screen indicating normal operation (reasonable readings, no error messages, etc)?	
Filter tape supply checked? Re-tension spool if needed. Filter tape spots visible & should have distinct , uniform borders.	
Percent Filter Tape remaining?	
Comments	not operational
PAS 2000	
**********	
Select Date & Time	01-23-2012 12:21 PM
Date & Time +/- 5 mins of PC time?	
Lamp Intensity between 95-105?	
Lamp Intensity is:	

Lamp Frequency between 8kHz-15kHz?	
Lamp Frequency is:	
Pump Flow rate between 1.9LPM-2.1LPM?	
Pump Flow rate is:	
Pump "Actual Value" between 40%-55%?	
Pump Actual Value is:	
Comments	not operational

PUF SAMPLER

****

Select Date & Time	01-23-2012 12:21 PM
Sampler is intact & inlet head unobstructed?	
PUF Sampler reading correct time and day?	
Exposed cartridge ran for 24 hours?	
Sampler left in Run Mode?	
STR	
STP	
Duration	
QSTD	
AVG	
MAX	
MIN	
Sample ID	
Sample Date	
Sample ID	
Sample Date	
Comments	no filter available

PARTISOL SAMPLER

****

Select Date & Time	01-23-2012 12:10 PM
Sampler is intact & inlet head unobstructed?	Yes
Temp shield is intact & sensor seated inside?	Yes

Partisol is reading correct time and day?	Yes
Exposed filter ran for 24 hours?	Yes
Sampler was left in Run Mode?	Yes
Next or New Sample Date Set?	Yes
Next or New Sample Date is:	1/28/12
Leak Check mmHg/min	124
Flow Check l/min	16.7
Exposed Filter ID	12T0035
Pass/Fail	Pass
Pass/Fail	Pass
Leak Check mmHg/min	52
Flow Check l/min	16.7
New Filter ID	12T0288
Pass/Fail	Pass
Pass/Fail	Pass
Comments	

Brian Smith <brian@advm2.com>

New Submission: RIAC Weekly System Check Sheets

Laura Ernst <noreply@jotform.com> **Sun, Jan 29, 2012 at 9:47 AM**
Reply-To: Laura Ernst <noreply@jotform.com>
To: brian@advm2.com

JotForm

Question	Answer
Site Operator	Laura Ernst
Site	Fieldview
AETHALOMETER	
**********	
Select Date & Time	01-29-2012 10:12 AM
Display Date & Time +/- 5 mins of PC time?	Yes
Display Flow between 4.7LPM-5.3LPM?	Yes
Flow rate is:	4.8
Display screen indicating normal operation (reasonable readings, no error messages, etc)?	Yes
Filter tape supply checked? Re-tension spool if needed. Filter tape spots visible & should have distinct , uniform borders.	Yes
Percent Filter Tape remaining?	85
Comments	
PAS 2000	
**********	
Select Date & Time	01-29-2012 10:15 AM
Date & Time +/- 5 mins of PC time?	
Lamp Intensity between 95-105?	
Lamp Intensity is:	

Lamp Frequency between 8kHz-15kHz?	
Lamp Frequency is:	
Pump Flow rate between 1.9LPM-2.1LPM?	
Pump Flow rate is:	
Pump "Actual Value" between 40%-55%?	
Pump Actual Value is:	
Comments	not operational

PUF SAMPLER

****

Select Date & Time	01-29-2012 10:15 AM
Sampler is intact & inlet head unobstructed?	Yes
PUF Sampler reading correct time and day?	Yes
Exposed cartridge ran for 24 hours?	Yes
Sampler left in Run Mode?	Yes
STR	1-28-12
STP	1-29-12
Duration	24
QSTD	0
AVG	229
MAX	231
MIN	229
Sample ID	FV-P-20120128
Sample Date	1-28-12
Sample ID	FV-P-20120203
Sample Date	02-03-2012
Comments	new filter not installed but will be by next sample run (filter not available today)

PARTISOL SAMPLER

****

Select Date & Time	01-29-2012 10:28 AM
Sampler is intact & inlet head unobstructed?	Yes
Temp shield is intact & sensor seated inside?	Yes

Partisol is reading correct time and day?	No
Exposed filter ran for 24 hours?	Yes
Sampler was left in Run Mode?	Yes
Next or New Sample Date Set?	Yes
Next or New Sample Date is:	02-03-12
Leak Check mmHg/min	98
Flow Check l/min	16.7
Exposed Filter ID	12T0290
Pass/Fail	Pass
Pass/Fail	Pass
Leak Check mmHg/min	20
Flow Check l/min	16.7
New Filter ID	12T0293
Pass/Fail	Pass
Pass/Fail	Pass
Comments	time off by one minute

Brian Smith <brian@advm2.com>

New Submission: RIAC Weekly System Check Sheets

Laura Ernst <noreply@jotform.com> **Sun, Jan 29, 2012 at 12:18 PM**
Reply-To: Laura Ernst <noreply@jotform.com>
To: brian@advm2.com

JotForm

Question	Answer
Site Operator	Laura Ernst
Site	Fire Station
AETHALOMETER	
**********	
Select Date & Time	01-29-2012 12:48 PM
Display Date & Time +/- 5 mins of PC time?	Yes
Display Flow between 4.7LPM-5.3LPM?	Yes
Flow rate is:	4.9
Display screen indicating normal operation (reasonable readings, no error messages, etc)?	Yes
Filter tape supply checked? Re-tension spool if needed. Filter tape spots visible & should have distinct , uniform borders.	Yes
Percent Filter Tape remaining?	49
Comments	
PAS 2000	
**********	
Select Date & Time	01-29-2012 1:13 PM
Date & Time +/- 5 mins of PC time?	
Lamp Intensity between 95-105?	
Lamp Intensity is:	

Lamp Frequency between 8kHz-15kHz?	
Lamp Frequency is:	
Pump Flow rate between 1.9LPM-2.1LPM?	
Pump Flow rate is:	
Pump "Actual Value" between 40%-55%?	
Pump Actual Value is:	
Comments	not operational

PUF SAMPLER

****

Select Date & Time	01-29-2012 12:52 PM
Sampler is intact & inlet head unobstructed?	Yes
PUF Sampler reading correct time and day?	Yes
Exposed cartridge ran for 24 hours?	Yes
Sampler left in Run Mode?	Yes
STR	1-28-12
STP	1-29-12
Duration	24
QSTD	0
AVG	229
MAX	231
MIN	229
Sample ID	FS-P-20120128
Sample Date	1/28/12
Sample ID	FS-P-20120203
Sample Date	2-3-12
Comments	filter not installed but will be by next sample date -- no filter available

PARTISOL SAMPLER

****

Select Date & Time	01-29-2012 1:02 PM
Sampler is intact & inlet head unobstructed?	Yes
Temp shield is intact & sensor seated inside?	Yes

Partisol is reading correct time and day?	No
Exposed filter ran for 24 hours?	Yes
Sampler was left in Run Mode?	Yes
Next or New Sample Date Set?	Yes
Next or New Sample Date is:	02-03-12
Leak Check mmHg/min	100
Flow Check l/min	16.7
Exposed Filter ID	12T0289
Pass/Fail	Pass
Pass/Fail	Pass
Leak Check mmHg/min	57
Flow Check l/min	16.7
New Filter ID	12T0296
Pass/Fail	Pass
Pass/Fail	Pass
Comments	

Brian Smith <brian@advm2.com>

New Submission: RIAC Weekly System Check Sheets

Laura Ernst <noreply@jotform.com> **Sun, Jan 29, 2012 at 10:45 AM**
Reply-To: Laura Ernst <noreply@jotform.com>
To: brian@advm2.com

JotForm

Question	Answer
Site Operator	Laura Ernst
Site	Lydick
AETHALOMETER	
**********	
Select Date & Time	01-29-2012 11:08 AM
Display Date & Time +/- 5 mins of PC time?	Yes
Display Flow between 4.7LPM-5.3LPM?	Yes
Flow rate is:	5.3
Display screen indicating normal operation (reasonable readings, no error messages, etc)?	Yes
Filter tape supply checked? Re-tension spool if needed. Filter tape spots visible & should have distinct , uniform borders.	Yes
Percent Filter Tape remaining?	0
Comments	needs new tape
PAS 2000	
**********	
Select Date & Time	01-29-2012 11:40 AM
Date & Time +/- 5 mins of PC time?	
Lamp Intensity between 95-105?	
Lamp Intensity is:	

Lamp Frequency between 8kHz-15kHz?	
Lamp Frequency is:	
Pump Flow rate between 1.9LPM-2.1LPM?	
Pump Flow rate is:	
Pump "Actual Value" between 40%-55%?	
Pump Actual Value is:	
Comments	not operational

PUF SAMPLER

****

Select Date & Time	01-29-2012 11:18 AM
Sampler is intact & inlet head unobstructed?	Yes
PUF Sampler reading correct time and day?	Yes
Exposed cartridge ran for 24 hours?	Yes
Sampler left in Run Mode?	Yes
STR	01-28-12
STP	01-29-12
Duration	24
QSTD	0
AVG	229
MAX	231
MIN	229
Sample ID	LD-P-20120128
Sample Date	01-28-12
Sample ID	LD-P-20120203
Sample Date	02-03-12
Comments	no new filter available today to install; new filter will be installed by next sample run.

PARTISOL SAMPLER

****

Select Date & Time	01-29-2012 11:26 AM
Sampler is intact & inlet head unobstructed?	Yes
Temp shield is intact & sensor seated inside?	Yes

Partisol is reading correct time and day?	Yes
Exposed filter ran for 24 hours?	Yes
Sampler was left in Run Mode?	Yes
Next or New Sample Date Set?	Yes
Next or New Sample Date is:	02-03-12
Leak Check mmHg/min	83
Flow Check l/min	16.7
Exposed Filter ID	12T0291
Pass/Fail	Pass
Pass/Fail	Pass
Leak Check mmHg/min	66
Flow Check l/min	16.7
New Filter ID	12T0294
Pass/Fail	Pass
Pass/Fail	Pass
Comments	The sampler was in ERR mode upon arrival.

Brian Smith <brian@advm2.com>

New Submission: RIAC Weekly System Check Sheets

Laura Ernst <noreply@jotform.com> **Sun, Jan 29, 2012 at 11:28 AM**
Reply-To: Laura Ernst <noreply@jotform.com>
To: brian@advm2.com

JotForm

Question	Answer
Site Operator	Laura Ernst
Site	Pembroke
AETHALOMETER	
**********	
Select Date & Time	01-29-2012 12:23 PM
Display Date & Time +/- 5 mins of PC time?	
Display Flow between 4.7LPM-5.3LPM?	
Flow rate is:	
Display screen indicating normal operation (reasonable readings, no error messages, etc)?	
Filter tape supply checked? Re-tension spool if needed. Filter tape spots visible & should have distinct , uniform borders.	
Percent Filter Tape remaining?	
Comments	not operational
PAS 2000	
**********	
Select Date & Time	01-29-2012 12:23 PM
Date & Time +/- 5 mins of PC time?	
Lamp Intensity between 95-105?	
Lamp Intensity is:	

Lamp Frequency between 8kHz-15kHz?	
Lamp Frequency is:	
Pump Flow rate between 1.9LPM-2.1LPM?	
Pump Flow rate is:	
Pump "Actual Value" between 40%-55%?	
Pump Actual Value is:	
Comments	not operational

PUF SAMPLER

****

Select Date & Time	01-29-2012 12:03 PM
Sampler is intact & inlet head unobstructed?	Yes
PUF Sampler reading correct time and day?	Yes
Exposed cartridge ran for 24 hours?	Yes
Sampler left in Run Mode?	Yes
STR	1-28-12
STP	1-29-12
Duration	24
QSTD	0
AVG	229
MAX	232
MIN	229
Sample ID	PB-P-20120128
Sample Date	1-28-12
Sample ID	PB-P-20120203
Sample Date	2-3-12
Comments	no filter to install but will be installed for next sample run.

PARTISOL SAMPLER

****

Select Date & Time	01-29-2012 12:11 PM
Sampler is intact & inlet head unobstructed?	Yes
Temp shield is intact & sensor seated inside?	Yes

Partisol is reading correct time and day?	No
Exposed filter ran for 24 hours?	Yes
Sampler was left in Run Mode?	Yes
Next or New Sample Date Set?	Yes
Next or New Sample Date is:	02-03-12
Leak Check mmHg/min	72
Flow Check l/min	16.7
Exposed Filter ID	12T0288
Pass/Fail	Pass
Pass/Fail	Pass
Leak Check mmHg/min	13
Flow Check l/min	16.7
New Filter ID	12T0295
Pass/Fail	Pass
Pass/Fail	Pass
Comments	In ERR mode upon arrival and time off by 2 mins

Brian Smith <brian@advm2.com>

New Submission: RIAC Weekly System Check Sheets

Laura Ernst <noreply@jotform.com> **Sat, Feb 4, 2012 at 10:31 AM**
Reply-To: Laura Ernst <noreply@jotform.com>
To: brian@advm2.com

JotForm

Question	Answer
Site Operator	Laura Ernst
Site	Fieldview
AETHALOMETER	
**********	
Select Date & Time	02-04-2012 9:50 AM
Display Date & Time +/- 5 mins of PC time?	Yes
Display Flow between 4.7LPM-5.3LPM?	Yes
Flow rate is:	4.8
Display screen indicating normal operation (reasonable readings, no error messages, etc)?	Yes
Filter tape supply checked? Re-tension spool if needed. Filter tape spots visible & should have distinct , uniform borders.	Yes
Percent Filter Tape remaining?	85
Comments	
PAS 2000	
**********	
Select Date & Time	02-04-2012 11:25 AM
Date & Time +/- 5 mins of PC time?	
Lamp Intensity between 95-105?	
Lamp Intensity is:	

Lamp Frequency between 8kHz-15kHz?	
Lamp Frequency is:	
Pump Flow rate between 1.9LPM-2.1LPM?	
Pump Flow rate is:	
Pump "Actual Value" between 40%-55%?	
Pump Actual Value is:	
Comments	not operational

PUF SAMPLER

****

Select Date & Time	02-04-2012 9:52 AM
Sampler is intact & inlet head unobstructed?	Yes
PUF Sampler reading correct time and day?	Yes
Exposed cartridge ran for 24 hours?	Yes
Sampler left in Run Mode?	Yes
STR	2-3-12
STP	2-4-12
Duration	24
QSTD	0
AVG	229
MAX	230
MIN	229
Sample ID	FV-P-20120203
Sample Date	2-3-12
Sample ID	FV-P-20120209
Sample Date	2-9-12
Comments	

PARTISOL SAMPLER

****

Select Date & Time	02-04-2012 10:26 AM
Sampler is intact & inlet head unobstructed?	Yes
Temp shield is intact & sensor seated inside?	Yes

Partisol is reading correct time and day?	Yes
Exposed filter ran for 24 hours?	Yes
Sampler was left in Run Mode?	Yes
Next or New Sample Date Set?	Yes
Next or New Sample Date is:	2-9-12
Leak Check mmHg/min	19
Flow Check l/min	16.7
Exposed Filter ID	12T0293
Pass/Fail	Pass
Pass/Fail	Pass
Leak Check mmHg/min	34
Flow Check l/min	16.7
New Filter ID	12T0297
Pass/Fail	Pass
Pass/Fail	Pass
Comments	

Brian Smith <brian@advm2.com>

New Submission: RIAC Weekly System Check Sheets

Laura Ernst <noreply@jotform.com> **Sat, Feb 4, 2012 at 12:17 PM**
Reply-To: Laura Ernst <noreply@jotform.com>
To: brian@advm2.com

JotForm

Question	Answer
Site Operator	Laura Ernst
Site	Fire Station
AETHALOMETER	
**********	
Select Date & Time	02-04-2012 12:01 PM
Display Date & Time +/- 5 mins of PC time?	Yes
Display Flow between 4.7LPM-5.3LPM?	Yes
Flow rate is:	4.9
Display screen indicating normal operation (reasonable readings, no error messages, etc)?	Yes
Filter tape supply checked? Re-tension spool if needed. Filter tape spots visible & should have distinct , uniform borders.	Yes
Percent Filter Tape remaining?	49
Comments	
PAS 2000	
**********	
Select Date & Time	02-04-2012 1:13 PM
Date & Time +/- 5 mins of PC time?	
Lamp Intensity between 95-105?	
Lamp Intensity is:	

Lamp Frequency between 8kHz-15kHz?	
Lamp Frequency is:	
Pump Flow rate between 1.9LPM-2.1LPM?	
Pump Flow rate is:	
Pump "Actual Value" between 40%-55%?	
Pump Actual Value is:	
Comments	not operational

PUF SAMPLER

****

Select Date & Time	02-04-2012 12:03 PM
Sampler is intact & inlet head unobstructed?	Yes
PUF Sampler reading correct time and day?	Yes
Exposed cartridge ran for 24 hours?	Yes
Sampler left in Run Mode?	Yes
STR	2-3-12
STP	2-4-12
Duration	24
QSTD	0
AVG	229
MAX	231
MIN	229
Sample ID	FS-P-20120203
Sample Date	2-3-12
Sample ID	FS-P-20120209
Sample Date	2-9-12
Comments	

PARTISOL SAMPLER

****

Select Date & Time	02-04-2012 12:30 PM
Sampler is intact & inlet head unobstructed?	Yes
Temp shield is intact & sensor seated inside?	Yes

Partisol is reading correct time and day?	Yes
Exposed filter ran for 24 hours?	Yes
Sampler was left in Run Mode?	Yes
Next or New Sample Date Set?	Yes
Next or New Sample Date is:	2-9-12
Leak Check mmHg/min	50
Flow Check l/min	16.7
Exposed Filter ID	12T0296
Pass/Fail	Pass
Pass/Fail	Pass
Leak Check mmHg/min	102
Flow Check l/min	16.7
New Filter ID	12T0298
Pass/Fail	Pass
Pass/Fail	Pass
Comments	

Brian Smith <brian@advm2.com>

New Submission: RIAC Weekly System Check Sheets

Laura Ernst <noreply@jotform.com> **Sat, Feb 4, 2012 at 2:55 PM**
Reply-To: Laura Ernst <noreply@jotform.com>
To: brian@advm2.com

JotForm

Question	Answer
Site Operator	Laura Ernst
Site	Lydick
AETHALOMETER	
**********	
Select Date & Time	02-04-2012 3:07 PM
Display Date & Time +/- 5 mins of PC time?	Yes
Display Flow between 4.7LPM-5.3LPM?	Yes
Flow rate is:	5.0
Display screen indicating normal operation (reasonable readings, no error messages, etc)?	Yes
Filter tape supply checked? Re-tension spool if needed. Filter tape spots visible & should have distinct , uniform borders.	Yes
Percent Filter Tape remaining?	0
Comments	tape needs to be changed
PAS 2000	
**********	
Select Date & Time	02-04-2012 3:52 PM
Date & Time +/- 5 mins of PC time?	
Lamp Intensity between 95-105?	
Lamp Intensity is:	

Lamp Frequency between 8kHz-15kHz?	
Lamp Frequency is:	
Pump Flow rate between 1.9LPM-2.1LPM?	
Pump Flow rate is:	
Pump "Actual Value" between 40%-55%?	
Pump Actual Value is:	
Comments	not operational

PUF SAMPLER

****

Select Date & Time	02-04-2012 2:04 PM
Sampler is intact & inlet head unobstructed?	Yes
PUF Sampler reading correct time and day?	Yes
Exposed cartridge ran for 24 hours?	Yes
Sampler left in Run Mode?	Yes
STR	2-3-12
STP	2-4-12
Duration	24
QSTD	0
AVG	229
MAX	231
MIN	229
Sample ID	LD-P-20120203
Sample Date	2-3-12
Sample ID	LD-P-20120209
Sample Date	02-9-12
Comments	

PARTISOL SAMPLER

****

Select Date & Time	02-04-2012 3:24 PM
Sampler is intact & inlet head unobstructed?	Yes
Temp shield is intact & sensor seated inside?	Yes

Partisol is reading correct time and day?	Yes
Exposed filter ran for 24 hours?	Yes
Sampler was left in Run Mode?	Yes
Next or New Sample Date Set?	Yes
Next or New Sample Date is:	2-9-12
Leak Check mmHg/min	68
Flow Check l/min	16.8
Exposed Filter ID	12T0294
Pass/Fail	Pass
Pass/Fail	Pass
Leak Check mmHg/min	27
Flow Check l/min	16.7
New Filter ID	12T0300
Pass/Fail	Pass
Pass/Fail	Pass
Comments	

Brian Smith <brian@advm2.com>

New Submission: RIAC Weekly System Check Sheets

Laura Ernst <noreply@jotform.com> **Sat, Feb 4, 2012 at 1:43 PM**
Reply-To: Laura Ernst <noreply@jotform.com>
To: brian@advm2.com

Question	Answer
Site Operator	Laura Ernst
Site	Pembroke
AETHALOMETER	
**********	
Select Date & Time	02-04-2012 2:39 PM
Display Date & Time +/- 5 mins of PC time?	
Display Flow between 4.7LPM-5.3LPM?	
Flow rate is:	
Display screen indicating normal operation (reasonable readings, no error messages, etc)?	
Filter tape supply checked? Re-tension spool if needed. Filter tape spots visible & should have distinct , uniform borders.	
Percent Filter Tape remaining?	
Comments	not oeprational
PAS 2000	
**********	
Select Date & Time	02-04-2012 2:39 PM
Date & Time +/- 5 mins of PC time?	
Lamp Intensity between 95-105?	
Lamp Intensity is:	

Lamp Frequency between 8kHz-15kHz?	
Lamp Frequency is:	
Pump Flow rate between 1.9LPM-2.1LPM?	
Pump Flow rate is:	
Pump "Actual Value" between 40%-55%?	
Pump Actual Value is:	
Comments	not operational

PUF SAMPLER

****

Select Date & Time	02-04-2012 1:43 PM
Sampler is intact & inlet head unobstructed?	Yes
PUF Sampler reading correct time and day?	Yes
Exposed cartridge ran for 24 hours?	Yes
Sampler left in Run Mode?	Yes
STR	2-3-12
STP	2-4-12
Duration	24
QSTD	0
AVG	229
MAX	231
MIN	229
Sample ID	PB-P-20120203
Sample Date	2-3-12
Sample ID	PB-P-20120209
Sample Date	2-9-12
Comments	

PARTISOL SAMPLER

****

Select Date & Time	02-04-2012 2:04 PM
Sampler is intact & inlet head unobstructed?	Yes
Temp shield is intact & sensor seated inside?	Yes

Partisol is reading correct time and day?	Yes
Exposed filter ran for 24 hours?	No
Sampler was left in Run Mode?	Yes
Next or New Sample Date Set?	Yes
Next or New Sample Date is:	2-9-12
Leak Check mmHg/min	16
Flow Check l/min	19.6
Exposed Filter ID	12T0295
Pass/Fail	Pass
Pass/Fail	Pass
Leak Check mmHg/min	28
Flow Check l/min	16.7
New Filter ID	12T0299
Pass/Fail	Pass
Pass/Fail	Pass
Comments	note the STAT was XE the mode was ERR only ran 18.24 hours volume 18.4 m^3

Brian Smith <brian@advm2.com>

New Submission: RIAC Weekly System Check Sheets

laura@landcoastalservices.com <noreply@jotform.net> **Thu, Feb 16, 2012 at 11:33 AM**
Reply-To: "laura@landcoastalservices.com" <noreply@jotform.net>
To: brian@advm2.com

JotForm

Question	Answer
Site Operator	laura@landcoastalservices.com
Site	Fieldview
AETHALOMETER	
**********	
Select Date & Time	02-10-2012 9:29 PM
Display Date & Time +/- 5 mins of PC time?	Yes
Display Flow between 4.7LPM-5.3LPM?	Yes
Flow rate is:	4.8
Display screen indicating normal operation (reasonable readings, no error messages, etc)?	Yes
Filter tape supply checked? Re-tension spool if needed. Filter tape spots visible & should have distinct , uniform borders.	Yes
Percent Filter Tape remaining?	84
Comments	computer was off
PAS 2000	
**********	
Select Date & Time	02-10-2012 12:27 PM
Date & Time +/- 5 mins of PC time?	
Lamp Intensity between 95-105?	
Lamp Intensity is:	

Lamp Frequency between 8kHz-15kHz?	
Lamp Frequency is:	
Pump Flow rate between 1.9LPM-2.1LPM?	
Pump Flow rate is:	
Pump "Actual Value" between 40%-55%?	
Pump Actual Value is:	
Comments	not operational

PUF SAMPLER

****

Select Date & Time	02-10-2012 9:12 PM
Sampler is intact & inlet head unobstructed?	Yes
PUF Sampler reading correct time and day?	Yes
Exposed cartridge ran for 24 hours?	Yes
Sampler left in Run Mode?	Yes
STR	2-9-12
STP	2-10-12
Duration	24
QSTD	0
AVG	229
MAX	231
MIN	229
Sample ID	FV-P-20120209
Sample Date	2/9/12
Sample ID	FV-P-20120215
Sample Date	2/15/12
Comments	

PARTISOL SAMPLER

****

Select Date & Time	02-10-2012 9:21 PM
Sampler is intact & inlet head unobstructed?	Yes
Temp shield is intact & sensor seated inside?	Yes

Partisol is reading correct time and day?	Yes
Exposed filter ran for 24 hours?	Yes
Sampler was left in Run Mode?	Yes
Next or New Sample Date Set?	Yes
Next or New Sample Date is:	2/15/12
Leak Check mmHg/min	32
Flow Check l/min	16.6
Exposed Filter ID	12T0297
Pass/Fail	Pass
Pass/Fail	Pass
Leak Check mmHg/min	24
Flow Check l/min	16.7
New Filter ID	12T0593
Pass/Fail	Pass
Pass/Fail	Pass
Comments	note new partisol filters were not available for install; installed on 2/13

Brian Smith <brian@advm2.com>

New Submission: RIAC Weekly System Check Sheets

laura@landcoastalservices.com <noreply@jotform.net> **Thu, Feb 16, 2012 at 11:37 AM**
Reply-To: "laura@landcoastalservices.com" <noreply@jotform.net>
To: brian@advm2.com

JotForm

Question	Answer
Site Operator	laura@landcoastalservices.com
Site	Fire Station
AETHALOMETER	
**********	
Select Date & Time	02-10-2012 12:58 PM
Display Date & Time +/- 5 mins of PC time?	Yes
Display Flow between 4.7LPM-5.3LPM?	Yes
Flow rate is:	4.8
Display screen indicating normal operation (reasonable readings, no error messages, etc)?	Yes
Filter tape supply checked? Re-tension spool if needed. Filter tape spots visible & should have distinct , uniform borders.	Yes
Percent Filter Tape remaining?	49
Comments	
PAS 2000	
**********	
Select Date & Time	02-10-2012 12:33 PM
Date & Time +/- 5 mins of PC time?	
Lamp Intensity between 95-105?	
Lamp Intensity is:	

Lamp Frequency between 8kHz-15kHz?	
Lamp Frequency is:	
Pump Flow rate between 1.9LPM-2.1LPM?	
Pump Flow rate is:	
Pump "Actual Value" between 40%-55%?	
Pump Actual Value is:	
Comments	not operational

PUF SAMPLER

****

Select Date & Time	02-10-2012 1:02 PM
Sampler is intact & inlet head unobstructed?	Yes
PUF Sampler reading correct time and day?	Yes
Exposed cartridge ran for 24 hours?	Yes
Sampler left in Run Mode?	Yes
STR	2/9/12
STP	2/10/12
Duration	24
QSTD	0
AVG	229
MAX	231
MIN	229
Sample ID	FS-P-20120209
Sample Date	2/9/12
Sample ID	FS-P-20120215
Sample Date	2/15/12
Comments	

PARTISOL SAMPLER

****

Select Date & Time	02-10-2012 1:10 PM
Sampler is intact & inlet head unobstructed?	Yes
Temp shield is intact & sensor seated inside?	Yes

Partisol is reading correct time and day?	Yes
Exposed filter ran for 24 hours?	Yes
Sampler was left in Run Mode?	Yes
Next or New Sample Date Set?	Yes
Next or New Sample Date is:	2/15/12
Leak Check mmHg/min	106
Flow Check l/min	16.7
Exposed Filter ID	12T0298
Pass/Fail	Pass
Pass/Fail	Pass
Leak Check mmHg/min	61
Flow Check l/min	16.7
New Filter ID	11T5079
Pass/Fail	Pass
Pass/Fail	Pass
Comments	note new partisol filters were not available for install; installed on 2/13

Brian Smith <brian@advm2.com>

New Submission: RIAC Weekly System Check Sheets

laura@landcoastalservices.com <noreply@jotform.net> **Thu, Feb 16, 2012 at 11:47 AM**
Reply-To: "laura@landcoastalservices.com" <noreply@jotform.net>
To: brian@advm2.com

JotForm

Question	Answer
Site Operator	laura@landcoastalservices.com
Site	Lydick
AETHALOMETER	
**********	
Select Date & Time	02-10-2012 12:06 PM
Display Date & Time +/- 5 mins of PC time?	Yes
Display Flow between 4.7LPM-5.3LPM?	Yes
Flow rate is:	5.0
Display screen indicating normal operation (reasonable readings, no error messages, etc)?	Yes
Filter tape supply checked? Re-tension spool if needed. Filter tape spots visible & should have distinct , uniform borders.	Yes
Percent Filter Tape remaining?	0
Comments	tape needs to be changed
PAS 2000	
**********	
Select Date & Time	02-10-2012 12:08 PM
Date & Time +/- 5 mins of PC time?	
Lamp Intensity between 95-105?	
Lamp Intensity is:	

Lamp Frequency between 8kHz-15kHz?	
Lamp Frequency is:	
Pump Flow rate between 1.9LPM-2.1LPM?	
Pump Flow rate is:	
Pump "Actual Value" between 40%-55%?	
Pump Actual Value is:	
Comments	not operational

PUF SAMPLER

****

Select Date & Time	02-10-2012 12:08 PM
Sampler is intact & inlet head unobstructed?	Yes
PUF Sampler reading correct time and day?	Yes
Exposed cartridge ran for 24 hours?	Yes
Sampler left in Run Mode?	Yes
STR	2/9/12
STP	2/10/12
Duration	24
QSTD	0
AVG	229
MAX	231
MIN	229
Sample ID	LD-P-20120209
Sample Date	2/9/12
Sample ID	LD-P-20120215
Sample Date	2/15/12
Comments	note puf filters not avilable this day so installed on 2/13 -- for all sites

PARTISOL SAMPLER

****

Select Date & Time	02-10-2012 12:17 PM
Sampler is intact & inlet head unobstructed?	Yes
Temp shield is intact & sensor seated inside?	Yes

Partisol is reading correct time and day?	Yes
Exposed filter ran for 24 hours?	Yes
Sampler was left in Run Mode?	Yes
Next or New Sample Date Set?	Yes
Next or New Sample Date is:	2/15/12
Leak Check mmHg/min	17
Flow Check l/min	16.7
Exposed Filter ID	12T0300
Pass/Fail	Pass
Pass/Fail	Pass
Leak Check mmHg/min	33
Flow Check l/min	16.7
New Filter ID	11T5080
Pass/Fail	Pass
Pass/Fail	Pass
Comments	note new partisol filters were not available for install; installed on 2/13 sampler was in ERR mode upon arrival

Brian Smith <brian@advm2.com>

New Submission: RIAC Weekly System Check Sheets

laura@landcoastalservices.com <noreply@jotform.net> **Thu, Feb 16, 2012 at 11:42 AM**
Reply-To: "laura@landcoastalservices.com" <noreply@jotform.net>
To: brian@advm2.com

JotForm

Question	Answer
Site Operator	laura@landcoastalservices.com
Site	Pembroke
AETHALOMETER	
**********	
Select Date & Time	02-10-2012 12:38 PM
Display Date & Time +/- 5 mins of PC time?	
Display Flow between 4.7LPM-5.3LPM?	
Flow rate is:	
Display screen indicating normal operation (reasonable readings, no error messages, etc)?	
Filter tape supply checked? Re-tension spool if needed. Filter tape spots visible & should have distinct , uniform borders.	
Percent Filter Tape remaining?	
Comments	not operational
PAS 2000	
**********	
Select Date & Time	02-10-2012 12:38 PM
Date & Time +/- 5 mins of PC time?	
Lamp Intensity between 95-105?	
Lamp Intensity is:	

Lamp Frequency between 8kHz-15kHz?	
Lamp Frequency is:	
Pump Flow rate between 1.9LPM-2.1LPM?	
Pump Flow rate is:	
Pump "Actual Value" between 40%-55%?	
Pump Actual Value is:	
Comments	not operational

PUF SAMPLER

****

Select Date & Time	02-10-2012 11:20 PM
Sampler is intact & inlet head unobstructed?	Yes
PUF Sampler reading correct time and day?	Yes
Exposed cartridge ran for 24 hours?	Yes
Sampler left in Run Mode?	Yes
STR	2/9/12
STP	2/10/12
Duration	24
QSTD	0
AVG	229
MAX	231
MIN	229
Sample ID	PB-P-20120209
Sample Date	2/9/12
Sample ID	PB-P-20120215
Sample Date	2/15/12
Comments	

PARTISOL SAMPLER

****

Select Date & Time	02-10-2012 11:30 PM
Sampler is intact & inlet head unobstructed?	Yes
Temp shield is intact & sensor seated inside?	Yes

Partisol is reading correct time and day?	No
Exposed filter ran for 24 hours?	No
Sampler was left in Run Mode?	Yes
Next or New Sample Date Set?	Yes
Next or New Sample Date is:	2/15/12
Leak Check mmHg/min	18
Flow Check l/min	16.7
Exposed Filter ID	12T0299
Pass/Fail	Pass
Pass/Fail	Pass
Leak Check mmHg/min	41
Flow Check l/min	16.7
New Filter ID	12T0592
Pass/Fail	Pass
Pass/Fail	Pass
Comments	note new partisol filters were not available for install; installed on 2/13 NOTE: exposed filter only ran for 21.11 hours and the volume was 21.2 m3

Brian Smith <brian@advm2.com>

New Submission: RIAC Weekly System Check Sheets

laura@landcoastalservices.com <noreply@jotform.net> **Thu, Feb 16, 2012 at 12:08 PM**
Reply-To: "laura@landcoastalservices.com" <noreply@jotform.net>
To: brian@advm2.com

JotForm

Question	Answer
Site Operator	laura@landcoastalservices.com
Site	Fieldview
AETHALOMETER	
**********	
Select Date & Time	02-16-2012 1:02 PM
Display Date & Time +/- 5 mins of PC time?	Yes
Display Flow between 4.7LPM-5.3LPM?	Yes
Flow rate is:	4.8
Display screen indicating normal operation (reasonable readings, no error messages, etc)?	Yes
Filter tape supply checked? Re-tension spool if needed. Filter tape spots visible & should have distinct , uniform borders.	Yes
Percent Filter Tape remaining?	84
Comments	unit was in check mode but computer was on upon arrival. Turned off and back on after count of 10 and did readings after all other instruments.
PAS 2000	
**********	
Select Date & Time	02-16-2012 12:09 PM
Date & Time +/- 5 mins of PC time?	
Lamp Intensity between 95-105?	
Lamp Intensity is:	

Lamp Frequency between 8kHz-15kHz?	
Lamp Frequency is:	
Pump Flow rate between 1.9LPM-2.1LPM?	
Pump Flow rate is:	
Pump "Actual Value" between 40%-55%?	
Pump Actual Value is:	
Comments	not operational

PUF SAMPLER

****

Select Date & Time	02-16-2012 12:09 PM
Sampler is intact & inlet head unobstructed?	Yes
PUF Sampler reading correct time and day?	Yes
Exposed cartridge ran for 24 hours?	Yes
Sampler left in Run Mode?	Yes
STR	2/15/12
STP	2/16/12
Duration	24
QSTD	0
AVG	229
MAX	231
MIN	229
Sample ID	FV-P-20120215
Sample Date	2/15/12
Sample ID	FV-P-20120221
Sample Date	2/21/12
Comments	

PARTISOL SAMPLER

****

Select Date & Time	02-16-2012 12:18 PM
Sampler is intact & inlet head unobstructed?	Yes
Temp shield is intact & sensor seated inside?	Yes

Partisol is reading correct time and day?	Yes
Exposed filter ran for 24 hours?	Yes
Sampler was left in Run Mode?	Yes
Next or New Sample Date Set?	Yes
Next or New Sample Date is:	2/21/12
Leak Check mmHg/min	17
Flow Check l/min	16.7
Exposed Filter ID	12T0593
Pass/Fail	Pass
Pass/Fail	Pass
Leak Check mmHg/min	26
Flow Check l/min	16.7
New Filter ID	11T4758
Pass/Fail	Pass
Pass/Fail	Pass
Comments	

Brian Smith <brian@advm2.com>

New Submission: RIAC Weekly System Check Sheets

laura@landcoastalservices.com <noreply@jotform.net> **Thu, Feb 16, 2012 at 11:51 AM**
Reply-To: "laura@landcoastalservices.com" <noreply@jotform.net>
To: brian@advm2.com

JotForm

Question	Answer
Site Operator	laura@landcoastalservices.com
Site	Fire Station
AETHALOMETER	
**********	
Select Date & Time	02-16-2012 11:31 PM
Display Date & Time +/- 5 mins of PC time?	Yes
Display Flow between 4.7LPM-5.3LPM?	Yes
Flow rate is:	4.8
Display screen indicating normal operation (reasonable readings, no error messages, etc)?	Yes
Filter tape supply checked? Re-tension spool if needed. Filter tape spots visible & should have distinct , uniform borders.	Yes
Percent Filter Tape remaining?	49
Comments	
PAS 2000	
**********	
Select Date & Time	02-16-2012 12:47 PM
Date & Time +/- 5 mins of PC time?	
Lamp Intensity between 95-105?	
Lamp Intensity is:	

Lamp Frequency between 8kHz-15kHz?	
Lamp Frequency is:	
Pump Flow rate between 1.9LPM-2.1LPM?	
Pump Flow rate is:	
Pump "Actual Value" between 40%-55%?	
Pump Actual Value is:	
Comments	not operational

PUF SAMPLER

****

Select Date & Time	02-16-2012 11:34 PM
Sampler is intact & inlet head unobstructed?	Yes
PUF Sampler reading correct time and day?	Yes
Exposed cartridge ran for 24 hours?	Yes
Sampler left in Run Mode?	Yes
STR	2/15/12
STP	2/16/12
Duration	24
QSTD	0
AVG	229
MAX	231
MIN	228
Sample ID	FS-P-20120215
Sample Date	2/15/12
Sample ID	FS-P-20120221
Sample Date	2/21/12
Comments	

PARTISOL SAMPLER

****

Select Date & Time	02-16-2012 11:42 PM
Sampler is intact & inlet head unobstructed?	Yes
Temp shield is intact & sensor seated inside?	Yes

Partisol is reading correct time and day?	Yes
Exposed filter ran for 24 hours?	Yes
Sampler was left in Run Mode?	Yes
Next or New Sample Date Set?	Yes
Next or New Sample Date is:	2/21/12
Leak Check mmHg/min	53
Flow Check l/min	16.6
Exposed Filter ID	11T5079
Pass/Fail	Pass
Pass/Fail	Pass
Leak Check mmHg/min	58
Flow Check l/min	16.7
New Filter ID	11T4757
Pass/Fail	Pass
Pass/Fail	Pass
Comments	mode was in error upon arrival

Brian Smith <brian@advm2.com>

New Submission: RIAC Weekly System Check Sheets

laura@landcoastalservices.com <noreply@jotform.net> **Thu, Feb 16, 2012 at 12:02 PM**
Reply-To: "laura@landcoastalservices.com" <noreply@jotform.net>
To: brian@advm2.com

JotForm

Question	Answer
Site Operator	laura@landcoastalservices.com
Site	Lydick
AETHALOMETER	
**********	
Select Date & Time	02-16-2012 9:47 PM
Display Date & Time +/- 5 mins of PC time?	Yes
Display Flow between 4.7LPM-5.3LPM?	Yes
Flow rate is:	5.0
Display screen indicating normal operation (reasonable readings, no error messages, etc)?	Yes
Filter tape supply checked? Re-tension spool if needed. Filter tape spots visible & should have distinct , uniform borders.	Yes
Percent Filter Tape remaining?	0
Comments	tape need to be changed
PAS 2000	
**********	
Select Date & Time	02-16-2012 12:56 PM
Date & Time +/- 5 mins of PC time?	
Lamp Intensity between 95-105?	
Lamp Intensity is:	

Lamp Frequency between 8kHz-15kHz?	
Lamp Frequency is:	
Pump Flow rate between 1.9LPM-2.1LPM?	
Pump Flow rate is:	
Pump "Actual Value" between 40%-55%?	
Pump Actual Value is:	
Comments	not operational

PUF SAMPLER

****

Select Date & Time	02-16-2012 9:55 PM
Sampler is intact & inlet head unobstructed?	Yes
PUF Sampler reading correct time and day?	
Exposed cartridge ran for 24 hours?	Yes
Sampler left in Run Mode?	Yes
STR	2/15/12
STP	2/16/12
Duration	24
QSTD	0
AVG	229
MAX	231
MIN	229
Sample ID	LD-P-20120215
Sample Date	2/15/12
Sample ID	LD-P-20120221
Sample Date	2/21/12
Comments	

PARTISOL SAMPLER

****

Select Date & Time	02-16-2012 10:04 PM
Sampler is intact & inlet head unobstructed?	Yes
Temp shield is intact & sensor seated inside?	Yes

Partisol is reading correct time and day?	Yes
Exposed filter ran for 24 hours?	Yes
Sampler was left in Run Mode?	Yes
Next or New Sample Date Set?	Yes
Next or New Sample Date is:	2/21/12
Leak Check mmHg/min	25
Flow Check l/min	16.7
Exposed Filter ID	11T5080
Pass/Fail	Pass
Pass/Fail	Pass
Leak Check mmHg/min	32
Flow Check l/min	16.7
New Filter ID	11T5078
Pass/Fail	Pass
Pass/Fail	Pass
Comments	sampler was in ERR mode and status was T

Brian Smith <brian@advm2.com>

New Submission: RIAC Weekly System Check Sheets

laura@landcoastalservices.com <noreply@jotform.net> **Thu, Feb 16, 2012 at 11:56 AM**
Reply-To: "laura@landcoastalservices.com" <noreply@jotform.net>
To: brian@advm2.com

JotForm

Question	Answer
Site Operator	laura@landcoastalservices.com
Site	Pembroke
AETHALOMETER	
**********	
Select Date & Time	02-16-2012 10:51 PM
Display Date & Time +/- 5 mins of PC time?	
Display Flow between 4.7LPM-5.3LPM?	
Flow rate is:	
Display screen indicating normal operation (reasonable readings, no error messages, etc)?	
Filter tape supply checked? Re-tension spool if needed. Filter tape spots visible & should have distinct , uniform borders.	
Percent Filter Tape remaining?	
Comments	not operational
PAS 2000	
**********	
Select Date & Time	02-16-2012 12:52 PM
Date & Time +/- 5 mins of PC time?	
Lamp Intensity between 95-105?	
Lamp Intensity is:	

Lamp Frequency between 8kHz-15kHz?	
Lamp Frequency is:	
Pump Flow rate between 1.9LPM-2.1LPM?	
Pump Flow rate is:	
Pump "Actual Value" between 40%-55%?	
Pump Actual Value is:	
Comments	not operational

PUF SAMPLER

****

Select Date & Time	02-16-2012 10:42 PM
Sampler is intact & inlet head unobstructed?	Yes
PUF Sampler reading correct time and day?	Yes
Exposed cartridge ran for 24 hours?	Yes
Sampler left in Run Mode?	Yes
STR	2/15/12
STP	2/16/12
Duration	24
QSTD	0
AVG	222
MAX	230
MIN	216
Sample ID	PB-P-20120215
Sample Date	2/15/12
Sample ID	PB-P-20120221
Sample Date	2/21/12
Comments	

PARTISOL SAMPLER

****

Select Date & Time	02-16-2012 10:51 PM
Sampler is intact & inlet head unobstructed?	Yes
Temp shield is intact & sensor seated inside?	Yes

Partisol is reading correct time and day?	Yes
Exposed filter ran for 24 hours?	Yes
Sampler was left in Run Mode?	Yes
Next or New Sample Date Set?	Yes
Next or New Sample Date is:	2/21/12
Leak Check mmHg/min	38
Flow Check l/min	16.7
Exposed Filter ID	12T0592
Pass/Fail	Pass
Pass/Fail	Pass
Leak Check mmHg/min	94
Flow Check l/min	16.7
New Filter ID	11T4756
Pass/Fail	Pass
Pass/Fail	Pass
Comments	mode was in error and status was T

Brian Smith <brian@advm2.com>

New Submission: RIAC Weekly System Check Sheets

laura@landcoastalservices.com <noreply@jotform.com> **Wed, Feb 22, 2012 at 11:06 AM**
Reply-To: "laura@landcoastalservices.com" <noreply@jotform.com>
To: brian@advm2.com

JotForm

Question	Answer
Site Operator	laura@landcoastalservices.com
Site	Fieldview
AETHALOMETER	
**********	
Select Date & Time	02-22-2012 11:44 AM
Display Date & Time +/- 5 mins of PC time?	Yes
Display Flow between 4.7LPM-5.3LPM?	Yes
Flow rate is:	4.8
Display screen indicating normal operation (reasonable readings, no error messages, etc)?	Yes
Filter tape supply checked? Re-tension spool if needed. Filter tape spots visible & should have distinct , uniform borders.	Yes
Percent Filter Tape remaining?	84
Comments	
PAS 2000	
**********	
Select Date & Time	02-22-2012 12:02 PM
Date & Time +/- 5 mins of PC time?	
Lamp Intensity between 95-105?	
Lamp Intensity is:	

Lamp Frequency between 8kHz-15kHz?	
Lamp Frequency is:	
Pump Flow rate between 1.9LPM-2.1LPM?	
Pump Flow rate is:	
Pump "Actual Value" between 40%-55%?	
Pump Actual Value is:	
Comments	not operational

PUF SAMPLER

****

Select Date & Time	02-22-2012 11:45 AM
Sampler is intact & inlet head unobstructed?	Yes
PUF Sampler reading correct time and day?	Yes
Exposed cartridge ran for 24 hours?	Yes
Sampler left in Run Mode?	Yes
STR	2-21-12
STP	2-22-12
Duration	24
QSTD	0
AVG	229
MAX	229
MIN	231
Sample ID	FV-P-20120221
Sample Date	2/21/12
Sample ID	FV-P-20120227
Sample Date	2/27/12
Comments	tag 000

PARTISOL SAMPLER

****

Select Date & Time	02-22-2012 11:52 AM
Sampler is intact & inlet head unobstructed?	Yes
Temp shield is intact & sensor seated inside?	Yes

Partisol is reading correct time and day?	Yes
Exposed filter ran for 24 hours?	Yes
Sampler was left in Run Mode?	Yes
Next or New Sample Date Set?	Yes
Next or New Sample Date is:	2/27/12
Leak Check mmHg/min	47
Flow Check l/min	16.7
Exposed Filter ID	11T4758
Pass/Fail	Pass
Pass/Fail	Pass
Leak Check mmHg/min	30
Flow Check l/min	16.6
New Filter ID	12T0595
Pass/Fail	Pass
Pass/Fail	Pass
Comments	

Brian Smith <brian@advm2.com>

New Submission: RIAC Weekly System Check Sheets

laura@landcoastalservices.com <noreply@jotform.com> **Wed, Feb 22, 2012 at 11:09 AM**
Reply-To: "laura@landcoastalservices.com" <noreply@jotform.com>
To: brian@advm2.com

JotForm

Question	Answer
Site Operator	laura@landcoastalservices.com
Site	Fire Station
AETHALOMETER	
**********	
Select Date & Time	02-22-2012 11:04 AM
Display Date & Time +/- 5 mins of PC time?	Yes
Display Flow between 4.7LPM-5.3LPM?	Yes
Flow rate is:	4.8
Display screen indicating normal operation (reasonable readings, no error messages, etc)?	Yes
Filter tape supply checked? Re-tension spool if needed. Filter tape spots visible & should have distinct , uniform borders.	Yes
Percent Filter Tape remaining?	48
Comments	
PAS 2000	
**********	
Select Date & Time	02-22-2012 12:06 PM
Date & Time +/- 5 mins of PC time?	
Lamp Intensity between 95-105?	
Lamp Intensity is:	

Lamp Frequency between 8kHz-15kHz?	
Lamp Frequency is:	
Pump Flow rate between 1.9LPM-2.1LPM?	
Pump Flow rate is:	
Pump "Actual Value" between 40%-55%?	
Pump Actual Value is:	
Comments	not operational

PUF SAMPLER

****

Select Date & Time	02-22-2012 11:07 AM
Sampler is intact & inlet head unobstructed?	Yes
PUF Sampler reading correct time and day?	Yes
Exposed cartridge ran for 24 hours?	Yes
Sampler left in Run Mode?	Yes
STR	2/21/12
STP	2/22/12
Duration	24
QSTD	0
AVG	229
MAX	229
MIN	231
Sample ID	FS-P-20120221
Sample Date	2/21/12
Sample ID	FS-P-20120227
Sample Date	2/27/12
Comments	0BD

PARTISOL SAMPLER

****

Select Date & Time	02-22-2012 11:16 AM
Sampler is intact & inlet head unobstructed?	Yes
Temp shield is intact & sensor seated inside?	Yes

Partisol is reading correct time and day?	Yes
Exposed filter ran for 24 hours?	Yes
Sampler was left in Run Mode?	Yes
Next or New Sample Date Set?	Yes
Next or New Sample Date is:	2/27/12
Leak Check mmHg/min	58
Flow Check l/min	16.6
Exposed Filter ID	11T4757
Pass/Fail	Pass
Pass/Fail	Pass
Leak Check mmHg/min	54
Flow Check l/min	16.7
New Filter ID	12T0596
Pass/Fail	Pass
Pass/Fail	Pass
Comments	In ERR Mode upon arrival

Brian Smith <brian@advm2.com>

New Submission: RIAC Weekly System Check Sheets

laura@landcoastalservices.com <noreply@jotform.com> **Wed, Feb 22, 2012 at 9:07 AM**
Reply-To: "laura@landcoastalservices.com" <noreply@jotform.com>
To: brian@advm2.com

JotForm

Question	Answer
Site Operator	laura@landcoastalservices.com
Site	Lydick
AETHALOMETER	
**********	
Select Date & Time	02-22-2012 9:27 AM
Display Date & Time +/- 5 mins of PC time?	Yes
Display Flow between 4.7LPM-5.3LPM?	Yes
Flow rate is:	5.0
Display screen indicating normal operation (reasonable readings, no error messages, etc)?	Yes
Filter tape supply checked? Re-tension spool if needed. Filter tape spots visible & should have distinct , uniform borders.	Yes
Percent Filter Tape remaining?	0
Comments	need to replace tape
PAS 2000	
**********	
Select Date & Time	02-22-2012 10:02 AM
Date & Time +/- 5 mins of PC time?	
Lamp Intensity between 95-105?	
Lamp Intensity is:	

Lamp Frequency between 8kHz-15kHz?	
Lamp Frequency is:	
Pump Flow rate between 1.9LPM-2.1LPM?	
Pump Flow rate is:	
Pump "Actual Value" between 40%-55%?	
Pump Actual Value is:	
Comments	not operational

PUF SAMPLER

****

Select Date & Time	02-22-2012 9:33 AM
Sampler is intact & inlet head unobstructed?	Yes
PUF Sampler reading correct time and day?	Yes
Exposed cartridge ran for 24 hours?	Yes
Sampler left in Run Mode?	Yes
STR	02/21/12
STP	02/22/12
Duration	24
QSTD	0
AVG	229
MAX	231
MIN	229
Sample ID	LD-P-20120221
Sample Date	2/21/12
Sample ID	LD-P-20120227
Sample Date	2/27/12
Comments	

PARTISOL SAMPLER

****

Select Date & Time	02-22-2012 9:43 AM
Sampler is intact & inlet head unobstructed?	Yes
Temp shield is intact & sensor seated inside?	Yes

Partisol is reading correct time and day?	Yes
Exposed filter ran for 24 hours?	Yes
Sampler was left in Run Mode?	Yes
Next or New Sample Date Set?	Yes
Next or New Sample Date is:	02/27/12
Leak Check mmHg/min	33
Flow Check l/min	16.7
Exposed Filter ID	11T5078
Pass/Fail	Pass
Pass/Fail	Pass
Leak Check mmHg/min	29
Flow Check l/min	16.7
New Filter ID	11T4755
Pass/Fail	Pass
Pass/Fail	Pass
Comments	field blank 11T4747

Brian Smith <brian@advm2.com>

New Submission: RIAC Weekly System Check Sheets

laura@landcoastalservices.com <noreply@jotform.com> **Wed, Feb 22, 2012 at 11:13 AM**
Reply-To: "laura@landcoastalservices.com" <noreply@jotform.com>
To: brian@advm2.com

JotForm

Question	Answer
Site Operator	laura@landcoastalservices.com
Site	Pembroke
AETHALOMETER	
**********	
Select Date & Time	02-22-2012 12:09 PM
Display Date & Time +/- 5 mins of PC time?	
Display Flow between 4.7LPM-5.3LPM?	
Flow rate is:	
Display screen indicating normal operation (reasonable readings, no error messages, etc)?	
Filter tape supply checked? Re-tension spool if needed. Filter tape spots visible & should have distinct , uniform borders.	
Percent Filter Tape remaining?	
Comments	not operational
PAS 2000	
**********	
Select Date & Time	02-22-2012 12:09 PM
Date & Time +/- 5 mins of PC time?	
Lamp Intensity between 95-105?	
Lamp Intensity is:	

Lamp Frequency between 8kHz-15kHz?	
Lamp Frequency is:	
Pump Flow rate between 1.9LPM-2.1LPM?	
Pump Flow rate is:	
Pump "Actual Value" between 40%-55%?	
Pump Actual Value is:	
Comments	not operational

PUF SAMPLER

****

Select Date & Time	02-22-2012 10:23 AM
Sampler is intact & inlet head unobstructed?	Yes
PUF Sampler reading correct time and day?	Yes
Exposed cartridge ran for 24 hours?	Yes
Sampler left in Run Mode?	Yes
STR	2/21/12
STP	2/22/12
Duration	24
QSTD	0
AVG	229
MAX	231
MIN	229
Sample ID	PB-P-20120221
Sample Date	2/21/12
Sample ID	PB-P-20120227
Sample Date	2/27/12
Comments	024

PARTISOL SAMPLER

****

Select Date & Time	02-22-2012 10:32 AM
Sampler is intact & inlet head unobstructed?	Yes
Temp shield is intact & sensor seated inside?	Yes

Partisol is reading correct time and day?	No
Exposed filter ran for 24 hours?	Yes
Sampler was left in Run Mode?	Yes
Next or New Sample Date Set?	Yes
Next or New Sample Date is:	2/27/12
Leak Check mmHg/min	77
Flow Check l/min	16.7
Exposed Filter ID	11T4756
Pass/Fail	Pass
Pass/Fail	Pass
Leak Check mmHg/min	21
Flow Check l/min	16.7
New Filter ID	12T0594
Pass/Fail	Pass
Pass/Fail	Pass
Comments	mode in err upon arrival

Brian Smith <brian@advm2.com>

New Submission: RIAC Weekly System Check Sheets

laura@landcoastalservices.com <noreply@jotform.com> **Tue, Feb 28, 2012 at 11:43 AM**
To: brian@advm2.com

Question	Answer
Site Operator	laura@landcoastalservices.com
Site	Fieldview
AETHALOMETER	
**********	
Select Date & Time	02-28-2012 9:35 AM
Display Date & Time +/- 5 mins of PC time?	Yes
Display Flow between 4.7LPM-5.3LPM?	Yes
Flow rate is:	4.8
Display screen indicating normal operation (reasonable readings, no error messages, etc)?	Yes
Filter tape supply checked? Re-tension spool if needed. Filter tape spots visible & should have distinct , uniform borders.	Yes
Percent Filter Tape remaining?	84
Comments	computer down and rebooted.
PAS 2000	
**********	
Select Date & Time	02-28-2012 12:39 PM
Date & Time +/- 5 mins of PC time?	
Lamp Intensity between 95-105?	
Lamp Intensity is:	
Lamp Frequency between 8kHz-15kHz?	

Lamp Frequency is:	
Pump Flow rate between 1.9LPM-2.1LPM?	
Pump Flow rate is:	
Pump "Actual Value" between 40%-55%?	
Pump Actual Value is:	
Comments	not operational

PUF SAMPLER

****

Select Date & Time	02-28-2012 9:41 AM
Sampler is intact & inlet head unobstructed?	Yes
PUF Sampler reading correct time and day?	Yes
Exposed cartridge ran for 24 hours?	Yes
Sampler left in Run Mode?	Yes
STR	2/27/12
STP	2/28/12
Duration	24
QSTD	0
AVG	229
MAX	231
MIN	229
Sample ID	FV-P-20120227
Sample Date	2/27/12
Sample ID	FV-P-20120304
Sample Date	03/04/12
Comments	

PARTISOL SAMPLER

****

Select Date & Time	02-28-2012 9:53 AM
Sampler is intact & inlet head unobstructed?	Yes
Temp shield is intact & sensor seated inside?	Yes
Partisol is reading correct time and day?	Yes

Exposed filter ran for 24 hours?	Yes
Sampler was left in Run Mode?	Yes
Next or New Sample Date Set?	Yes
Next or New Sample Date is:	3/4/12
Leak Check mmHg/min	77
Flow Check l/min	16.7
Exposed Filter ID	12T0595
Pass/Fail	Pass
Pass/Fail	Pass
Leak Check mmHg/min	112
Flow Check l/min	16.6
New Filter ID	12T0567
Pass/Fail	Pass
Pass/Fail	Pass
Comments	

Brian Smith <brian@advm2.com>

New Submission: RIAC Weekly System Check Sheets

laura@landcoastalservices.com <noreply@jotform.com> **Tue, Feb 28, 2012 at 11:39 AM**
To: brian@advm2.com

JotForm

Question	Answer
Site Operator	laura@landcoastalservices.com
Site	Fire Station
AETHALOMETER	
**********	
Select Date & Time	02-28-2012 10:23 AM
Display Date & Time +/- 5 mins of PC time?	Yes
Display Flow between 4.7LPM-5.3LPM?	Yes
Flow rate is:	4.8
Display screen indicating normal operation (reasonable readings, no error messages, etc)?	Yes
Filter tape supply checked? Re-tension spool if needed. Filter tape spots visible & should have distinct , uniform borders.	Yes
Percent Filter Tape remaining?	48
Comments	
PAS 2000	
**********	
Select Date & Time	02-28-2012 12:32 PM
Date & Time +/- 5 mins of PC time?	
Lamp Intensity between 95-105?	
Lamp Intensity is:	
Lamp Frequency between 8kHz-15kHz?	

Lamp Frequency is:	
Pump Flow rate between 1.9LPM-2.1LPM?	
Pump Flow rate is:	
Pump "Actual Value" between 40%-55%?	
Pump Actual Value is:	
Comments	not operational

PUF SAMPLER

****

Select Date & Time	02-28-2012 10:29 AM
Sampler is intact & inlet head unobstructed?	Yes
PUF Sampler reading correct time and day?	Yes
Exposed cartridge ran for 24 hours?	Yes
Sampler left in Run Mode?	Yes
STR	2/27/12
STP	2/28/12
Duration	24
QSTD	0
AVG	229
MAX	231
MIN	229
Sample ID	FS-P-20120227
Sample Date	2/27/12
Sample ID	FS-P-20120304
Sample Date	3/4/12
Comments	

PARTISOL SAMPLER

****

Select Date & Time	02-28-2012 10:41 PM
Sampler is intact & inlet head unobstructed?	Yes
Temp shield is intact & sensor seated inside?	Yes
Partisol is reading correct time and day?	Yes

Exposed filter ran for 24 hours?	Yes
Sampler was left in Run Mode?	Yes
Next or New Sample Date Set?	Yes
Next or New Sample Date is:	3/4/12
Leak Check mmHg/min	94
Flow Check l/min	16.7
Exposed Filter ID	12T0596
Pass/Fail	Pass
Pass/Fail	Pass
Leak Check mmHg/min	51
Flow Check l/min	16.7
New Filter ID	12T0566
Pass/Fail	Pass
Pass/Fail	Pass
Comments	in ERR mode

Brian Smith <brian@advm2.com>

New Submission: RIAC Weekly System Check Sheets

laura@landcoastalservices.com <noreply@jotform.com> **Tue, Feb 28, 2012 at 11:29 AM**
To: brian@advm2.com

JotForm

Question	Answer
Site Operator	laura@landcoastalservices.com
Site	Lydick
AETHALOMETER	
**********	
Select Date & Time	02-28-2012 11:48 PM
Display Date & Time +/- 5 mins of PC time?	Yes
Display Flow between 4.7LPM-5.3LPM?	Yes
Flow rate is:	5.0
Display screen indicating normal operation (reasonable readings, no error messages, etc)?	Yes
Filter tape supply checked? Re-tension spool if needed. Filter tape spots visible & should have distinct , uniform borders.	Yes
Percent Filter Tape remaining?	0
Comments	
PAS 2000	
**********	
Select Date & Time	02-28-2012 12:23 PM
Date & Time +/- 5 mins of PC time?	
Lamp Intensity between 95-105?	
Lamp Intensity is:	
Lamp Frequency between 8kHz-15kHz?	

Should be AM.

Lamp Frequency is:	
Pump Flow rate between 1.9LPM-2.1LPM?	
Pump Flow rate is:	
Pump "Actual Value" between 40%-55%?	
Pump Actual Value is:	
Comments	not operational

PUF SAMPLER

****

Select Date & Time	02-28-2012 11:52 PM
Sampler is intact & inlet head unobstructed?	Yes
PUF Sampler reading correct time and day?	Yes
Exposed cartridge ran for 24 hours?	Yes
Sampler left in Run Mode?	Yes
STR	022712
STP	022812
Duration	24
QSTD	0
AVG	229
MAX	231
MIN	229
Sample ID	LD-P-2012-0227
Sample Date	2/27/12
Sample ID	LD-P-20120304
Sample Date	3/4/12
Comments	

PARTISOL SAMPLER

****

Select Date & Time	02-28-2012 12:01 PM
Sampler is intact & inlet head unobstructed?	Yes
Temp shield is intact & sensor seated inside?	Yes
Partisol is reading correct time and day?	Yes

Exposed filter ran for 24 hours?	Yes
Sampler was left in Run Mode?	Yes
Next or New Sample Date Set?	Yes
Next or New Sample Date is:	3/4/12
Leak Check mmHg/min	24
Flow Check l/min	16.7
Exposed Filter ID	11T4755
Pass/Fail	Pass
Pass/Fail	Pass
Leak Check mmHg/min	24
Flow Check l/min	16.7
New Filter ID	12T0565
Pass/Fail	Pass
Pass/Fail	Pass
Comments	ERR mode and ran at volume of 24.1 m3

Brian Smith <brian@advm2.com>

New Submission: RIAC Weekly System Check Sheets

laura@landcoastalservices.com <noreply@jotform.com> **Tue, Feb 28, 2012 at 11:32 AM**
To: brian@advm2.com

Question	Answer
Site Operator	laura@landcoastalservices.com
Site	Pembroke
AETHALOMETER	
**********	
Select Date & Time	02-28-2012 11:12 PM
Display Date & Time +/- 5 mins of PC time?	
Display Flow between 4.7LPM-5.3LPM?	
Flow rate is:	
Display screen indicating normal operation (reasonable readings, no error messages, etc)?	
Filter tape supply checked? Re-tension spool if needed. Filter tape spots visible & should have distinct , uniform borders.	
Percent Filter Tape remaining?	
Comments	not operational
PAS 2000	
**********	
Select Date & Time	02-28-2012 12:29 PM
Date & Time +/- 5 mins of PC time?	
Lamp Intensity between 95-105?	
Lamp Intensity is:	
Lamp Frequency between 8kHz-15kHz?	

Should be AM.

Lamp Frequency is:	
Pump Flow rate between 1.9LPM-2.1LPM?	
Pump Flow rate is:	
Pump "Actual Value" between 40%-55%?	
Pump Actual Value is:	
Comments	not operational

PUF SAMPLER

****

Select Date & Time	02-28-2012 11:12 PM
Sampler is intact & inlet head unobstructed?	Yes
PUF Sampler reading correct time and day?	Yes
Exposed cartridge ran for 24 hours?	Yes
Sampler left in Run Mode?	Yes
STR	2-27-12
STP	2-28-12
Duration	24
QSTD	0
AVG	229
MAX	231
MIN	229
Sample ID	PB-P-20120227
Sample Date	2/27/12
Sample ID	PB-P-20120304
Sample Date	3/4/12
Comments	

PARTISOL SAMPLER

****

Select Date & Time	02-28-2012 11:21 PM
Sampler is intact & inlet head unobstructed?	Yes
Temp shield is intact & sensor seated inside?	Yes
Partisol is reading correct time and day?	Yes

Exposed filter ran for 24 hours?	Yes
Sampler was left in Run Mode?	Yes
Next or New Sample Date Set?	Yes
Next or New Sample Date is:	3/4/12
Leak Check mmHg/min	22
Flow Check l/min	16.7
Exposed Filter ID	12T0594
Pass/Fail	Pass
Pass/Fail	Pass
Leak Check mmHg/min	50
Flow Check l/min	16.7
New Filter ID	12T0564
Pass/Fail	Pass
Pass/Fail	Pass
Comments	

Brian Smith <brian@advm2.com>

New Submission: RIAC Weekly System Check Sheets

laura@landcoastalservices.com <noreply@jotform.com> **Mon, Mar 5, 2012 at 9:07 PM**
To: brian@advm2.com

Question	Answer
Site Operator	laura@landcoastalservices.com
Site	Fieldview
AETHALOMETER	
**********	
Select Date & Time	03-05-2012 4:03 PM
Display Date & Time +/- 5 mins of PC time?	Yes
Display Flow between 4.7LPM-5.3LPM?	Yes
Flow rate is:	4.8
Display screen indicating normal operation (reasonable readings, no error messages, etc)?	Yes
Filter tape supply checked? Re-tension spool if needed. Filter tape spots visible & should have distinct , uniform borders.	Yes
Percent Filter Tape remaining?	84
Comments	computer was off, rebooted.
PAS 2000	
**********	
Select Date & Time	03-05-2012 10:03 PM
Date & Time +/- 5 mins of PC time?	
Lamp Intensity between 95-105?	
Lamp Intensity is:	
Lamp Frequency between 8kHz-15kHz?	

Lamp Frequency is:	
Pump Flow rate between 1.9LPM-2.1LPM?	
Pump Flow rate is:	
Pump "Actual Value" between 40%-55%?	
Pump Actual Value is:	
Comments	not operational

PUF SAMPLER

****

Select Date & Time	03-05-2012 4:07 PM
Sampler is intact & inlet head unobstructed?	Yes
PUF Sampler reading correct time and day?	Yes
Exposed cartridge ran for 24 hours?	Yes
Sampler left in Run Mode?	Yes
STR	3/4/12
STP	3/5/12
Duration	24
QSTD	0
AVG	229
MAX	231
MIN	229
Sample ID	FV-P-20120304
Sample Date	3/4/12
Sample ID	FV-P-20120310
Sample Date	3/10/12
Comments	

PARTISOL SAMPLER

****

Select Date & Time	03-05-2012 4:24 PM
Sampler is intact & inlet head unobstructed?	Yes
Temp shield is intact & sensor seated inside?	Yes
Partisol is reading correct time and day?	Yes

Exposed filter ran for 24 hours?	Yes
Sampler was left in Run Mode?	Yes
Next or New Sample Date Set?	Yes
Next or New Sample Date is:	3/10/12
Leak Check mmHg/min	50
Flow Check l/min	16.6
Exposed Filter ID	12T0567
Pass/Fail	Pass
Pass/Fail	Pass
Leak Check mmHg/min	32
Flow Check l/min	16.7
New Filter ID	?
Pass/Fail	Pass
Pass/Fail	Pass
Comments	Need to confirm new filter ID 12T0570? 2-3 leak checks done to find good filter

Brian Smith <brian@advm2.com>

New Submission: RIAC Weekly System Check Sheets

laura@landcoastalservices.com <noreply@jotform.com> **Mon, Mar 5, 2012 at 9:01 PM**
To: brian@advm2.com

Question	Answer
Site Operator	laura@landcoastalservices.com
Site	Fire Station
AETHALOMETER	
**********	
Select Date & Time	03-05-2012 2:36 AM
Display Date & Time +/- 5 mins of PC time?	Yes
Display Flow between 4.7LPM-5.3LPM?	Yes
Flow rate is:	4.8
Display screen indicating normal operation (reasonable readings, no error messages, etc)?	Yes
Filter tape supply checked? Re-tension spool if needed. Filter tape spots visible & should have distinct , uniform borders.	Yes
Percent Filter Tape remaining?	48
Comments	
PAS 2000	
**********	
Select Date & Time	03-05-2012 9:57 PM
Date & Time +/- 5 mins of PC time?	
Lamp Intensity between 95-105?	
Lamp Intensity is:	
Lamp Frequency between 8kHz-15kHz?	

Lamp Frequency is:	
Pump Flow rate between 1.9LPM-2.1LPM?	
Pump Flow rate is:	
Pump "Actual Value" between 40%-55%?	
Pump Actual Value is:	
Comments	not operational

PUF SAMPLER

****

Select Date & Time	03-05-2012 2:44 PM
Sampler is intact & inlet head unobstructed?	Yes
PUF Sampler reading correct time and day?	Yes
Exposed cartridge ran for 24 hours?	Yes
Sampler left in Run Mode?	Yes
STR	3/4/12
STP	3/5/12
Duration	24
QSTD	0
AVG	229
MAX	231
MIN	228
Sample ID	FS-P-20120304
Sample Date	3/4/12
Sample ID	FS-P-20120310
Sample Date	3/10/12
Comments	

PARTISOL SAMPLER

****

Select Date & Time	03-05-2012 3:02 PM
Sampler is intact & inlet head unobstructed?	Yes
Temp shield is intact & sensor seated inside?	Yes
Partisol is reading correct time and day?	Yes

Exposed filter ran for 24 hours?	Yes
Sampler was left in Run Mode?	Yes
Next or New Sample Date Set?	Yes
Next or New Sample Date is:	3/10/12
Leak Check mmHg/min	63
Flow Check l/min	16.7
Exposed Filter ID	12T0566
Pass/Fail	Pass
Pass/Fail	Pass
Leak Check mmHg/min	72
Flow Check l/min	16.7
New Filter ID	12T0572
Pass/Fail	Pass
Pass/Fail	Pass
Comments	4 leak checks performed to find filter that worked.

Brian Smith <brian@advm2.com>

New Submission: RIAC Weekly System Check Sheets

laura@landcoastalservices.com <noreply@jotform.com> **Mon, Mar 5, 2012 at 8:43 PM**
To: brian@advm2.com

JotForm

Question	Answer
Site Operator	laura@landcoastalservices.com
Site	Lydick
AETHALOMETER	
**********	
Select Date & Time	03-05-2012 10:49 AM
Display Date & Time +/- 5 mins of PC time?	Yes
Display Flow between 4.7LPM-5.3LPM?	Yes
Flow rate is:	5.0
Display screen indicating normal operation (reasonable readings, no error messages, etc)?	Yes
Filter tape supply checked? Re-tension spool if needed. Filter tape spots visible & should have distinct , uniform borders.	Yes
Percent Filter Tape remaining?	0
Comments	
PAS 2000	
**********	
Select Date & Time	03-05-2012 9:36 PM
Date & Time +/- 5 mins of PC time?	
Lamp Intensity between 95-105?	
Lamp Intensity is:	
Lamp Frequency between 8kHz-15kHz?	

Lamp Frequency is:	
Pump Flow rate between 1.9LPM-2.1LPM?	
Pump Flow rate is:	
Pump "Actual Value" between 40%-55%?	
Pump Actual Value is:	
Comments	not operational

PUF SAMPLER

****

Select Date & Time	03-05-2012 11:02 AM
Sampler is intact & inlet head unobstructed?	Yes
PUF Sampler reading correct time and day?	Yes
Exposed cartridge ran for 24 hours?	Yes
Sampler left in Run Mode?	Yes
STR	3/4/12
STP	3/5/12
Duration	24
QSTD	0
AVG	229
MAX	231
MIN	229
Sample ID	LD-P-20120304
Sample Date	3/4/12
Sample ID	LD-P-20120310
Sample Date	3/10/12
Comments	

PARTISOL SAMPLER

****

Select Date & Time	03-05-2012 11:32 AM
Sampler is intact & inlet head unobstructed?	Yes
Temp shield is intact & sensor seated inside?	Yes
Partisol is reading correct time and day?	Yes

Exposed filter ran for 24 hours?	Yes
Sampler was left in Run Mode?	Yes
Next or New Sample Date Set?	Yes
Next or New Sample Date is:	3/10/12
Leak Check mmHg/min	28
Flow Check l/min	16.7
Exposed Filter ID	12T0565
Pass/Fail	Pass
Pass/Fail	Pass
Leak Check mmHg/min	34
Flow Check l/min	16.7
New Filter ID	12T0568
Pass/Fail	Pass
Pass/Fail	Pass
Comments	Status was T and Mode was ERR upon arrival. Volume was 24. Note the last time it rant at 24m3 was on 1/28/12. Since than and up until today it was running 24.1m3.

Brian Smith <brian@advm2.com>

New Submission: RIAC Weekly System Check Sheets

laura@landcoastalservices.com <noreply@jotform.com> **Mon, Mar 5, 2012 at 8:56 PM**
To: brian@advm2.com

JotForm

Question	Answer
Site Operator	laura@landcoastalservices.com
Site	Pembroke
AETHALOMETER	
**********	
Select Date & Time	03-05-2012 12:51 AM
Display Date & Time +/- 5 mins of PC time?	
Display Flow between 4.7LPM-5.3LPM?	
Flow rate is:	
Display screen indicating normal operation (reasonable readings, no error messages, etc)?	
Filter tape supply checked? Re-tension spool if needed. Filter tape spots visible & should have distinct , uniform borders.	
Percent Filter Tape remaining?	
Comments	not operational
PAS 2000	
**********	
Select Date & Time	03-05-2012 9:52 PM
Date & Time +/- 5 mins of PC time?	
Lamp Intensity between 95-105?	
Lamp Intensity is:	
Lamp Frequency between 8kHz-15kHz?	

Lamp Frequency is:	
Pump Flow rate between 1.9LPM-2.1LPM?	
Pump Flow rate is:	
Pump "Actual Value" between 40%-55%?	
Pump Actual Value is:	
Comments	not operational

PUF SAMPLER

****

Select Date & Time	03-05-2012 12:51 AM
Sampler is intact & inlet head unobstructed?	Yes
PUF Sampler reading correct time and day?	Yes
Exposed cartridge ran for 24 hours?	Yes
Sampler left in Run Mode?	Yes
STR	3/4/12
STP	3/5/12
Duration	24
QSTD	0
AVG	229
MAX	231
MIN	229
Sample ID	PB-P-20120304
Sample Date	3/4/12
Sample ID	PB-P-20120310
Sample Date	3/10/12
Comments	

PARTISOL SAMPLER

****

Select Date & Time	03-05-2012 1:10 AM
Sampler is intact & inlet head unobstructed?	Yes
Temp shield is intact & sensor seated inside?	Yes
Partisol is reading correct time and day?	No

Exposed filter ran for 24 hours?	Yes
Sampler was left in Run Mode?	Yes
Next or New Sample Date Set?	Yes
Next or New Sample Date is:	3/10/12
Leak Check mmHg/min	40
Flow Check l/min	16.7
Exposed Filter ID	12T0564
Pass/Fail	Pass
Pass/Fail	Pass
Leak Check mmHg/min	22
Flow Check l/min	16.7
New Filter ID	?
Pass/Fail	Pass
Pass/Fail	Pass
Comments	note 4 leak checks performed to get filter that worked. Did not record filter that ended up working.

Brian Smith <brian@advm2.com>

New Submission: RIAC Weekly System Check Sheets

laura@landcoastalservices.com <noreply@jotform.com> **Sun, Mar 11, 2012 at 10:59 AM**
To: brian@advm2.com

Question	Answer
Site Operator	laura@landcoastalservices.com
Site	Fieldview
AETHALOMETER	
**********	
Select Date & Time	03-11-2012 11:12 AM
Display Date & Time +/- 5 mins of PC time?	No
Display Flow between 4.7LPM-5.3LPM?	Yes
Flow rate is:	4.8
Display screen indicating normal operation (reasonable readings, no error messages, etc)?	Yes
Filter tape supply checked? Re-tension spool if needed. Filter tape spots visible & should have distinct , uniform borders.	Yes
Percent Filter Tape remaining?	83
Comments	time off due to daylight savings time; computer was down and time was off due to daylight savings time. Computer time corrected. Aethy time corrected.
PAS 2000	
**********	
Select Date & Time	03-11-2012 10:44 AM
Date & Time +/- 5 mins of PC time?	
Lamp Intensity between 95-105?	
Lamp Intensity is:	

Lamp Frequency between 8kHz-15kHz?	
Lamp Frequency is:	
Pump Flow rate between 1.9LPM-2.1LPM?	
Pump Flow rate is:	
Pump "Actual Value" between 40%-55%?	
Pump Actual Value is:	
Comments	not operational.

PUF SAMPLER

****

Select Date & Time	03-11-2012 10:44 AM
Sampler is intact & inlet head unobstructed?	Yes
PUF Sampler reading correct time and day?	No
Exposed cartridge ran for 24 hours?	Yes
Sampler left in Run Mode?	Yes
STR	3/10/12
STP	3/11/12
Duration	24
QSTD	0
AVG	222
MAX	227
MIN	216
Sample ID	FV--P-20120310
Sample Date	3-10-12
Sample ID	FV-P-20120316
Sample Date	3-16-12
Comments	time corrected for DLS

PARTISOL SAMPLER

****

Select Date & Time	03-11-2012 11:25 AM
Sampler is intact & inlet head unobstructed?	Yes
Temp shield is intact & sensor seated inside?	Yes

Partisol is reading correct time and day?	No
Exposed filter ran for 24 hours?	Yes
Sampler was left in Run Mode?	No
Next or New Sample Date Set?	Yes
Next or New Sample Date is:	3-16-12
Leak Check mmHg/min	24
Flow Check l/min	
Exposed Filter ID	12T0570
Pass/Fail	Pass
Pass/Fail	Fail
Leak Check mmHg/min	
Flow Check l/min	
New Filter ID	
Pass/Fail	
Pass/Fail	
Comments	not any of the four filters left for use would pass. 12T057 series of filters: 5 and 4 would not create vacume 6 and 1 would not pass leak check no filter installed;

Brian Smith <brian@advm2.com>

New Submission: RIAC Weekly System Check Sheets

laura@landcoastalservices.com <noreply@jotform.com> **Sun, Mar 11, 2012 at 11:57 AM**
To: brian@advm2.com

JotForm

Question	Answer
Site Operator	laura@landcoastalservices.com
Site	Fire Station
AETHALOMETER	
**********	
Select Date & Time	03-11-2012 12:52 PM
Display Date & Time +/- 5 mins of PC time?	No
Display Flow between 4.7LPM-5.3LPM?	Yes
Flow rate is:	4.8
Display screen indicating normal operation (reasonable readings, no error messages, etc)?	Yes
Filter tape supply checked? Re-tension spool if needed. Filter tape spots visible & should have distinct , uniform borders.	Yes
Percent Filter Tape remaining?	48
Comments	reset clock for DLS and read 30 mins later drop box says that it needs more disk space to allow for syncing.
PAS 2000	
**********	
Select Date & Time	03-11-2012 12:52 PM
Date & Time +/- 5 mins of PC time?	
Lamp Intensity between 95-105?	
Lamp Intensity is:	

Resolved.

Lamp Frequency between 8kHz-15kHz?	
Lamp Frequency is:	
Pump Flow rate between 1.9LPM-2.1LPM?	
Pump Flow rate is:	
Pump "Actual Value" between 40%-55%?	
Pump Actual Value is:	
Comments	not operatinal

PUF SAMPLER

****

Select Date & Time	03-11-2012 12:27 PM
Sampler is intact & inlet head unobstructed?	Yes
PUF Sampler reading correct time and day?	No
Exposed cartridge ran for 24 hours?	Yes
Sampler left in Run Mode?	Yes
STR	3-10-12
STP	3-11-12
Duration	24
QSTD	0
AVG	229
MAX	231
MIN	229
Sample ID	FS-P-20120310
Sample Date	3/10/12
Sample ID	FS-P-20120316
Sample Date	3/16/12
Comments	clock set for dls

PARTISOL SAMPLER

****

Select Date & Time	03-11-2012 12:38 PM
Sampler is intact & inlet head unobstructed?	Yes
Temp shield is intact & sensor seated inside?	Yes

Partisol is reading correct time and day?	No
Exposed filter ran for 24 hours?	Yes
Sampler was left in Run Mode?	No
Next or New Sample Date Set?	Yes
Next or New Sample Date is:	3-16-12
Leak Check mmHg/min	78
Flow Check l/min	16.7
Exposed Filter ID	12T0572
Pass/Fail	Pass
Pass/Fail	Pass
Leak Check mmHg/min	
Flow Check l/min	
New Filter ID	NA
Pass/Fail	Fail
Pass/Fail	
Comments	no filters would pass leak check

Brian Smith <brian@advm2.com>

New Submission: RIAC Weekly System Check Sheets

laura@landcoastalservices.com <noreply@jotform.com> **Sun, Mar 11, 2012 at 1:35 PM**
To: brian@advm2.com

JotForm

Question	Answer
Site Operator	laura@landcoastalservices.com
Site	Lydick
AETHALOMETER	
**********	
Select Date & Time	03-11-2012 2:21 PM
Display Date & Time +/- 5 mins of PC time?	Yes
Display Flow between 4.7LPM-5.3LPM?	Yes
Flow rate is:	5.0
Display screen indicating normal operation (reasonable readings, no error messages, etc)?	Yes
Filter tape supply checked? Re-tension spool if needed. Filter tape spots visible & should have distinct , uniform borders.	Yes
Percent Filter Tape remaining?	0
Comments	time changed for DLS
PAS 2000	
**********	
Select Date & Time	03-11-2012 2:29 PM
Date & Time +/- 5 mins of PC time?	
Lamp Intensity between 95-105?	
Lamp Intensity is:	
Lamp Frequency between 8kHz-15kHz?	

Lamp Frequency is:	
Pump Flow rate between 1.9LPM-2.1LPM?	
Pump Flow rate is:	
Pump "Actual Value" between 40%-55%?	
Pump Actual Value is:	
Comments	not operational

PUF SAMPLER

****

Select Date & Time	03-11-2012 2:03 PM
Sampler is intact & inlet head unobstructed?	Yes
PUF Sampler reading correct time and day?	Yes
Exposed cartridge ran for 24 hours?	Yes
Sampler left in Run Mode?	Yes
STR	3-10-12
STP	3-11-12
Duration	24
QSTD	0
AVG	229
MAX	231
MIN	229
Sample ID	LD-P-20120310
Sample Date	3-10-12
Sample ID	LD-P-20120316
Sample Date	3-16-12
Comments	

PARTISOL SAMPLER

****

Select Date & Time	03-11-2012 2:11 PM
Sampler is intact & inlet head unobstructed?	Yes
Temp shield is intact & sensor seated inside?	Yes
Partisol is reading correct time and day?	Yes

Exposed filter ran for 24 hours?	Yes
Sampler was left in Run Mode?	No
Next or New Sample Date Set?	Yes
Next or New Sample Date is:	3-16-12
Leak Check mmHg/min	23
Flow Check l/min	16.7
Exposed Filter ID	12T0568
Pass/Fail	Pass
Pass/Fail	Pass
Leak Check mmHg/min	128
Flow Check l/min	NA
New Filter ID	12T0575
Pass/Fail	Fail
Pass/Fail	
Comments	12T0576 also failed at 128 Sampler in ERR mode upon arrival and volume ran at 24.1 m3

Brian Smith <brian@advm2.com>

New Submission: RIAC Weekly System Check Sheets

laura@landcoastalservices.com <noreply@jotform.com> **Sun, Mar 11, 2012 at 1:29 PM**
To: brian@advm2.com

Question	Answer
Site Operator	laura@landcoastalservices.com
Site	Pembroke
AETHALOMETER	
**********	
Select Date & Time	03-11-2012 1:16 PM
Display Date & Time +/- 5 mins of PC time?	
Display Flow between 4.7LPM-5.3LPM?	
Flow rate is:	
Display screen indicating normal operation (reasonable readings, no error messages, etc)?	
Filter tape supply checked? Re-tension spool if needed. Filter tape spots visible & should have distinct , uniform borders.	
Percent Filter Tape remaining?	
Comments	not operational
PAS 2000	
**********	
Select Date & Time	03-11-2012 2:24 PM
Date & Time +/- 5 mins of PC time?	
Lamp Intensity between 95-105?	
Lamp Intensity is:	
Lamp Frequency between 8kHz-15kHz?	

Lamp Frequency is:	
Pump Flow rate between 1.9LPM-2.1LPM?	
Pump Flow rate is:	
Pump "Actual Value" between 40%-55%?	
Pump Actual Value is:	
Comments	not operational

PUF SAMPLER

****

Select Date & Time	03-11-2012 1:16 PM
Sampler is intact & inlet head unobstructed?	Yes
PUF Sampler reading correct time and day?	No
Exposed cartridge ran for 24 hours?	Yes
Sampler left in Run Mode?	Yes
STR	3-10-12
STP	3-11-12
Duration	24
QSTD	0
AVG	229
MAX	232
MIN	228
Sample ID	PB-P-20120310
Sample Date	3/10/12
Sample ID	PB-P-20120316
Sample Date	3-16-12
Comments	time corrected for DLS

PARTISOL SAMPLER

****

Select Date & Time	03-11-2012 1:26 PM
Sampler is intact & inlet head unobstructed?	Yes
Temp shield is intact & sensor seated inside?	Yes
Partisol is reading correct time and day?	No

Exposed filter ran for 24 hours?	Yes
Sampler was left in Run Mode?	No
Next or New Sample Date Set?	Yes
Next or New Sample Date is:	3-16-12
Leak Check mmHg/min	19
Flow Check l/min	16.7
Exposed Filter ID	12T0569
Pass/Fail	Pass
Pass/Fail	Pass
Leak Check mmHg/min	129
Flow Check l/min	NA
New Filter ID	12T0571
Pass/Fail	Fail
Pass/Fail	
Comments	time changed for DLS 12T0575 also failed at 129 Fly inside sample 12T0569 when I opened the sampler. Maybe the filters that don't work seem a little wider in diameter than others?

Brian Smith <brian@advm2.com>

New Submission: RIAC Weekly System Check Sheets

laura@landcoastalservices.com <noreply@jotform.com> Sat, Mar 17, 2012 at 9:51 AM
To: brian@advm2.com, tom@advm2.com

JotForm

Question	Answer
Site Operator	laura@landcoastalservices.com
Site	Fieldview
AETHALOMETER	
**********	
Select Date & Time	03-17-2012 10:23 AM
Display Date & Time +/- 5 mins of PC time?	Yes
Display Flow between 4.7LPM-5.3LPM?	Yes
Flow rate is:	4.8
Display screen indicating normal operation (reasonable readings, no error messages, etc)?	Yes
Filter tape supply checked? Re-tension spool if needed. Filter tape spots visible & should have distinct , uniform borders.	Yes
Percent Filter Tape remaining?	83
Comments	computer was off PC replaced with new netbook.
PAS 2000	
**********	
Select Date & Time	03-17-2012 10:47 AM
Date & Time +/- 5 mins of PC time?	
Lamp Intensity between 95-105?	
Lamp Intensity is:	
Lamp Frequency between 8kHz-15kHz?	

Lamp Frequency is:	
Pump Flow rate between 1.9LPM-2.1LPM?	
Pump Flow rate is:	
Pump "Actual Value" between 40%-55%?	
Pump Actual Value is:	
Comments	not operational

PUF SAMPLER

****

Select Date & Time	03-17-2012 10:27 AM
Sampler is intact & inlet head unobstructed?	Yes
PUF Sampler reading correct time and day?	Yes
Exposed cartridge ran for 24 hours?	Yes
Sampler left in Run Mode?	Yes
STR	3-16-12
STP	3-17-12
Duration	24
QSTD	0
AVG	206
MAX	214
MIN	201
Sample ID	FV--P-20120316
Sample Date	3-16-12
Sample ID	FV-P-20120322
Sample Date	3/22/12
Comments	

PARTISOL SAMPLER

****

Select Date & Time	03-17-2012 10:39 AM
Sampler is intact & inlet head unobstructed?	Yes
Temp shield is intact & sensor seated inside?	Yes
Partisol is reading correct time and day?	Yes

Exposed filter ran for 24 hours?	Yes	
Sampler was left in Run Mode?	No	
Next or New Sample Date Set?	Yes	
Next or New Sample Date is:	3-22-12	
Leak Check mmHg/min	37	
Flow Check l/min	16.7	
Exposed Filter ID	12T0576	
Pass/Fail	Pass	
Pass/Fail	Pass	
Leak Check mmHg/min		
Flow Check l/min		
New Filter ID		
Pass/Fail		
Pass/Fail		
Comments	no new filter available	New filter media being shipped from Lab.

Brian Smith <brian@advm2.com>

New Submission: RIAC Weekly System Check Sheets

laura@landcoastalservices.com <noreply@jotform.com> Sat, Mar 17, 2012 at 12:11 PM
To: brian@advm2.com, tom@advm2.com

JotForm

Question	Answer
Site Operator	laura@landcoastalservices.com
Site	Fire Station
AETHALOMETER	
**********	
Select Date & Time	03-17-2012 11:08 AM
Display Date & Time +/- 5 mins of PC time?	Yes
Display Flow between 4.7LPM-5.3LPM?	Yes
Flow rate is:	4.8
Display screen indicating normal operation (reasonable readings, no error messages, etc)?	Yes
Filter tape supply checked? Re-tension spool if needed. Filter tape spots visible & should have distinct , uniform borders.	Yes
Percent Filter Tape remaining?	48
Comments	
PAS 2000	
**********	
Select Date & Time	03-17-2012 1:08 PM
Date & Time +/- 5 mins of PC time?	
Lamp Intensity between 95-105?	
Lamp Intensity is:	
Lamp Frequency between 8kHz-15kHz?	

Lamp Frequency is:	
Pump Flow rate between 1.9LPM-2.1LPM?	
Pump Flow rate is:	
Pump "Actual Value" between 40%-55%?	
Pump Actual Value is:	
Comments	not operational

PUF SAMPLER

****

Select Date & Time	03-17-2012 11:10 AM
Sampler is intact & inlet head unobstructed?	Yes
PUF Sampler reading correct time and day?	Yes
Exposed cartridge ran for 24 hours?	Yes
Sampler left in Run Mode?	Yes
STR	3-16-12
STP	3-17-12
Duration	24
QSTD	0
AVG	229
MAX	231
MIN	229
Sample ID	FS-P-20120316
Sample Date	3-16-12
Sample ID	FS-P-20120322
Sample Date	3-22-12
Comments	

PARTISOL SAMPLER

****

Select Date & Time	03-17-2012 11:21 AM
Sampler is intact & inlet head unobstructed?	Yes
Temp shield is intact & sensor seated inside?	Yes
Partisol is reading correct time and day?	Yes

Exposed filter ran for 24 hours?	Yes
Sampler was left in Run Mode?	No
Next or New Sample Date Set?	Yes
Next or New Sample Date is:	3-22-12
Leak Check mmHg/min	128
Flow Check l/min	16.7
Exposed Filter ID	12T0571
Pass/Fail	Fail
Pass/Fail	Pass
Leak Check mmHg/min	
Flow Check l/min	
New Filter ID	
Pass/Fail	
Pass/Fail	
Comments	no new filter availalbe New filters on way from Lab.

Brian Smith <brian@advm2.com>

New Submission: RIAC Weekly System Check Sheets

laura@landcoastalservices.com <noreply@jotform.com> Sat, Mar 17, 2012 at 12:18 PM
To: brian@advm2.com, tom@advm2.com

JotForm

Question	Answer
Site Operator	laura@landcoastalservices.com
Site	Lydick
AETHALOMETER	
**********	
Select Date & Time	03-17-2012 12:40 PM
Display Date & Time +/- 5 mins of PC time?	Yes
Display Flow between 4.7LPM-5.3LPM?	Yes
Flow rate is:	5.0
Display screen indicating normal operation (reasonable readings, no error messages, etc)?	Yes
Filter tape supply checked? Re-tension spool if needed. Filter tape spots visible & should have distinct , uniform borders.	Yes
Percent Filter Tape remaining?	0
Comments	Value indicated on display not actual value. Still 1" to 1.5" of tape on roll.
PAS 2000	
**********	
Select Date & Time	03-17-2012 1:14 PM
Date & Time +/- 5 mins of PC time?	
Lamp Intensity between 95-105?	
Lamp Intensity is:	
Lamp Frequency between 8kHz-15kHz?	

Lamp Frequency is:	
Pump Flow rate between 1.9LPM-2.1LPM?	
Pump Flow rate is:	
Pump "Actual Value" between 40%-55%?	
Pump Actual Value is:	
Comments	not operational

PUF SAMPLER

****

Select Date & Time	03-17-2012 12:42 PM
Sampler is intact & inlet head unobstructed?	Yes
PUF Sampler reading correct time and day?	No
Exposed cartridge ran for 24 hours?	Yes
Sampler left in Run Mode?	Yes
STR	3-16-12
STP	3-17-12
Duration	24
QSTD	0
AVG	229
MAX	231
MIN	229
Sample ID	LD-P-20120316
Sample Date	3-16-12
Sample ID	LD-P-20120322
Sample Date	3-22-12
Comments	puf time off by one hour. fixed

PARTISOL SAMPLER

****

Select Date & Time	03-17-2012 12:52 PM
Sampler is intact & inlet head unobstructed?	Yes
Temp shield is intact & sensor seated inside?	Yes
Partisol is reading correct time and day?	No

Exposed filter ran for 24 hours?	Yes
Sampler was left in Run Mode?	No
Next or New Sample Date Set?	Yes
Next or New Sample Date is:	3-22-12
Leak Check mmHg/min	128
Flow Check l/min	16.7
Exposed Filter ID	12T0575
Pass/Fail	Fail `Old filter media style. Ordered new media style that works better and sent to Lab for distribution.`
Pass/Fail	Pass
Leak Check mmHg/min	
Flow Check l/min	
New Filter ID	
Pass/Fail	
Pass/Fail	
Comments	volume was 24.1 and time was off by 1 hour. Was in ERR mode upon arrival

Brian Smith <brian@advm2.com>

New Submission: RIAC Weekly System Check Sheets

laura@landcoastalservices.com <noreply@jotform.com> Sat, Mar 17, 2012 at 12:14 PM
To: brian@advm2.com, tom@advm2.com

JotForm

Question	Answer
Site Operator	laura@landcoastalservices.com
Site	Pembroke
AETHALOMETER	
**********	
Select Date & Time	03-17-2012 12:03 PM
Display Date & Time +/- 5 mins of PC time?	
Display Flow between 4.7LPM-5.3LPM?	
Flow rate is:	
Display screen indicating normal operation (reasonable readings, no error messages, etc)?	
Filter tape supply checked? Re-tension spool if needed. Filter tape spots visible & should have distinct , uniform borders.	
Percent Filter Tape remaining?	
Comments	not oeprational
PAS 2000	
**********	
Select Date & Time	03-17-2012 1:11 PM
Date & Time +/- 5 mins of PC time?	
Lamp Intensity between 95-105?	
Lamp Intensity is:	
Lamp Frequency between 8kHz-15kHz?	

Lamp Frequency is:	
Pump Flow rate between 1.9LPM-2.1LPM?	
Pump Flow rate is:	
Pump "Actual Value" between 40%-55%?	
Pump Actual Value is:	
Comments	not operationial

PUF SAMPLER

****

Select Date & Time	03-17-2012 12:03 PM
Sampler is intact & inlet head unobstructed?	Yes
PUF Sampler reading correct time and day?	No
Exposed cartridge ran for 24 hours?	Yes
Sampler left in Run Mode?	Yes
STR	3-16-12
STP	3-17-12
Duration	24
QSTD	0
AVG	229
MAX	231
MIN	229
Sample ID	PB-P-20120316
Sample Date	3-16-12
Sample ID	PB-P-20120322
Sample Date	3-22-12
Comments	clock said it was 00:03:07 upon arrival Clock adjusted to read correct time.

PARTISOL SAMPLER

****

Select Date & Time	03-17-2012 11:51 PM
Sampler is intact & inlet head unobstructed?	Yes
Temp shield is intact & sensor seated inside?	Yes
Partisol is reading correct time and day?	Yes

Exposed filter ran for 24 hours?	Yes
Sampler was left in Run Mode?	No
Next or New Sample Date Set?	Yes
Next or New Sample Date is:	3-22-12
Leak Check mmHg/min	128
Flow Check l/min	16.7
Exposed Filter ID	12T0574
Pass/Fail	Fail
Pass/Fail	Pass
Leak Check mmHg/min	
Flow Check l/min	
New Filter ID	
Pass/Fail	
Pass/Fail	`New filter media still in transit from Lab.`
Comments	no new filter available. Black specks on filter. Screen on intake head may need to be replaced, coming away from head so bugs may be getting in.

Brian Smith <brian@advm2.com>

New Submission: RIAC Weekly System Check Sheets

laura@landcoastalservices.com <noreply@jotform.com> Fri, Mar 23, 2012 at 9:05 AM
To: brian@advm2.com, tom@advm2.com

JotForm

Question	Answer
Site Operator	laura@landcoastalservices.com
Site	Fieldview
AETHALOMETER	
**********	
Select Date & Time	03-23-2012 9:39 AM
Display Date & Time +/- 5 mins of PC time?	Yes
Display Flow between 4.7LPM-5.3LPM?	Yes
Flow rate is:	4.8
Display screen indicating normal operation (reasonable readings, no error messages, etc)?	Yes
Filter tape supply checked? Re-tension spool if needed. Filter tape spots visible & should have distinct , uniform borders.	Yes
Percent Filter Tape remaining?	83
Comments	
PAS 2000	
**********	
Select Date & Time	03-23-2012 10:01 AM
Date & Time +/- 5 mins of PC time?	
Lamp Intensity between 95-105?	
Lamp Intensity is:	
Lamp Frequency between 8kHz-15kHz?	

Lamp Frequency is:	
Pump Flow rate between 1.9LPM-2.1LPM?	
Pump Flow rate is:	
Pump "Actual Value" between 40%-55%?	
Pump Actual Value is:	
Comments	not operational

PUF SAMPLER

****

Select Date & Time	03-23-2012 9:41 AM
Sampler is intact & inlet head unobstructed?	Yes
PUF Sampler reading correct time and day?	Yes
Exposed cartridge ran for 24 hours?	Yes
Sampler left in Run Mode?	Yes
STR	3-22-12
STP	3-23-12
Duration	24
QSTD	0
AVG	197
MAX	209
MIN	189
Sample ID	FV-P-03222012
Sample Date	3-22-12
Sample ID	FV-P-03282012
Sample Date	3-28-12
Comments	

PARTISOL SAMPLER

****

Select Date & Time	03-23-2012 9:51 AM
Sampler is intact & inlet head unobstructed?	Yes
Temp shield is intact & sensor seated inside?	Yes
Partisol is reading correct time and day?	Yes

Exposed filter ran for 24 hours?	Yes
Sampler was left in Run Mode?	Yes
Next or New Sample Date Set?	Yes
Next or New Sample Date is:	3-28-12
Leak Check mmHg/min	14
Flow Check l/min	16.7
Exposed Filter ID	12T0883
Pass/Fail	Pass
Pass/Fail	Pass
Leak Check mmHg/min	12
Flow Check l/min	16.7
New Filter ID	12T0873
Pass/Fail	Pass
Pass/Fail	Pass
Comments	

Brian Smith <brian@advm2.com>

New Submission: RIAC Weekly System Check Sheets

laura@landcoastalservices.com <noreply@jotform.com> Fri, Mar 23, 2012 at 9:46 AM
To: brian@advm2.com, tom@advm2.com

JotForm

Question	Answer
Site Operator	laura@landcoastalservices.com
Site	Fire Station
AETHALOMETER	
**********	
Select Date & Time	03-23-2012 10:21 AM
Display Date & Time +/- 5 mins of PC time?	Yes
Display Flow between 4.7LPM-5.3LPM?	Yes
Flow rate is:	4.8
Display screen indicating normal operation (reasonable readings, no error messages, etc)?	Yes
Filter tape supply checked? Re-tension spool if needed. Filter tape spots visible & should have distinct , uniform borders.	Yes
Percent Filter Tape remaining?	48
Comments	
PAS 2000	
**********	
Select Date & Time	03-23-2012 10:42 AM
Date & Time +/- 5 mins of PC time?	
Lamp Intensity between 95-105?	
Lamp Intensity is:	
Lamp Frequency between 8kHz-15kHz?	

Lamp Frequency is:	
Pump Flow rate between 1.9LPM-2.1LPM?	
Pump Flow rate is:	
Pump "Actual Value" between 40%-55%?	
Pump Actual Value is:	
Comments	not operational

PUF SAMPLER

****

Select Date & Time	03-23-2012 10:23 AM
Sampler is intact & inlet head unobstructed?	Yes
PUF Sampler reading correct time and day?	Yes
Exposed cartridge ran for 24 hours?	Yes
Sampler left in Run Mode?	Yes
STR	3-22-12
STP	3-23-12
Duration	24
QSTD	0
AVG	229
MAX	231
MIN	229
Sample ID	FS-P-20120322
Sample Date	3-22-12
Sample ID	FS-P-20120328
Sample Date	3-28-12
Comments	

PARTISOL SAMPLER

****

Select Date & Time	03-23-2012 10:33 AM
Sampler is intact & inlet head unobstructed?	Yes
Temp shield is intact & sensor seated inside?	Yes
Partisol is reading correct time and day?	Yes

Exposed filter ran for 24 hours?	Yes
Sampler was left in Run Mode?	Yes
Next or New Sample Date Set?	Yes
Next or New Sample Date is:	3-28-12
Leak Check mmHg/min	39
Flow Check l/min	16.7
Exposed Filter ID	12T0884
Pass/Fail	Pass
Pass/Fail	Pass
Leak Check mmHg/min	36
Flow Check l/min	16.7
New Filter ID	12T0877
Pass/Fail	Pass
Pass/Fail	Pass
Comments	

Brian Smith <brian@advm2.com>

New Submission: RIAC Weekly System Check Sheets

laura@landcoastalservices.com <noreply@jotform.com> Fri, Mar 23, 2012 at 11:15 AM
To: brian@advm2.com, tom@advm2.com

JotForm

Question	Answer
Site Operator	laura@landcoastalservices.com
Site	Lydick
AETHALOMETER	
**********	
Select Date & Time	03-23-2012 11:44 PM
Display Date & Time +/- 5 mins of PC time?	Yes
Display Flow between 4.7LPM-5.3LPM?	Yes
Flow rate is:	5.0
Display screen indicating normal operation (reasonable readings, no error messages, etc)?	Yes
Filter tape supply checked? Re-tension spool if needed. Filter tape spots visible & should have distinct , uniform borders.	Yes
Percent Filter Tape remaining?	0
Comments	need to change tape soon How much tape left on spool?
PAS 2000	
**********	
Select Date & Time	03-23-2012 12:10 AM
Date & Time +/- 5 mins of PC time?	
Lamp Intensity between 95-105?	
Lamp Intensity is:	
Lamp Frequency between 8kHz-15kHz?	

Lamp Frequency is:	
Pump Flow rate between 1.9LPM-2.1LPM?	
Pump Flow rate is:	
Pump "Actual Value" between 40%-55%?	
Pump Actual Value is:	
Comments	not operational

PUF SAMPLER

****

Select Date & Time	03-23-2012 11:47 AM
Sampler is intact & inlet head unobstructed?	Yes
PUF Sampler reading correct time and day?	Yes
Exposed cartridge ran for 24 hours?	Yes
Sampler left in Run Mode?	Yes
STR	3-22-12
STP	3-23-12
Duration	24
QSTD	0
AVG	229
MAX	231
MIN	229
Sample ID	LD-P-20120322
Sample Date	3-22-12
Sample ID	LD-P-20120328
Sample Date	3-28-12
Comments	

PARTISOL SAMPLER

****

Select Date & Time	03-23-2012 11:56 AM
Sampler is intact & inlet head unobstructed?	Yes
Temp shield is intact & sensor seated inside?	Yes
Partisol is reading correct time and day?	Yes

Exposed filter ran for 24 hours?	Yes
Sampler was left in Run Mode?	Yes
Next or New Sample Date Set?	Yes
Next or New Sample Date is:	3-28-12
Leak Check mmHg/min	56
Flow Check l/min	16.7
Exposed Filter ID	12T0885
Pass/Fail	Pass
Pass/Fail	Pass
Leak Check mmHg/min	11
Flow Check l/min	16.7
New Filter ID	12T0875
Pass/Fail	Pass
Pass/Fail	Pass
Comments	

Brian Smith <brian@advm2.com>

New Submission: RIAC Weekly System Check Sheets

laura@landcoastalservices.com <noreply@jotform.com> Fri, Mar 23, 2012 at 11:10 AM
To: brian@advm2.com, tom@advm2.com

JotForm

Question	Answer
Site Operator	laura@landcoastalservices.com
Site	Pembroke
AETHALOMETER	
**********	
Select Date & Time	03-23-2012 11:06 AM
Display Date & Time +/- 5 mins of PC time?	
Display Flow between 4.7LPM-5.3LPM?	
Flow rate is:	
Display screen indicating normal operation (reasonable readings, no error messages, etc)?	
Filter tape supply checked? Re-tension spool if needed. Filter tape spots visible & should have distinct , uniform borders.	
Percent Filter Tape remaining?	
Comments	not operational
PAS 2000	
**********	
Select Date & Time	03-23-2012 12:06 PM
Date & Time +/- 5 mins of PC time?	
Lamp Intensity between 95-105?	
Lamp Intensity is:	
Lamp Frequency between 8kHz-15kHz?	

Lamp Frequency is:	
Pump Flow rate between 1.9LPM-2.1LPM?	
Pump Flow rate is:	
Pump "Actual Value" between 40%-55%?	
Pump Actual Value is:	
Comments	not operational;

PUF SAMPLER

****

Select Date & Time	03-23-2012 11:06 AM
Sampler is intact & inlet head unobstructed?	Yes
PUF Sampler reading correct time and day?	Yes
Exposed cartridge ran for 24 hours?	Yes
Sampler left in Run Mode?	Yes
STR	3-22-12
STP	3-23-12
Duration	24
QSTD	0
AVG	229
MAX	231
MIN	228
Sample ID	PB-P-20120322
Sample Date	3-22-12
Sample ID	PB-P-20120328
Sample Date	3-28-12
Comments	

PARTISOL SAMPLER

****

Select Date & Time	03-23-2012 11:15 AM
Sampler is intact & inlet head unobstructed?	Yes
Temp shield is intact & sensor seated inside?	Yes
Partisol is reading correct time and day?	No

Exposed filter ran for 24 hours?	Yes
Sampler was left in Run Mode?	Yes
Next or New Sample Date Set?	Yes
Next or New Sample Date is:	3-28-12
Leak Check mmHg/min	17
Flow Check l/min	16.7
Exposed Filter ID	12T0874
Pass/Fail	Pass
Pass/Fail	Pass
Leak Check mmHg/min	13
Flow Check l/min	16.7
New Filter ID	12T0876
Pass/Fail	Pass
Pass/Fail	Pass
Comments	

Brian Smith <brian@advm2.com>

New Submission: RIAC Weekly System Check Sheets

laura@landcoastalservices.com <noreply@jotform.com> Thu, Mar 29, 2012 at 3:33 PM
To: brian@advm2.com, tom@advm2.com

JotForm

Question	Answer
Site Operator	laura@landcoastalservices.com
Site	Fieldview
AETHALOMETER	
**********	
Select Date & Time	03-29-2012 10:18 AM
Display Date & Time +/- 5 mins of PC time?	Yes
Display Flow between 4.7LPM-5.3LPM?	Yes
Flow rate is:	4.8
Display screen indicating normal operation (reasonable readings, no error messages, etc)?	Yes
Filter tape supply checked? Re-tension spool if needed. Filter tape spots visible & should have distinct , uniform borders.	Yes
Percent Filter Tape remaining?	82
Comments	Aethalometer was in check mode upon arrival. Restarted.
PAS 2000	
**********	
Select Date & Time	03-29-2012 3:51 PM
Date & Time +/- 5 mins of PC time?	
Lamp Intensity between 95-105?	
Lamp Intensity is:	
Lamp Frequency between 8kHz-15kHz?	

Lamp Frequency is:	
Pump Flow rate between 1.9LPM-2.1LPM?	
Pump Flow rate is:	
Pump "Actual Value" between 40%-55%?	
Pump Actual Value is:	
Comments	not operational

PUF SAMPLER

****

Select Date & Time	03-29-2012 9:36 AM
Sampler is intact & inlet head unobstructed?	Yes
PUF Sampler reading correct time and day?	Yes
Exposed cartridge ran for 24 hours?	Yes
Sampler left in Run Mode?	Yes
STR	3/28/12
STP	3/29/12
Duration	24
QSTD	0
AVG	206
MAX	217
MIN	201
Sample ID	FV-P-20120328
Sample Date	3-28-12
Sample ID	FV-P-20120403
Sample Date	4/3/12
Comments	

PARTISOL SAMPLER

****

Select Date & Time	03-29-2012 10:00 AM
Sampler is intact & inlet head unobstructed?	Yes
Temp shield is intact & sensor seated inside?	Yes
Partisol is reading correct time and day?	Yes

Exposed filter ran for 24 hours?	Yes
Sampler was left in Run Mode?	Yes
Next or New Sample Date Set?	Yes
Next or New Sample Date is:	4-3-12
Leak Check mmHg/min	35
Flow Check l/min	16.7
Exposed Filter ID	12T0873
Pass/Fail	Pass
Pass/Fail	Pass
Leak Check mmHg/min	14
Flow Check l/min	16.7
New Filter ID	12T0880
Pass/Fail	Pass
Pass/Fail	Pass
Comments	

Brian Smith <brian@advm2.com>

New Submission: RIAC Weekly System Check Sheets

laura@landcoastalservices.com <noreply@jotform.com> Thu, Mar 29, 2012 at 3:44 PM
To: brian@advm2.com, tom@advm2.com

JotForm

Question	Answer
Site Operator	laura@landcoastalservices.com
Site	Fire Station
AETHALOMETER	
**********	
Select Date & Time	03-29-2012 4:37 PM
Display Date & Time +/- 5 mins of PC time?	
Display Flow between 4.7LPM-5.3LPM?	
Flow rate is:	
Display screen indicating normal operation (reasonable readings, no error messages, etc)?	
Filter tape supply checked? Re-tension spool if needed. Filter tape spots visible & should have distinct , uniform borders.	
Percent Filter Tape remaining?	
Comments	not operational
PAS 2000	
**********	
Select Date & Time	03-29-2012 4:37 PM
Date & Time +/- 5 mins of PC time?	
Lamp Intensity between 95-105?	
Lamp Intensity is:	
Lamp Frequency between 8kHz-15kHz?	

Lamp Frequency is:	
Pump Flow rate between 1.9LPM-2.1LPM?	
Pump Flow rate is:	
Pump "Actual Value" between 40%-55%?	
Pump Actual Value is:	
Comments	not operational

PUF SAMPLER

****

Select Date & Time	03-29-2012 10:45 AM
Sampler is intact & inlet head unobstructed?	Yes
PUF Sampler reading correct time and day?	Yes
Exposed cartridge ran for 24 hours?	Yes
Sampler left in Run Mode?	Yes
STR	3/28/12
STP	3/29/12
Duration	24
QSTD	0
AVG	229
MAX	231
MIN	229
Sample ID	FS-P-20120328
Sample Date	3/28/12
Sample ID	FS-P-20120403
Sample Date	4/3/12
Comments	

PARTISOL SAMPLER

****

Select Date & Time	03-29-2012 10:55 AM
Sampler is intact & inlet head unobstructed?	Yes
Temp shield is intact & sensor seated inside?	Yes
Partisol is reading correct time and day?	No

Exposed filter ran for 24 hours?	Yes
Sampler was left in Run Mode?	Yes
Next or New Sample Date Set?	Yes
Next or New Sample Date is:	4/3/12
Leak Check mmHg/min	45
Flow Check l/min	16.7
Exposed Filter ID	12T0877
Pass/Fail	Pass
Pass/Fail	Pass
Leak Check mmHg/min	43
Flow Check l/min	16.7
New Filter ID	12T0879
Pass/Fail	Pass
Pass/Fail	Pass
Comments	time off by 2 mins

Brian Smith <brian@advm2.com>

New Submission: RIAC Weekly System Check Sheets

laura@landcoastalservices.com <noreply@jotform.com> Thu, Mar 29, 2012 at 3:37 PM
To: brian@advm2.com, tom@advm2.com

JotForm

Question	Answer
Site Operator	laura@landcoastalservices.com
Site	Lydick
AETHALOMETER	
**********	
Select Date & Time	03-29-2012 4:33 PM
Display Date & Time +/- 5 mins of PC time?	
Display Flow between 4.7LPM-5.3LPM?	
Flow rate is:	
Display screen indicating normal operation (reasonable readings, no error messages, etc)?	
Filter tape supply checked? Re-tension spool if needed. Filter tape spots visible & should have distinct , uniform borders.	
Percent Filter Tape remaining?	
Comments	not operational
PAS 2000	
**********	
Select Date & Time	03-29-2012 4:33 PM
Date & Time +/- 5 mins of PC time?	
Lamp Intensity between 95-105?	
Lamp Intensity is:	
Lamp Frequency between 8kHz-15kHz?	

Lamp Frequency is:	
Pump Flow rate between 1.9LPM-2.1LPM?	
Pump Flow rate is:	
Pump "Actual Value" between 40%-55%?	
Pump Actual Value is:	
Comments	not operational

PUF SAMPLER

****

Select Date & Time	03-29-2012 12:14 PM
Sampler is intact & inlet head unobstructed?	Yes
PUF Sampler reading correct time and day?	Yes
Exposed cartridge ran for 24 hours?	Yes
Sampler left in Run Mode?	Yes
STR	3-28-12
STP	3-29-12
Duration	24
QSTD	0
AVG	229
MAX	231
MIN	229
Sample ID	LD-P-20120328
Sample Date	3/28/12
Sample ID	LD-P-20120403
Sample Date	4/3/12
Comments	

PARTISOL SAMPLER

****

Select Date & Time	03-29-2012 12:25 PM
Sampler is intact & inlet head unobstructed?	Yes
Temp shield is intact & sensor seated inside?	Yes
Partisol is reading correct time and day?	Yes

Exposed filter ran for 24 hours?	Yes
Sampler was left in Run Mode?	Yes
Next or New Sample Date Set?	Yes
Next or New Sample Date is:	4/3/12
Leak Check mmHg/min	9
Flow Check l/min	16.7
Exposed Filter ID	12T0875
Pass/Fail	Pass
Pass/Fail	Pass
Leak Check mmHg/min	10
Flow Check l/min	16.7
New Filter ID	12T0878
Pass/Fail	Pass
Pass/Fail	Pass
Comments	field blank 12T0881 `24.1m3 value added per site operator.`

Brian Smith <brian@advm2.com>

New Submission: RIAC Weekly System Check Sheets

laura@landcoastalservices.com <noreply@jotform.com> Thu, Mar 29, 2012 at 3:49 PM
To: brian@advm2.com, tom@advm2.com

JotForm

Question	Answer
Site Operator	laura@landcoastalservices.com
Site	Pembroke
AETHALOMETER	
**********	
Select Date & Time	03-29-2012 4:44 PM
Display Date & Time +/- 5 mins of PC time?	
Display Flow between 4.7LPM-5.3LPM?	
Flow rate is:	
Display screen indicating normal operation (reasonable readings, no error messages, etc)?	
Filter tape supply checked? Re-tension spool if needed. Filter tape spots visible & should have distinct , uniform borders.	
Percent Filter Tape remaining?	
Comments	not operational
PAS 2000	
**********	
Select Date & Time	03-29-2012 4:44 PM
Date & Time +/- 5 mins of PC time?	
Lamp Intensity between 95-105?	
Lamp Intensity is:	
Lamp Frequency between 8kHz-15kHz?	

Lamp Frequency is:	
Pump Flow rate between 1.9LPM-2.1LPM?	
Pump Flow rate is:	
Pump "Actual Value" between 40%-55%?	
Pump Actual Value is:	
Comments	not operational

PUF SAMPLER

****

Select Date & Time	03-29-2012 11:30 AM
Sampler is intact & inlet head unobstructed?	Yes
PUF Sampler reading correct time and day?	Yes
Exposed cartridge ran for 24 hours?	Yes
Sampler left in Run Mode?	Yes
STR	3/28/12
STP	3/29/12
Duration	24
QSTD	0
AVG	229
MAX	236
MIN	227
Sample ID	PB-P-20120328
Sample Date	3/28/12
Sample ID	PB-P-20120403
Sample Date	4/3/12
Comments	

PARTISOL SAMPLER

****

Select Date & Time	03-29-2012 11:36 AM
Sampler is intact & inlet head unobstructed?	Yes
Temp shield is intact & sensor seated inside?	Yes
Partisol is reading correct time and day?	No

Exposed filter ran for 24 hours?	Yes
Sampler was left in Run Mode?	Yes
Next or New Sample Date Set?	Yes
Next or New Sample Date is:	4/3/12
Leak Check mmHg/min	6
Flow Check l/min	16.7
Exposed Filter ID	12T0876
Pass/Fail	Pass
Pass/Fail	Pass
Leak Check mmHg/min	18
Flow Check l/min	16.7
New Filter ID	12T0882
Pass/Fail	Pass
Pass/Fail	Pass
Comments	sampler off by 2 mins

ADDENDUM B: MONTHLY SITE CHECK FORMS

Brian Smith <brian@advm2.com>

New submission: RIAC Monthly System Check Sheets

JotForm <noreply@jotform.com> **Thu, Jan 5, 2012 at 3:12 PM**
To: brian@advm2.com

JotForm

Question	Answer
Site Operator	Laura Ernst
Site	Fieldview
AETHALOMETER	
**********	
Select Date & Time	01-05-2012 4:08 PM
Flowmeter Model & S/N	
Date last Calibrated	
External flow reading at cyclone inlet	
Partisol Temp C	
Partisol BP mmHg	
Corrected flow (20 C)	
Flow from Aethalometer display	
Flow % difference (Should be <10%)	
Comments	
PUF SAMPLER	
**********	
Select Date & Time	01-05-2012 3:20 PM
Visually inspected and free of dust?	Yes
Comments	R = .9977 A1 = 41.2078 A0 = -2.2406
PARTISOL SAMPLER	
**********	
Select Date & Time	01-05-2012 3:31 PM
Visually inspected and free of dust?	Yes
Water trap is empty?	Yes

Sampler Flow l/min	16.7
Sampler Temp C	2.7
Sampler BP mmHg	754
Standard Flow l/min	16.59
Standard Temp C	2.7
Standard BP mmHg	754.2
Std 15.9-17.5 l/min?	Pass
Sampler +/- 2 C of Std?	Pass
Sampler +/- 10mmHg of Std	
Comments	NOTE: The Standard would not measure flow when I hit F3 than F2. It would only measure if you just hit F3 or were out of the audit screen. NOte: Sampler does not turn off during calibration.

Brian Smith <brian@advm2.com>

New submission: RIAC Monthly System Check Sheets

JotForm <noreply@jotform.com> **Thu, Jan 5, 2012 at 1:55 PM**
To: brian@advm2.com

Question	Answer
Site Operator	Laura Ernst
Site	Fire Station
AETHALOMETER	
**********	
Select Date & Time	01-05-2012 2:52 PM
Flowmeter Model & S/N	
Date last Calibrated	
External flow reading at cyclone inlet	
Partisol Temp C	
Partisol BP mmHg	
Corrected flow (20 C)	
Flow from Aethalometer display	
Flow % difference (Should be <10%)	
Comments	
PUF SAMPLER	
**********	
Select Date & Time	01-05-2012 2:05 PM
Visually inspected and free of dust?	Yes
Comments	R = .9964 A1: 41.1374 A0: -1.8188 ADC = 27
PARTISOL SAMPLER	
**********	
Select Date & Time	01-05-2012 2:17 PM

Visually inspected and free of dust?	Yes
Water trap is empty?	Yes
Sampler Flow l/min	16.6
Sampler Temp C	4.0
Sampler BP mmHg	753
Standard Flow l/min	16.71
Standard Temp C	4.1
Standard BP mmHg	753.5
Std 15.9-17.5 l/min?	Pass
Sampler +/- 2 C of Std?	Pass
Sampler +/- 10mmHg of Std	
Comments	

Brian Smith <brian@advm2.com>

New submission: RIAC Monthly System Check Sheets

JotForm <noreply@jotform.com> **Thu, Jan 5, 2012 at 10:49 AM**
To: brian@advm2.com

JotForm

Question	Answer
Site Operator	Laura Ernst
Site	Lydick
AETHALOMETER	
**********	
Select Date & Time	01-05-2012 11:42 AM
Flowmeter Model & S/N	
Date last Calibrated	
External flow reading at cyclone inlet	
Partisol Temp C	
Partisol BP mmHg	
Corrected flow (20 C)	
Flow from Aethalometer display	
Flow % difference (Should be <10%)	
Comments	
PUF SAMPLER	
**********	
Select Date & Time	01-05-2012 10:12 AM
Visually inspected and free of dust?	Yes
	Calibration ran twice: question -- am I suuposed to save the data to the disk and than download? When I saved it it did not do anything?
Comments	1. Sensor Qstd R= .9989 A1=34.3915 A0=-1.3288

Data saved

2. Qstd
R=.9976

A1=34.7125
A0=-1.4212

PARTISOL SAMPLER
****

Select Date & Time	01-05-2012 10:41 AM
Visually inspected and free of dust?	Yes
Water trap is empty?	Yes
Sampler Flow l/min	16.7
Sampler Temp C	1.9
Sampler BP mmHg	755
Standard Flow l/min	17.29
Standard Temp C	1.1
Standard BP mmHg	754.2
Std 15.9-17.5 l/min?	Pass
Sampler +/- 2 C of Std?	Pass
Sampler +/- 10mmHg of Std	
Comments	Brian -- the drop down menu for the pressure won't let me say yes or no for the sampler being within the correct number (see above) it just says option 1,2,3

Resolved.

Brian Smith <brian@advm2.com>

New submission: RIAC Monthly System Check Sheets

JotForm <noreply@jotform.com> **Thu, Jan 5, 2012 at 12:27 PM**
To: brian@advm2.com

Question	Answer
Site Operator	Laura Ernst
Site	Pembroke
AETHALOMETER	
**********	
Select Date & Time	01-05-2012 1:25 PM
Flowmeter Model & S/N	
Date last Calibrated	
External flow reading at cyclone inlet	
Partisol Temp C	
Partisol BP mmHg	
Corrected flow (20 C)	
Flow from Aethalometer display	
Flow % difference (Should be <10%)	
Comments	
PUF SAMPLER	
**********	
Select Date & Time	01-05-2012 1:25 PM
Visually inspected and free of dust?	Yes
	R = .9993
Comments	A1: 34.5764
	A0: -1.4606
PARTISOL SAMPLER	
**********	
Select Date & Time	01-05-2012 12:49 PM

Visually inspected and free of dust?	Yes
Water trap is empty?	Yes
Sampler Flow l/min	16.6
Sampler Temp C	3.5
Sampler BP mmHg	752
Standard Flow l/min	16.3
Standard Temp C	4.1
Standard BP mmHg	753.6
Std 15.9-17.5 l/min?	Pass
Sampler +/- 2 C of Std?	Pass
Sampler +/- 10mmHg of Std	
Comments	

Brian Smith <brian@advm2.com>

New submission: RIAC Monthly System Check Sheets

JotForm <noreply@jotform.com> **Sat, Feb 4, 2012 at 10:36 AM**
To: brian@advm2.com

Question	Answer
Site Operator	Laura Ernst
Site	Lydick
AETHALOMETER	
**********	
Select Date & Time	02-04-2012 11:31 AM
Flowmeter Model & S/N	
Date last Calibrated	
External flow reading at cyclone inlet	
Partisol Temp C	
Partisol BP mmHg	
Corrected flow (20 C)	
Flow from Aethalometer display	
Flow % difference (Should be <10%)	
Comments	waiting on instruments
PUF SAMPLER	
**********	
Select Date & Time	02-04-2012 10:10 AM
Visually inspected and free of dust?	Yes
Comments	R - 0.9983 A0- -0.7432 A1 - 32.8812
PARTISOL SAMPLER	
**********	
Select Date & Time	02-04-2012 11:31 AM
Visually inspected and free of dust?	Yes
Water trap is empty?	Yes

Sampler Flow l/min	16.6
Sampler Temp C	4.7
Sampler BP mmHg	764
Standard Flow l/min	16.75
Standard Temp C	4.7
Standard BP mmHg	763.5
Std 15.9-17.5 l/min?	Pass
Sampler +/- 2 C of Std?	Pass
Sampler +/- 10mmHg of Std	Option 1
Comments	Initial Leak check is 28 and passed Final offset - .0062 Final Flow Span - .9732 Initial offset and span not recorded.

Brian Smith <brian@advm2.com>

New submission: RIAC Monthly System Check Sheets

JotForm <noreply@jotform.com> **Sat, Feb 4, 2012 at 12:23 PM**
To: brian@advm2.com

JotForm

Question	Answer
Site Operator	Laura Ernst
Site	Pembroke
AETHALOMETER	
**********	
Select Date & Time	02-04-2012 1:18 PM
Flowmeter Model & S/N	
Date last Calibrated	
External flow reading at cyclone inlet	
Partisol Temp C	
Partisol BP mmHg	
Corrected flow (20 C)	
Flow from Aethalometer display	
Flow % difference (Should be <10%)	
Comments	waiting on instrument
PUF SAMPLER	
**********	
Select Date & Time	02-04-2012 12:08 PM
Visually inspected and free of dust?	Yes
Comments	R - .9997 A0 - -0.3150 A1 - 29.5566 Note: It asked for high and low flow rates on this instrument (though not at Field View) but I just left what was already in there. Does the calibration get saved to the disk and is supposed to be downloaded?
PARTISOL SAMPLER	
**********	
Select Date & Time	02-04-2012 12:40 PM

Visually inspected and free of dust?	Yes
Water trap is empty?	Yes
Sampler Flow l/min	16.7
Sampler Temp C	6.5
Sampler BP mmHg	762
Standard Flow l/min	16.69
Standard Temp C	6.4
Standard BP mmHg	762.8
Std 15.9-17.5 l/min?	Pass
Sampler +/- 2 C of Std?	Pass
Sampler +/- 10mmHg of Std	Option 1
Comments	Iniital Leak Check was 59 and passed flow calibration initial offset .0216 span .9638 final offset .0216 span .9673

Brian Smith <brian@advm2.com>

New submission: RIAC Monthly System Check Sheets

JotForm <noreply@jotform.com> **Sat, Feb 4, 2012 at 2:59 PM**
To: brian@advm2.com

JotForm

Question	Answer
Site Operator	Laura Ernst
Site	Lydick
AETHALOMETER	
**********	
Select Date & Time	02-04-2012 3:56 PM
Flowmeter Model & S/N	
Date last Calibrated	
External flow reading at cyclone inlet	
Partisol Temp C	
Partisol BP mmHg	
Corrected flow (20 C)	
Flow from Aethalometer display	
Flow % difference (Should be <10%)	
Comments	waiting on instrument
PUF SAMPLER	
**********	
Select Date & Time	02-04-2012 3:15 PM
Visually inspected and free of dust?	Yes
Comments	R - .9987 A0- -1.2497 A1 - 33.5509
PARTISOL SAMPLER	
**********	
Select Date & Time	02-04-2012 3:30 PM
Visually inspected and free of dust?	Yes
Water trap is empty?	Yes

Sampler Flow l/min	16.7
Sampler Temp C	7.0
Sampler BP mmHg	761
Standard Flow l/min	16.74
Standard Temp C	6.7
Standard BP mmHg	762
Std 15.9-17.5 l/min?	Pass
Sampler +/- 2 C of Std?	Pass
Sampler +/- 10mmHg of Std	Option 1
	leak check 35 pass
Comments	initial flow offset -.0012 and span .9493
	final offset -.0060 and span .9591

Brian Smith <brian@advm2.com>

New submission: RIAC Monthly System Check Sheets

JotForm <noreply@jotform.com> **Sat, Feb 4, 2012 at 1:46 PM**
To: brian@advm2.com

JotForm

Question	Answer
Site Operator	Laura Ernst
Site	Pembroke
AETHALOMETER	
**********	
Select Date & Time	02-04-2012 2:43 PM
Flowmeter Model & S/N	
Date last Calibrated	
External flow reading at cyclone inlet	
Partisol Temp C	
Partisol BP mmHg	
Corrected flow (20 C)	
Flow from Aethalometer display	
Flow % difference (Should be <10%)	
Comments	waiting on instrument
PUF SAMPLER	
**********	
Select Date & Time	02-04-2012 1:50 PM
Visually inspected and free of dust?	Yes
Comments	R - .9995 A0- 34.5711 A1 - -1.4444
PARTISOL SAMPLER	
**********	
Select Date & Time	02-04-2012 2:10 PM
Visually inspected and free of dust?	Yes
Water trap is empty?	Yes

Sampler Flow l/min	16.6
Sampler Temp C	8.0
Sampler BP mmHg	763
Standard Flow l/min	16.7
Standard Temp C	7.5
Standard BP mmHg	762
Std 15.9-17.5 l/min?	Pass
Sampler +/- 2 C of Std?	Pass
Sampler +/- 10mmHg of Std	Option 1
	leak check was 20 pass
Comments	initial offset .0021 and span .9648
	final offset .0028 and span .9577

Brian Smith <brian@advm2.com>

New submission: RIAC Monthly System Check Sheets

JotForm <noreply@jotform.com> **Tue, Mar 6, 2012 at 5:20 PM**
To: brian@advm2.com

JotForm

Question	Answer
Site Operator	laura@landcoastalservices.com
Site	Fieldview
AETHALOMETER	
**********	
Select Date & Time	03-06-2012 6:15 PM
Flowmeter Model & S/N	
Date last Calibrated	
External flow reading at cyclone inlet	
Partisol Temp C	
Partisol BP mmHg	
Corrected flow (20 C)	
Flow from Aethalometer display	
Flow % difference (Should be <10%)	
Comments	
PUF SAMPLER	
**********	
Select Date & Time	03-05-2012 4:14 PM
Visually inspected and free of dust?	Yes
Comments	temperature sampler 7.5 standard 3.3 R .9983 A0 -1.0498 A1 44.9713
PARTISOL SAMPLER	
**********	
Select Date & Time	03-05-2012 4:32 PM

Visually inspected and free of dust?	Yes
Water trap is empty?	Yes
Sampler Flow l/min	16.7
Sampler Temp C	3.2
Sampler BP mmHg	761
Standard Flow l/min	16.81
Standard Temp C	2.9
Standard BP mmHg	759.7
Std 15.9-17.5 l/min?	Pass
Sampler +/- 2 C of Std?	Pass
Sampler +/- 10mmHg of Std	Option 1
Comments	91 leak check pass temperature calibration 2.9 sampler 2.9 standard pressure calibration final 760 sampler 760 std Flow calibration initial flow offset .0062 flow span .9732 final flow offset .0063 flow span .9631

Brian Smith <brian@advm2.com>

New submission: RIAC Monthly System Check Sheets

JotForm <noreply@jotform.com> **Tue, Mar 6, 2012 at 5:14 PM**
To: brian@advm2.com

Question	Answer
Site Operator	laura@landcoastalservices.com
Site	Fire Station
AETHALOMETER	
**********	
Select Date & Time	03-05-2012 3:00 PM
Flowmeter Model & S/N	
Date last Calibrated	
External flow reading at cyclone inlet	
Partisol Temp C	
Partisol BP mmHg	
Corrected flow (20 C)	
Flow from Aethalometer display	
Flow % difference (Should be <10%)	
Comments	
PUF SAMPLER	
**********	
Select Date & Time	03-05-2012 3:00 PM
Visually inspected and free of dust?	Yes
Comments	Temperature sampler 5.6 Standard 4.2 R .9994 A0 -0.2856 A1 29.4661
PARTISOL SAMPLER	
**********	
Select Date & Time	03-05-2012 3:07 PM

Visually inspected and free of dust?	Yes
Water trap is empty?	Yes
Sampler Flow l/min	16.7
Sampler Temp C	4.5
Sampler BP mmHg	760
Standard Flow l/min	16.73
Standard Temp C	4.2
Standard BP mmHg	759.6
Std 15.9-17.5 l/min?	Pass
Sampler +/- 2 C of Std?	Pass
Sampler +/- 10mmHg of Std	Option 1
Comments	Leak Check 98 and Pass Temperature Calibration Final 4.2 sampler 4.2 standard Flow Calibration Initial flow offset .0216 Flow Span .9673 Final flow offset .0216 flow span .9691 Final flow audit 16.7 sampler 16.73 standard

Brian Smith <brian@advm2.com>

New submission: RIAC Monthly System Check Sheets

JotForm <noreply@jotform.com> **Tue, Mar 6, 2012 at 4:03 PM**
To: brian@advm2.com

Question	Answer
Site Operator	laura@landcoastalservices.com
Site	Lydick
AETHALOMETER	
**********	
Select Date & Time	03-05-2012 11:16 AM
Flowmeter Model & S/N	
Date last Calibrated	
External flow reading at cyclone inlet	
Partisol Temp C	
Partisol BP mmHg	
Corrected flow (20 C)	
Flow from Aethalometer display	
Flow % difference (Should be <10%)	
Comments	
PUF SAMPLER	
**********	
Select Date & Time	03-05-2012 11:16 AM
Visually inspected and free of dust?	Yes
	R .9992 A0 -1.5032 A1 35.0665
Comments	Temperature
	Sampler Tamb 3.4 Standard TRemo 5.4
PARTISOL SAMPLER	
**********	

Select Date & Time	03-05-2012 11:40 AM
Visually inspected and free of dust?	Yes
Water trap is empty?	No
Sampler Flow l/min	16.7
Sampler Temp C	3.3
Sampler BP mmHg	759
Standard Flow l/min	17.02
Standard Temp C	4.6
Standard BP mmHg	759.2
Std 15.9-17.5 l/min?	Pass
Sampler +/- 2 C of Std?	Pass
Sampler +/- 10mmHg of Std	Option 1
	I performed a temperature calibration and flow calibration anyway:
	Temperature:
	Final 2.8 sampler 3.5 standard
	Flow:
Comments	Leak Check 50 and Pass Flow Calibration Initial Flow Offset -0.0060 Flow Span .0012 Final Flow Offset .9591 Flow Span .9673
	Final Flow Rates Sampler 16.7 Standard 16.74

Brian Smith <brian@advm2.com>

New submission: RIAC Monthly System Check Sheets

JotForm <noreply@jotform.com> **Tue, Mar 6, 2012 at 4:25 PM**
To: brian@advm2.com

JotForm

Question	Answer
Site Operator	laura@landcoastalservices.com
Site	Pembroke
AETHALOMETER	
**********	
Select Date & Time	03-05-2012 5:05 PM
Flowmeter Model & S/N	
Date last Calibrated	
External flow reading at cyclone inlet	
Partisol Temp C	
Partisol BP mmHg	
Corrected flow (20 C)	
Flow from Aethalometer display	
Flow % difference (Should be <10%)	
Comments	not operational
PUF SAMPLER	
**********	
Select Date & Time	03-05-2012 1:05 PM
Visually inspected and free of dust?	Yes
Comments	Temperature: 4.8 sampler 4.5 std Calibration R .9995 A0 -1.4899 A1 34.5931
PARTISOL SAMPLER	
**********	
Select Date & Time	03-05-2012 1:20 PM

Visually inspected and free of dust?	Yes
Water trap is empty?	Yes
Sampler Flow l/min	16.7
Sampler Temp C	4.6
Sampler BP mmHg	758
Standard Flow l/min	16.8
Standard Temp C	4.6
Standard BP mmHg	758.8
Std 15.9-17.5 l/min?	Pass
Sampler +/- 2 C of Std?	Pass
Sampler +/- 10mmHg of Std	Option 1
Comments	Pressure Calibration final sampler 759 std 758.7 Flow Calibration Initial flow offset -.0028 flow span .9577 Final flow offset -.0028 flow span .9597 flow audit 16.7 sampler 16.74 standard

ADDENDUM C: $PM_{2.5}$ LAB SHEETS

Advanced Monitoring Methods

Gravimetric Data

Lab ID	Client ID	Site	Sample Date	Particle Size	Tare Wt.(mg)	Tare Date	Tare Temp (°C)	Tare Hum.	Gross Wt.(mg)	Gross Date	Gross Temp (°C)	Gross Hum.	Net Wt.(µg)	Volume (m3)	Conc. (ug/m3)	Comments	Days past Tare*
11-T4858	FS-F20111223	Fire Station	12/23/11	PM2.5	142.177	12/13/11	21.3	31	142.289	01/16/12	20.8	33	112	24	4.66667		10
11-T4851	PB-F20111223	Pembroke	12/23/11	PM2.5	141.906	12/13/11	21.3	31	142.011	01/16/12	20.8	33	105	24	4.375		10
11-T4852	FV-F20111223	Field View	12/23/11	PM2.5	142.444	12/13/11	21.3	31	142.557	01/16/12	20.8	33	113	24	4.70833		10
11-T4853	LD-F2011-1223	Lydick	12/23/11	PM2.5	140.865	12/13/11	21.3	31	141.016	01/16/12	20.8	33	151	24	6.29167		10
11-T4845	FV-F20111229	Field View	12/29/11	PM2.5	141.727	12/13/11	21.3	31	141.800	01/16/12	20.8	33	73	24	3.04167		16
11-T4846	LD-F20111229	Lydick	12/29/11	PM2.5	142.402	12/13/11	21.3	31	142.494	01/16/12	20.8	33	92	24	3.83333		16
11-T4847	PB-F20111229	Pembroke	12/29/11	PM2.5	145.037	12/13/11	21.3	31	145.118	01/16/12	20.8	33	81	24	3.375		16
11-T4848	FS-F20111229	Fire Station	12/29/11	PM2.5	140.706	12/13/11	21.3	31	140.810	01/16/12	20.8	33	104	24	4.33333		16
11-T4842	FV-F20120104	Field View	1/4/12	PM2.5	144.737	12/13/11	21.3	31	144.901	01/16/12	20.8	33	164	24	6.83333		22
11-T4849	FS-F20120104	Fire Station	1/4/12	PM2.5	143.410	12/13/11	21.3	31	143.566	01/16/12	20.8	33	156	24	6.5		22
11-T4844	PB-F20120104	Pembroke	1/4/12	PM2.5	144.684	12/13/11	21.3	31	144.709	01/16/12	20.8	33	25	24	1.04167	did not run 24 hours	22
11-T4843	LD-F20120104	Lydick	1/4/12	PM2.5	144.933	12/13/11	21.3	31	145.096	01/16/12	20.8	33	163	24	6.79167		22
11-T4841	FV-F20120104	Field Blank	1/5/12		143.815	12/13/11	21.3	31	143.837	01/16/12	20.8	33	22	24	0.91667		23
11-T4859					143.134	12/13/11	21.3	31	143.133	01/16/12	20.8	33	-1	24	-0.0417	Lab Blank	

Analysis performed by: ***CHESTER LabNet*** ♦ 12242 SW Garden Place ♦ Tigard, OR 97223 ♦ (503) 624-2183 ♦ www.chesterlab.net

* Number of days between Tare date and Sample date.

Company Name: Advanced Monitoring Methods		
Contact: Tom Brauch	Phone: 720-581-1182	
E-Mail Address: Tom@ADVM2.com	Fax: 720-763-9595	
Report Address: 710 Cat Club Dr		
City: Castle Rock	State: CO	Zip: 80108
Billing Address: 1157 Columbus Cir		
City: Janesville	State: WI	Zip: 53545
PO #: 32-1-5	Project: RIAC	

CHESTER LabNet
12242 SW Garden Place
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Fax (503) 624-2653
cln@chesterlab.net

CHAIN-OF-CUSTODY RECORD

Page ___ of ___

1IT48-

LabNet ID	Field Sample ID	Site	Sample Date	Volume (m³)	Particle Size	Gravimetry	XRF	OC/EC	IC	ICP	Cr VI					Remarks
58	FS-F20111223	Firestation	12/23/11	2.5	X											
51	PB-F2011223	Pembroke	12/23/11	2.5	X											
52	FV-F2011223	FieldView	12/23/11	2.5	X											
53	LD-F2011-1223	Lydick	12/23/11	2.5	X											
45	FV-F2011229	FieldView	12/29/11	2.5	X											
46	LD-F2011229	Lydick	12/29/11	2.5	X											
47	PB-F2011229	Pembroke	12/29/11	2.5	X											
48	FS-F2011229	Firestation	12/29/11	2.5	X											
42	FV-F20110104	Fieldview	1/4/12	2.5	X											
49	FS-F20110104	Firestation	1/4/12	2.5	X											
44	PB-F20110104	Pembroke	1/4/12	2.5	X											Note sampled did not Run 24 hrs
43	LD-F20110104	Lydick	1/4/12	2.5	X											it ran at 6.5 m3 4

Analysis Requested

Turn Around Time
☐ Standard
☐ Rush _____
Specify Received Temp 1.4°C

Relinquished By: (Signature) Date/Time		Received By: (Signature) Date/Time	
Relinquished By: (Signature) Date/Time		Received By: (Signature) Date/Time	1/9/12 9:00

Notes:
Field ID labeling changed from last shipment
for 6.3 Hours
1IT4844

12T 0033 FV-F-20110104 Field Blank 1/5/12

Original (white) accompanies shipment, Second copy (yellow) for customer use

Advanced Monitoring Methods

Gravimetric Data

Lab ID	Client ID	Site	Sample Date	Particle Size	Tare Wt.(mg)	Tare Date	Tare Temp (°C)	Tare Hum.	Gross Wt.(mg)	Gross Date	Gross Temp (°C)	Gross Hum.	Net Wt.(µg)	Volume (m3)	Conc (ug/m3)	Comments	Days past Tare*
12-T22					144.838	12/26/11	21.5	35	144.828	02/01/12	21.4	36	-10	24	-0.4167	Lab Blank	
12-T34	LD-F20120110	Lydick	1/10/12	PM2.5	144.110	12/26/11	21.5	35	144.442	02/01/12	21.4	36	332	24	13.8333		15
12-T31	PB-F20120110	Pembroke	1/10/12	PM2.5	143.006	12/26/11	21.5	35	143.366	02/01/12	21.4	36	360	24	15		15
12-T29	FS-F20120110	Fire Station	1/10/12	PM2.5	143.057	12/26/11	21.5	35	143.371	02/01/12	21.4	36	314	24	13.0833		15
12-T30	FV-F20120110	Fieldview	1/10/12	PM2.5	142.156	12/26/11	21.5	35	142.466	02/01/12	21.4	36	310	24	12.9167		15
12-T26	LD-F20120116	Lydick	1/16/12	PM2.5	143.426	12/26/11	21.5	35	143.567	02/01/12	21.4	36	141	24	5.875		21
12-T23	PB-F20120116	Pembroke	1/16/12	PM2.5	144.829	12/26/11	21.5	35	144.965	02/01/12	21.4	36	136	24	5.66667		21
12-T25	FS-F20120116	Fire Station	1/16/12	PM2.5	143.800	12/26/11	21.5	35	143.945	02/01/12	21.4	36	145	24	6.04167		21
12-T24	FV-F20120116	Fieldview	1/16/12	PM2.5	142.220	12/26/11	21.5	35	142.361	02/01/12	21.4	36	141	24	5.875		21
11-T4850	LD-F20120122	Lydick	1/22/12	PM2.5	140.687	12/13/11	21.3	31	140.904	02/01/12	21.4	36	217	24	9.04167		40
12-T35	PB-F20120122	Pembroke	1/22/12	PM2.5	144.769	12/26/11	21.5	35	144.956	02/01/12	21.4	36	187	24	7.79167		27
12-T32	FS-F20120122	Fire Station	1/22/12	PM2.5	139.686	12/26/11	21.5	35	139.874	02/01/12	21.4	36	188	24	7.83333		27
12-T27	FV-F20120122	Fieldview	1/22/12	PM2.5	144.256	12/26/11	21.5	35	144.448	02/01/12	21.4	36	192	24	8		27
12-T28	Field Blank	Lydick	1/17/12	PM2.5	140.582	12/26/11	21.5	35	140.599	02/01/12	21.4	36	17	24	0.70833	Field Blank	22

Analysis performed by: ***CHESTER LabNet*** ♦ 12242 SW Garden Place ♦ Tigard, OR 97223 ♦ (503) 624-2183 ♦ www.chesterlab.net

* Number of days between Tare date and Sample date.

FILE NAME: AMM 003.xls.xls

Company Name	Advanced Monitoring Methods
Contact	Tom Branch
Phone	720-581-1182
E-Mail Address	Tom@AAVM2.com
Fax	720-763-9595
Report Address	710 Golf Club Dr.
City	Castle Rock
State	CO
Zip	80108
Billing Address	1157 Columbus Circle
City	Janesville
State	WI
Zip	53545
PO #	32-1-5
Project	RIAC

CHESTER LabNet
12242 SW Garden Place
Tigard, OR 97223
(503) 624-2183
Fax (503) 624-2653
cln@chesterlab.net

CHAIN-OF-CUSTODY RECORD

12T00 –

LabNet ID	Field Sample ID	Site	Sample Date	Volume (m^3)	Particle Size	Gravimetry	XRF	OC/EC	IC	ICP	Cr VI					Remarks
34	LD-F20120110	Lydick	1/10/12	2.5	X	X										
31	PB-F20120110	Pembroke	1/10/12	2.5	X	X										
29	FS-F20120110	FireStation	1/10/12	2.5	X	X										
30	FV-F20120110	Fieldview	1/10/12	2.5	X	X										
26	LD-F20120116	Lydick	1/16/12	2.5	X	X										
23	PB-F20120116	Pembroke	1/16/12	2.5	X	X										
25	FS-F20120116	FireStation	1/16/12	2.5	X	X										
24	FV-F20120116	FieldView	1/16/12	2.5	X	X										
11T4850	LD-F20120122	Lydick	1/22/12	2.5	X	X										
12T0035	PB-F20120122	Pembroke	1/22/12	2.5	X	X										
12T0032	FS-F20120122	FireStation	1/22/12	2.5	X	X										
12T0027	FV-F20120122	FieldView	1/22/12	2.5	X	X										

Analysis Requested

Turn Around Time
☐ Standard
☐ Rush _____ Specify

Relinquished By: (Signature) Date/Time	Received By: (Signature) Date/Time
Relinquished By: (Signature) Date/Time	Received By: (Signature) Date/Time
Xavier Ernst 1/30/12	1/31/12 9:15

Notes: 12T0028 - Field Blank 1/17/12 @ Lydick because it would not pass the leak test.

Original (white) accompanies shipment, Second copy (yellow) for customer use

Advanced Monitoring Methods

Gravimetric Data

Lab ID	Client ID	Site	Sample Date	Particle Size	Tare Wt.(mg)	Tare Date	Tare Temp (°C)	Tare Hum.	Gross Wt.(mg)	Gross Date	Gross Temp (°C)	Gross Hum.	Net Wt.(µg)	Volume (m3)	Conc (ug/m3)	Comments	Days past Tare*
12-T287					139.910	01/17/12	20.7	36	139.909	02/22/12	20.8	36	-1	24	-0.0417	Lab Blank	
12-T290	FV-F-20120128	Fieldview	1/28/12	PM2.5	145.801	01/17/12	20.7	36	145.913	02/22/12	20.8	36	112	24	4.66667		11
12-T291	LD-F-20120128	Lydick	1/28/12	PM2.5	143.789	01/17/12	20.7	36	143.898	02/22/12	20.8	36	109	24	4.54167		11
12-T288	PB-F-20120128	Pembroke	1/28/12	PM2.5	141.875	01/17/12	20.7	36	141.989	02/22/12	20.8	36	114	24	4.75		11
12-T289	FS-F20120128	Fire Staion	1/28/12	PM2.5	143.449	01/17/12	20.7	36	143.559	02/22/12	20.8	36	110	24	4.58333		11
12-T295	PB-F-20120203	Pembroke	2/3/12	PM2.5	144.744	01/17/12	20.7	36	144.850	02/22/12	20.8	36	106	24	4.41667		17
12-T294	LD-F-20120203	Lydick	2/3/12	PM2.5	141.934	01/17/12	20.7	36	142.065	02/22/12	20.8	36	131	24	5.45833		17
12-T293	FV-F-20120203	Fieldview	2/3/12	PM2.5	144.711	01/17/12	20.7	36	144.839	02/22/12	20.8	36	128	24	5.33333		17
12-T296	FS-F-20120203	Fire Staion	2/3/12	PM2.5	144.386	01/17/12	20.7	36	144.522	02/22/12	20.8	36	136	24	5.66667		17
12-T299	PB-F-20120209	Pembroke	2/9/12	PM2.5	141.701	01/17/12	20.7	36	141.872	02/22/12	20.8	36	171	24	7.125		23
12-T297	FV-F-20120209	Fieldview	2/9/12	PM2.5	142.890	01/17/12	20.7	36	143.138	02/22/12	20.8	36	248	24	10.3333		23
12-T298	FS-F-20120209	Fire Staion	2/9/12	PM2.5	144.956	01/17/12	20.7	36	145.172	02/22/12	20.8	36	216	24	9		23
12-T300	LD-F20120209	Lydick	2/9/12	PM2.5	140.878	01/17/12	20.7	36	141.110	02/22/12	20.8	36	232	24	9.66667		23
12-T292	Field Blank	Lydick	1/23/12	PM2.5	145.633	01/17/12	20.7	36	145.641	02/22/12	20.8	36	8	24	0.33333	Field Blank	6

Analysis performed by: ***CHESTER LabNet*** ♦ 12242 SW Garden Place ♦ Tigard, OR 97223 ♦ (503) 624-2183 ♦ www.chesterlab.net

* Number of days between Tare date and Sample date.

Company Name	Advanced Monitoring Methods	
Contact	Tom Bauch	Phone 720-581-1182
E-Mail Address	tom@advm2.com	Fax 720-763-9595
Report Address	710 Golf Club Dr.	
City	Castlerock	State CO Zip 80108
Billing Address	1157 Columbus Circle	
City	Janesville	State WI Zip 53545
PO #	32-1-5	Project RIAC

CHESTER LabNet
12242 SW Garden Place
Tigard, OR 97223
(503) 624-2183
Fax (503) 624-2653
cln@chesterlab.net

CHAIN-OF-CUSTODY RECORD

12T02-

LabNet ID	Field Sample ID	Site	Sample Date	Volume (m³)	Particle Size	Gravimetry	XRF	OC/EC	IC	ICP	Cr VI					Remarks
90	FV-F-20120128	Fieldview	1/28/12		2.5	X										
91	LD-F-20120128	Lydick	1/28/12													
88	PB-F-20120128	Pembroke	1/28/12													
89	FS F-20120128	Firestation	1/28/12													
95	PB-F-20120203	Pembroke	2/3/12	18.4m³												Sample only ran 18.24hrs and volume only 18.4 m³
94	LD-F-20120203	Lydick	2/3/12													
93	FV-F-20120203	Fieldview	2/3/12													
96	FS-F-20120203	Firestation	2/3/12													
99	PB-F-20120209	Pembroke	2/9/12	21.2m³												Sample only ran 21.11 hrs and volume only 21.2 m³
97	FV-F-20120209	Fieldview	2/9/12													
98	FS-F-20120209	Firestation	2/9/12													
12T0300	LD-F-20120209	Lydick	2/9/12													

Analysis Requested

Turn Around Time
☐ Standard
☐ Rush _____ Specify
Received @ -0.9°C

Relinquished By: (Signature) Date/Time	Dana Ernst 2/15/12 9:02	Received By: (Signature) Date/Time
Relinquished By: (Signature) Date/Time		Received By: (Signature) Date/Time Lee Wheel 9:50 2/16/12

Notes: Field Blank is: 12T0292 Lydick 1/23/12 (Failed leak check) test

Original (white) accompanies shipment, Second copy (yellow) for customer use

Partisol = F

Advanced Monitoring Methods

Gravimetric Data

Lab ID	Client ID	Site	Sample Date	Particle Size	Tare Wt.(mg)	Tare Date	Tare Temp (°C)	Tare Hum.	Gross Wt.(mg)	Gross Date	Gross Temp (°C)	Gross Hum.	Net Wt.(µg)	Volume (m3)	Concentration (ug/m3)	Comments	Days past Tare*
11-T4747	Field Blank	Lydick	2/22/12	PM2.5	142.820	02/07/12	21.1	33	142.819	03/08/12	21.1	33	-1				15
12-T593	FV-F20120215	Fieldview	2/15/12	PM2.5	140.452	02/07/12	21.1	33	141.065	03/08/12	21.1	33	613	24.0	25.54		8
11-T5079	FS-F-20120215	Fire Station	2/15/12	PM2.5	142.924	02/07/12	21.1	33	143.436	03/08/12	21.1	33	512	24.0	21.33		8
11-T5080	LD-F-20120215	Lydick	2/15/12	PM2.5	146.499	02/07/12	21.1	33	147.037	03/08/12	21.1	33	538	24.1	22.32		8
12-T592	PB-F20120215	Pembroke	2/15/12	PM2.5	142.712	02/07/12	21.1	33	143.271	03/08/12	21.1	33	559	24.0	23.29		8
11-T4758	FV-F-20120221	Fieldview	2/21/12	PM2.5	140.874	02/07/12	21.1	33	141.029	03/08/12	21.1	33	155	24.0	6.46		14
11-T4757	FS-F-20120221	Fire Station	2/21/12	PM2.5	142.535	02/07/12	21.1	33	142.664	03/08/12	21.1	33	129	24.0	5.38		14
11-T5078	LD-F-20120221	Lydick	2/21/12	PM2.5	141.617	02/07/12	21.1	33	141.784	03/08/12	21.1	33	167	24.1	6.93		14
11-T4756	PB-F-20120221	Pembroke	2/21/12	PM2.5	142.058	02/07/12	21.1	33	142.187	03/08/12	21.1	33	129	24.0	5.38		14
12-T595	FV-F-20120227	Fieldview	2/27/12	PM2.5	144.746	02/07/12	21.1	33	145.064	03/08/12	21.1	33	318	24.0	13.25		20
12-T596	FS-F-20120227	Fire Station	2/27/12	PM2.5	141.312	02/07/12	21.1	33	141.602	03/08/12	21.1	33	290	24.0	12.08		20
11-T4755	LD-F-20120227	Lydick	2/27/12	PM2.5	141.155	02/07/12	21.1	33	141.416	03/08/12	21.1	33	261	24.1	10.83		20
12-T594	PB-F-20120227	Pembroke	2/27/12	PM2.5	141.225	02/07/12	21.1	33	141.516	03/08/12	21.1	33	291	24.0	12.13		20
11-T4744	Lab Blank				142.560	02/07/12	21.1	33	142.552	03/08/12	21.1	33	-8				

Analysis performed by: ***CHESTER LabNet*** ♦ 12242 SW Garden Place ♦ Tigard, OR 97223 ♦ (503) 624-2183 ♦ www.chesterlab.net

* Number of days between Tare date and Sample date.

Company Name	Advanced Monitoring Methods
Contact	Tom Branch
Phone	720-581-1182
E-Mail Address	Tom@ADVM2.com
Fax	720-763-9595
Report Address	710 Golf Club Dr.
City	Castle Rock
State	CO
Zip	80108
Billing Address	1157 Columbus Circle
City	Janesville
State	WI
Zip	53545
PO #	324-5
Project	RIAC

CHESTER LabNet
12242 SW Garden Place
Tigard, OR 97223
(503) 624-2183
Fax (503) 624-2653
cln@chesterlab.net

CHAIN-OF-CUSTODY RECORD

12TO

LabNet ID	Field Sample ID	Site	Sample Date	Volume (m³)	Particle Size	Gravimetry	XRF	OC/EC	IC	ICP	Cr VI					Remarks
592	PB-F-20120215	Pembroke	2/15/12	24	2.5	X										
593	FV-F-20120215	Fieldview	2/15/12	24												
11T5 079	FS-F-20120215	FireStation	2/15/12	24												
11T5 080	LD-F-20120215	Lydick	2/15/12	24.1												
11T5 078	LD-F-20120221	Lydick	2/21/12	24.1												Vol = 24.1
11T4 757	FS-F-20120221	FireStation	2/21/12	24												Vol = 24.1
11T4 758	FV-F-20120221	Fieldview	2/21/12	24												
11T4 756	PB-F-20120221	Pembroke	2/21/12	24												
12TO 596	FS-F-20120227	FireStation	2/27/12	24												12TO596
12TO 595	FV-F-20120227	Fieldview	2/27/12	24												
12TO 594	PB-F-20120227	Pembroke	2/27/12	24												
11T4 755	LD-F-20120227	Lydick	2/27/12	24.1												Vol = 24.1

Analysis Requested

Turn Around Time
☐ Standard
☐ Rush _____ Specify

Relinquished By: (Signature)	Date/Time: 3/5/12	Received By: (Signature) Date/Time
Relinquished By: (Signature)	Date/Time: 9:00	Received By: (Signature) Date/Time: 3/6/12 10:10

Notes: Field blank is 11T4747
Received @ -0.6°C
Lydick 2/21/12

Original (white) accompanies shipment, Second copy (yellow) for customer use

Advanced Monitoring Methods

Gravimetric Data

Lab ID	Client ID	Site	Sample Date	Particle Size	Tare Wt.(mg)	Tare Date	Tare Temp (°C)	Tare Hum.	Gross Wt.(mg)	Gross Date	Gross Temp (°C)	Gross Hum.	Net Wt.(µg)	Volume (m3)	Concen-tration (ug/m3)	Comments	Days past Tare*
12-T567	FV-F20120304	Fieldview	3/4/12	PM2.5	143.544	02/21/12	20.8	36	143.720	03/23/12	21.1	34	176	24.0	7.33		12
12-T566	FS-F-20120304	Fire Station	3/4/12	PM2.5	142.950	02/21/12	20.8	36	143.095	03/23/12	21.1	34	145	24.0	6.04		12
12-T565	LD-F-20120304	Lydick	3/4/12	PM2.5	145.131	02/21/12	20.8	36	145.332	03/23/12	21.1	34	201	24.0	8.38		12
12-T564	PB-F-20120304	Pembroke	3/4/12	PM2.5	143.956	02/21/12	20.8	36	144.132	03/23/12	21.1	34	176	24.0	7.33		12
12-T570	FV-F-20120310	Fieldview	3/10/12	PM2.5	143.984	02/21/12	20.8	36	144.154	03/23/12	21.1	34	170	24.0	7.08		18
12-T572	FS-F-20120310	Fire Station	3/10/12	PM2.5	142.388	02/21/12	20.8	36	142.528	03/23/12	21.1	34	140	24.0	5.83		18
12-T568	LD-F-20120310	Lydick	3/10/12	PM2.5	144.442	02/21/12	20.8	36	144.575	03/23/12	21.1	34	133	24.1	5.52		18
12-T569	PB-F-20120310	Pembroke	3/10/12	PM2.5	146.634	02/21/12	20.8	36	146.784	03/23/12	21.1	34	150	24.0	6.25	fly on filter when sampler opened	18
12-T576	FV-F-20120316	Fieldview	3/16/12	PM2.5	143.786	02/21/12	20.8	36	143.969	03/23/12	21.1	34	183	24.0	7.63		24
12-T571	FS-F-20120316	Fire Station	3/16/12	PM2.5	145.164	02/21/12	20.8	36	145.337	03/23/12	21.1	34	173	24.0	7.21		24
12-T575	LD-F-20120316	Lydick	3/16/12	PM2.5	146.200	02/21/12	20.8	36	146.364	03/23/12	21.1	34	164	24.1	6.80		24
12-T574	PB-F-20120316	Pembroke	3/16/12	PM2.5	143.132	02/21/12	20.8	36	143.411	03/23/12	21.1	34	279	24.0	11.63	Black specks on filter	24
12-T573	FV-F-20120304	Fieldview	3/4/12	PM2.5	147.174	02/21/12	20.8	36	147.173	03/23/12	21.1	34	-1			Field Blank	12
12-T563	Lab Blank				143.665	02/21/12	20.8	36	143.667	03/23/12	21.1	34	2				

Analysis performed by: ***CHESTER LabNet*** ♦ 12242 SW Garden Place ♦ Tigard, OR 97223 ♦ (503) 624-2183 ♦ www.chesterlab.net

* Number of days between Tare date and Sample date.

FILE NAME: AMM 006.xls.xls

Company Name		
Advanced Monitoring Methods		
Contact: Tom Brauch		Phone: (720) 581-1182
E-Mail Address: Tom@advm2.com		Fax:
Report Address: 710 Golf Club Dr		
City: Castle Rock	State: CO	Zip: 80108
Billing Address: 1157 Columbus Circle		
City: Janesville	State: WI	Zip: 53545
PO # 32-1-5	Project RIAC	

CHESTER LabNet
12242 SW Garden Place
Tigard, OR 97223
(503) 624-2183
Fax (503) 624-2653
cln@chesterlab.net

CHAIN-OF-CUSTODY RECORD

Turn Around Time
☐ Standard
☐ Rush _____ Specify
Received Temperature -3.0 °C

LabNet ID	Field Sample ID	Site	Sample Date	Volume (m³)	Particle Size	Gravimetry	Analysis Requested	Remarks
12T0567	FV-F-20120304	Fieldview	3/4/12	24	2.5	X		
12T0566	FS-F-20120304	FireStation	3/4/12	24				
12T0564	PB-F-20120304	Pembroke	3/4/12	24				
12T0565	LD-F-20120304	Lydick	3/4/12	24				
12T0570	FV-F-20120310	Fieldview	3/10/12	24				
12T0572	FS-F-20120310	Firestation	3/10/12	24				
12T0568	LD-F-20120310	Lydick	3/10/12	24.1				Vol 24.1
12T0569	PB-F-20120310	Pembroke	3/10/12	24				"Fly" on filter when Sampler open
12T0576	FV-F-20120316	Fieldview	3/16/12	24				
12T0571	FS-F-20120316	Firestation	3/16/12	24				
12T0574	PB-F-20120316	Pembroke	3/16/12	24				Black specks on filter
12T0575	LD-F-20120316	Lydick	3/16/12	24.1				Vol 24.1
12T0573	FV-F-20120304	Fieldview	3/4/12	X				Field Blank

Relinquished By: (Signature) Date/Time	Received By: (Signature) Date/Time
Dana Ernst 3/20/12 1:30	
Relinquished By: (Signature) Date/Time	Received By: (Signature) Date/Time
	3/22/12 9:00

Notes: 3/10/12 Pembroke Fly on filter, small black pieces of what I assume is fly.

Original (white) accompanies shipment, second copy (yellow) for customer use

Advanced Monitoring Methods											
3/15/2012	Install Partisol Filters which failed on 3/11/12 because we decided to go with Blue filters and they were not available yet										
Station	Filter No.	Flow	Pass/Fail	Leak	Pass/Fail						
Pembroke	12T0574	16.7	Pass	117	Pass						
Lydick	12T0575	16.7	Pass	127	Fail						
Fire Station	12T0571	16.7	Pass	127	Fail						
Field View	12T0576	16.7	Pass	42	Pass						
3/16/2012	Sample Event for above filters										
Pembroke	12T0574	16.7	Pass	128	fail						
Lydick	12T0575	16.7	Pass	128	fail						
Fire Station	12T0571	16.7	Pass	128	fail						
Field View	12T0576	16.7	Pass	37	pass						

Chester: FYI partisol filters which failed leak tests. Call Tom w/?

Advanced Monitoring Methods

Gravimetric Data

Lab ID	Client ID	Site	Sample Date	Particle Size	Tare Wt.(mg)	Tare Date	Tare Temp (°C)	Tare Hum.	Gross Wt.(mg)	Gross Date	Gross Temp (°C)	Gross Hum.	Net Wt.(µg)	Volume (m3)	Concen-tration (ug/m3)	Comments	Days past Tare*
12-T883	FV-F-20120322	Field View	3/22/12	PM2.5	144.267	03/13/12	20.8	35	144.424	04/11/12	21.1	35	157	24.0	6.54		9
12-T884	FS-F-20120322	FireStation	3/22/12	PM2.5	141.826	03/13/12	20.8	35	141.998	04/11/12	21.1	35	172	24.0	7.17		9
12-T874	PB-F-20120322	Pembroke	3/22/12	PM2.5	144.427	03/13/12	20.8	35	144.608	04/11/12	21.1	35	181	24.0	7.54	black flecks on sample	9
12-T885	LD-F-20120322	Lydick	3/22/12	PM2.5	141.446	03/13/12	20.8	35	141.610	04/11/12	21.1	35	164	24.1	6.80	Volume ran 24.1	9
12-T876	PB-F-20120328	Pembroke	3/28/12	PM2.5	144.124	03/13/12	20.8	35	144.364	04/11/12	21.1	35	240	24.0	10.0		15
12-T877	FS-F-20120328	FireStation	3/28/12	PM2.5	141.360	03/13/12	20.8	35	141.601	04/11/12	21.1	35	241	24.0	10.0		15
12-T875	LD-F-20120328	Lydick	3/28/12	PM2.5	144.432	03/13/12	20.8	35	144.682	04/11/12	21.1	35	250	24.1	10.4	Volume ran 24.1	15
12-T873	FV-F-20120328	Field View	3/28/12	PM2.5	140.734	03/13/12	20.8	35	140.989	04/11/12	21.1	35	255	24.0	10.6		15
12-T881	Field Blank	Lydick	3/28/12	PM2.5	144.158	03/13/12	20.8	35	144.162	04/11/12	21.1	35	4				15
12-T882	PB-F-20120403	Pembroke	4/3/12	PM2.5	140.244	03/13/12	20.8	35	140.321	04/11/12	21.1	35	77	24.0	3.21		21
12-T878	LD-F-20120403	Lydick	4/3/12	PM2.5	142.826	03/13/12	20.8	35	143.018	04/11/12	21.1	35	192	24.1	7.97		21
12-T879	FS-F-20120403	FireStation	4/3/12	PM2.5	141.888	03/13/12	20.8	35	142.005	04/11/12	21.1	35	117	24.0	4.88	Ran 24.1 and fly on filter	21
12-T880	FV-F-20120403	Field View	4/3/12	PM2.5	142.392	03/13/12	20.8	35	142.460	04/11/12	21.1	35	68	24.0	2.83		
12-T886	Lab Blank				142.703	03/13/12	20.8	35	142.700	04/11/12	21.1	35	-3				

Analysis performed by: ***CHESTER LabNet*** ♦ 12242 SW Garden Place ♦ Tigard, OR 97223 ♦ (503) 624-2183 ♦ www.chesterlab.net

* Number of days between Tare date and Sample date.

FILE NAME: AMM 007.xls.xls

Company Name		
Advanced Monitoring Methods		
Contact: Tom Brauch		Phone: (720) 581-1182
E-Mail Address: Tom@advm2.com		Fax:
Report Address: 710 Golf Club Dr		
City: Castle Rock	State: CO	Zip: 80108
Billing Address: 1157 Columbus Circle		
City: Janesville	State: WI	Zip: 53545
PO # 32-1-5	Project RIAC	

CHESTER LabNet
12242 SW Garden Place
Tigard, OR 97223
(503) 624-2183
Fax (503) 624-2653
cln@chesterlab.net

CHAIN-OF-CUSTODY RECORD

Turn Around Time
☐ Standard
☐ Rush _____ Specify
Received Temperature 0.6°C

LabNet ID	Field Sample ID	Site	Sample Date	Volume (m^3)	Particle Size	Analysis Requested: Gravimetry									Remarks
12T0883	FV-F-20120322	Field View	3/22/12	24	2.5	X									
12T0884	FS-F-20120322	FireStation	3/22/12	24	2.5	X									
12T0874	PB-F-20120322	Pembroke	3/22/12	24	2.5	X									Black flecks on sample filter
12T0885	LD-F-20120322	Lydick	3/22/12	24.1	2.5	X									Volume ran at 24.1
12T0876	PB-F-20120328	Pembroke	3/28/12	24	2.5	X									
12T0877	FS-F-20120328	Fire Station	3/28/12	24	2.5	X									
12T0875	LD-F-20120328	Lydick	3/28/12	24.1	2.5	X									Volume was 24.1 m3
12T0873	FV-F-20120328	Field View	3/28/12	24	2.5	X									
12T0881	Field Blank	Lydick	3/28/12	X	2.5	x									Field Blank
12T0882	PB-F-20120403	Pembroke	4/3/12	24	2.5	X									
12T0871	LD-F-20120403	Lydick	4/3/12	24.1	2.5	X									Volume ran at 24.1 and fly on filter (live)
12T0879	FS-F-20120403	FireStation	4/3/12	24	2.5	X									
12T0880	FV-F-20120403	FieldView	4/3/12	24	2.5	x									

878

Relinquished By: (Signature) Date/Time	Received By: (Signature) Date/Time	Notes:
Laura Bendt 4/9/12 5:00		
Relinquished By: (Signature) Date/Time	Received By: (Signature) Date/Time	
	Lisa Bell 4/10/12 9:30	

886

Original (white) accompanies shipment, second copy (yellow) for customer use

ADDENDUM D: TO-13 LAB SHEETS

ANALYTICAL REPORT

Report Date: January 24, 2012

Tom Brauch
Advanced Monitoring Methods, LLC
710 Golf Club Dr.
Castle Rock, CO 80108-8359

Phone: (720) 897-7792 x 100
Fax: (303) 663-2883
E-mail: tom@advm2.com

Workorder: **34-1201805**
Project ID: RIAC 011812
Purchase Order: RIAC

Client Sample ID	Lab ID	Collect Date	Receive Date	Sampling Site
LD-P-120116	1201805001	01/17/12	01/18/12	RIAC
PB-P-120116	1201805002	01/17/12	01/18/12	RIAC
FS-P-120116	1201805003	01/17/12	01/18/12	RIAC
FV-P-120116	1201805004	01/17/12	01/18/12	RIAC

ANALYTICAL REPORT

Workorder: 34-1201805
Client: Advanced Monitoring Methods, LLC
Project Manager: Paul E. Pope

Analytical Results

Sample ID: **LD-P-120116** | Sampling Site: RIAC | Collected: 01/17/2012
Lab ID: 1201805001 | Media: PUF Tube | Received: 01/18/2012
Matrix: Air | Sampling Parameter: NA

Analysis Method - EPA TO-13

Preparation:	EPA 3540 Soxhlet Ext.	**Weight/Volume**	**Analysis:**	EPA TO-13, Air	**Instrument ID:** 5975-H
Batch:	ENVX/14267 (HBN: 79619)	**Initial:** 1 filter	**Batch:**	ESVO/3438 (HBN: 79840)	**Percent Solid:** NA
Prepared:	01/18/2012	**Final:** 1 mL	**Analyzed:**	01/23/2012 17:02	**Report Basis:** Wet

Analyte	ug/sample	ug/m³	MDL	RL (ug/sample)	Dilution	Qual.
Naphthalene	7.4	NA	NA	5.0	1	

Sample ID: **PB-P-120116** | Sampling Site: RIAC | Collected: 01/17/2012
Lab ID: 1201805002 | Media: PUF Tube | Received: 01/18/2012
Matrix: Air | Sampling Parameter: NA

Analysis Method - EPA TO-13

Preparation:	EPA 3540 Soxhlet Ext.	**Weight/Volume**	**Analysis:**	EPA TO-13, Air	**Instrument ID:** 5975-H
Batch:	ENVX/14267 (HBN: 79619)	**Initial:** 1 filter	**Batch:**	ESVO/3438 (HBN: 79840)	**Percent Solid:** NA
Prepared:	01/18/2012	**Final:** 1 mL	**Analyzed:**	01/23/2012 17:34	**Report Basis:** Wet

Analyte	ug/sample	ug/m³	MDL	RL (ug/sample)	Dilution	Qual.
Naphthalene	9.4	NA	NA	5.0	1	

Sample ID: **FS-P-120116** | Sampling Site: RIAC | Collected: 01/17/2012
Lab ID: 1201805003 | Media: PUF Tube | Received: 01/18/2012
Matrix: Air | Sampling Parameter: NA

Analysis Method - EPA TO-13

Preparation:	EPA 3540 Soxhlet Ext.	**Weight/Volume**	**Analysis:**	EPA TO-13, Air	**Instrument ID:** 5975-H
Batch:	ENVX/14267 (HBN: 79619)	**Initial:** 1 filter	**Batch:**	ESVO/3438 (HBN: 79840)	**Percent Solid:** NA
Prepared:	01/18/2012	**Final:** 1 mL	**Analyzed:**	01/23/2012 18:06	**Report Basis:** Wet

Analyte	ug/sample	ug/m³	MDL	RL (ug/sample)	Dilution	Qual.
Naphthalene	12	NA	NA	5.0	1	

Sample ID: **FV-P-120116** | Sampling Site: RIAC | Collected: 01/17/2012
Lab ID: 1201805004 | Media: PUF Tube | Received: 01/18/2012
Matrix: Air | Sampling Parameter: NA

Analysis Method - EPA TO-13

Preparation:	EPA 3540 Soxhlet Ext.	**Weight/Volume**	**Analysis:**	EPA TO-13, Air	**Instrument ID:** 5975-H
Batch:	ENVX/14267 (HBN: 79619)	**Initial:** 1 filter	**Batch:**	ESVO/3438 (HBN: 79840)	**Percent Solid:** NA
Prepared:	01/18/2012	**Final:** 1 mL	**Analyzed:**	01/23/2012 18:38	**Report Basis:** Wet

Analyte	ug/sample	ug/m³	MDL	RL (ug/sample)	Dilution	Qual.
Naphthalene	10	NA	NA	5.0	1	

ANALYTICAL REPORT

Workorder: 34-1201805
Client: Advanced Monitoring Methods, LLC
Project Manager: Paul E. Pope

Report Authorization

Method	Analyst	Peer Review
EPA TO-13	Reed A. Hendricks	Matt Garvin

Laboratory Contact Information

ALS Environmental
960 W Levoy Drive
Salt Lake City, Utah 84123

Phone: (801) 266-7700
Email: alslt.lab@ALSGlobal.com
Web: www.alsslc.com

General Lab Comments

The results provided in this report relate only to the items tested.
Samples were received in acceptable condition unless otherwise noted.
Samples have not been blank corrected unless otherwise noted.

ALS provides professional analytical services for all samples submitted. ALS is not in a position to interpret the data and assumes no responsibility for the quality of the samples submitted.

All quality control samples processed with the samples in this report yielded acceptable results unless otherwise noted.

ALS is accredited for specific fields of testing (scopes) in the following testing sectors. The quality system implemented at ALS conforms to accreditation requirements and is applied to all analytical testing performed by ALS. The following table lists testing sector, accreditation body, accreditation number and website. Please contact these accrediting bodies or your ALS project manager for the current scope of accreditation that applies to your analytical testing.

Testing Sector	Accreditation Body (Standard)	Certificate Number	Website
Environmental	ACLASS (DoD ELAP)	AT-1421	http://www.aclasscorp.com
	Utah (NELAC)	DATA1	http://health.utah.gov/lab/labimp/
	Nevada	UT00009	http://ndep.nv.gov/bsdw/labservice.htm
	Oklahoma	UT00009	http://www.deq.state.ok.us/CSDnew/
	Iowa	IA# 376	http://www.iowadnr.gov/InsideDNR/RegulatoryWater.aspx
	Florida (TNI)	E871067	http://www.dep.state.fl.us/labs/bars/sas/qa/
	Texas (TNI)	T104704456-11-1	http://www.tceq.texas.gov/field/qa/lab_accred_certif.html
Industrial Hygiene	AIHA (ISO 17025 & AIHA IHLAP/ELLAP)	101574	http://www.aihaaccreditedlabs.org
Lead Testing:			
CPSC	ACLASS (ISO 17025, CPSC)	AT-1421	http://www.aclasscorp.com
Soil, Dust, Paint ,Air	AIHA (ISO 17025, AIHA ELLAP and NLLAP)	101574	http://www.aihaaccreditedlabs.org
Dietary Supplements	ACLASS (ISO 17025)	AT-1421	http://www.aclasscorp.com

ANALYTICAL REPORT

Workorder: 34-1201805
Client: Advanced Monitoring Methods, LLC
Project Manager: Paul E. Pope

Result Symbol Definitions

MDL = Method Detection Limit, a statistical estimate of method/media/instrument sensitivity.
RL = Reporting Limit, a verified value of method/media/instrument sensitivity.
CRDL = Contract Required Detection Limit
Reg. Limit = Regulatory Limit.
ND = Not Detected, testing result not detected above the MDL or RL.
< This testing result is less than the numerical value.
** No result could be reported, see sample comments for details.

Qualifier Symbol Definitions

U = Qualifier indicates that the analyte was not detected above the MDL.
J = Qualifier Indicates that the analyte value is between the MDL and the RL. It is also used to indicate an estimated value for tentatively identified compounds in mass spectrometry where a 1:1 response is assumed.
B = Qualifier indicates that the analyte was detected in the blank.
E = Qualifier indicates that the analyte result exceeds calibration range.
P = Qualifier indicates that the RPD between the two columns is greater than 40%.

Quality Control Sample
Batch Report

Analysis Information

Workorder: 1201805

Limits: Historical/Performance
Basis: ALS Laboratory Group

Preparation: EPA 3540 Soxhlet Ext.
Batch: ENVX/14267 (HBN: 79619)
Prepared By: Lyle Edwards

Analysis: EPA TO-13
Batch: ESVO/3438 (HBN: 79840)
Analyzed By: Reed A. Hendricks

Blank

MB: 255308
Analyzed: 01/23/2012 13:16
Units: ug/sample

Analyte	Result	RL
Naphthalene	ND	5

Laboratory Control Sample - Laboratory Control Sample Duplicate

LCS: 255309
Analyzed: 01/23/2012 15:25
Units: ug/sample

LCSD: 255310
Analyzed: 01/23/2012 15:58

Analyte	Result	Target	% Recovery	QC Limits		Result	RPD	QC Limits	
Naphthalene	19.7	40	49.2	40.7	96.7	22.4	12.8	0	36

Surrogate Recoveries

Surrogate	2-Fluorophenol			2-Fluorobiphenyl			Phenol-d5		
QC Limits	0	121		35.1	113.6		0	145	
Units	ug/sample			ug/sample			ug/sample		
Lab ID	Result	Target	% Recovery	Result	Target	% Recovery	Result	Target	% Recovery
255308-MB	54.8	50	110	45.8	50	91.5	41.6	50	83.3
255309-LCS	36.5	50	73.1	35.2	50	70.4	34.2	50	68.5
255310-LCSD	36.5	50	73	36.4	50	72.9	35	50	70
1201805001	30.5	50	61.1	27.4	50	54.8	26.5	50	53.1
1201805002	38.4	50	76.9	35.5	50	71	32.7	50	65.4
1201805003	41.5	50	82.9	38.2	50	76.3	36.6	50	73.2
1201805004	36.2	50	72.4	33.3	50	66.6	32.9	50	65.8

Surrogate	2,4,6-Tribromophenol			Nitrobenzene-d5			Terphenyl-d14		
QC Limits	12.1	139.9		22	130.3		16.2	143.5	
Units	ug/sample			ug/sample			ug/sample		
Lab ID	Result	Target	% Recovery	Result	Target	% Recovery	Result	Target	% Recovery
255308-MB	32.5	50	64.9	26.6	50	53.1	50.8	50	102
255309-LCS	42.7	50	85.3	27.4	50	54.7	44.9	50	89.7
255310-LCSD	41.1	50	82.1	28.9	50	57.9	41.8	50	83.6
1201805001	31.5	50	63	23	50	46.1	28.5	50	57
1201805002	37.8	50	75.6	29.9	50	59.7	37.4	50	74.8
1201805003	38.8	50	77.6	32.5	50	65.1	38.1	50	76.1
1201805004	39.2	50	78.3	28	50	56	38	50	75.9

Comments

None

Symbols and Definitions

* - See Comments section for more information
▲ - Sample result is greater than 4 times the spike added.

RPD - Relative % Difference (Spike / Spike Duplicate)
ND - Not Detected
QC results are not adjusted for moisture correction, where applicable.

Quality Control Sample
Batch Report

Analysis Information

Workorder: **1201805**

Limits:	Historical/Performance	**Preparation:**	EPA 3540 Soxhlet Ext.	**Analysis:**	EPA TO-13
Basis:	ALS Laboratory Group	**Batch:**	ENVX/14267 (HBN: 79619)	**Batch:**	ESVO/3438 (HBN: 79840)
		Prepared By:	Lyle Edwards	**Analyzed By:**	Reed A. Hendricks

QC Data Approved and Reviewed by

Reed A. Hendricks	Matt Garvin	1/24/2012
Analyst	**Peer Review**	**Date**

Symbols and Definitions

* - See Comments section for more information
▲ - Sample result is greater than 4 times the spike added.

RPD - Relative % Difference (Spike / Spike Duplicate)
ND - Not Detected
QC results are not adjusted for moisture correction, where applicable.

2012-01-18-1201805-01

W 1201805

ANALYTICAL REQUEST FORM

1201805

1. ☐ **REGULAR Status**

☐ **RUSH Status Requested - ADDITIONAL CHARGE**
RESULTS REQUIRED BY _____
DATE
CONTACT ALS SALT LAKE PRIOR TO SENDING SAMPLES

2. Date 1/17/12 Purchase Order No. _____

3. Company Name Advanced Monitoring Methods
Address 710 Golf Club Dr.
Castle Rock, CO 80108-8359
Person to Contact Tom Brauch
Telephone (720) - 581-1182
Fax Telephone ( ) _____
E-mail Address _____
Billing Address (if different from above)

4. Quote No. _____
ALS Project Manager Paul

5. **Sample Collection**
Sampling Site BIAC
Industrial Process _____
Date of Collection 1/17/12
Time Collected _____
Date of Shipment 1/17/12
Chain of Custody No. _____

6. How did you first learn about ALS?

7. **REQUEST FOR ANALYSES**

Laboratory Use Only	Client Sample Number	Matrix*	Sample Volume	ANALYSES REQUESTED - Use method number if known	Units**
	LD-P-120116	air		TO-13	
	PB-P-120116	air		TO-13	
	FS-P-120116	air		TO-13	
	FV-P-120116	air		TO-13	

* Specify: Solid sorbent tube, e.g. Charcoal; Filter type; Impinger solution; Bulk sample; Blood; Urine; Tissue; Soil; Water; Other

** 1. µg/sample 2. mg/m³ 3. ppm 4. % 5. µg/m³ 6.____ (other) Please indicate one or more units in the column entitled Units**

Comments _____

Possible Contamination and/or Chemical Hazards _____

7. **Chain of Custody (Optional)**

Relinquished by Laura Ernst 401-595-3816 Date/Time 1/17/12 via UPS overnight
Received by _____ Date/Time 01-18-12 10:00
Relinquished by _____ Date/Time _____
Received by _____ Date/Time _____

960 West LeVoy Drive / Salt Lake City, UT 84123 800-356-9135 or 801-266-7700 / FAX: 801-268-9992
ALS Environmental

ANALYTICAL REPORT

Lab Number:	L1201718
Client:	Advanced Monitoring Methods LLC 710 Golf Club Dr Castle Rock, CO 80108
ATTN:	Tom Brauch
Phone:	(720) 897-7792
Project Name:	RI AIRPORT CORPORATION
Project Number:	32-1-5
Report Date:	02/09/12

Certifications & Approvals: NY (11627), CT (PH-0141), NH (2206), NJ NELAP (MA015), RI (LAO00299), PA (68-02089), LA NELAP (03090), FL (E87814), TX (T104704419), WA (C954), DOD (L2217.01), USDA (Permit #P330-11-00109), US Army Corps of Engineers.

320 Forbes Boulevard, Mansfield, MA 02048-1806
508-822-9300 (Fax) 508-822-3288 800-624-9220 - www.alphalab.com

Project Name: RI AIRPORT CORPORATION
Project Number: 32-1-5

Lab Number: L1201718
Report Date: 02/09/12

Alpha Sample ID	Client ID	Sample Location	Collection Date/Time
L1201718-01	LD-P20120128	WARWICK, RI	01/28/12 00:00
L1201718-02	PB-P20120128	WARWICK, RI	01/28/12 00:00
L1201718-03	FS-P20120128	WARWICK, RI	01/28/12 00:00
L1201718-04	FV-P20120128	WARWICK, RI	01/28/12 00:00
L1201718-05	FV-FIELD BLANK	WARWICK, RI	01/29/12 00:00

Project Name: RI AIRPORT CORPORATION **Lab Number:** L1201718
Project Number: 32-1-5 **Report Date:** 02/09/12

Case Narrative

The samples were received in accordance with the Chain of Custody and no significant deviations were encountered during the preparation or analysis unless otherwise noted. Sample Receipt, Container Information, and the Chain of Custody are located at the back of the report.

Results contained within this report relate only to the samples submitted under this Alpha Lab Number and meet all of the requirements of NELAC, for all NELAC accredited parameters. The data presented in this report is organized by parameter (i.e. VOC, SVOC, etc.). Sample specific Quality Control data (i.e. Surrogate Spike Recovery) is reported at the end of the target analyte list for each individual sample, followed by the Laboratory Batch Quality Control at the end of each parameter. If a sample was re-analyzed or re-extracted due to a required quality control corrective action and if both sets of data are reported, the Laboratory ID of the re-analysis or re-extraction is designated with an "R" or "RE", respectively. When multiple Batch Quality Control elements are reported (e.g. more than one LCS), the associated samples for each element are noted in the grey shaded header line of each data table. Any Laboratory Batch, Sample Specific % recovery or RPD value that is outside the listed Acceptance Criteria is bolded in the report. Definitions of all data qualifiers and acronyms used in this report are provided in the Glossary located at the back of the report.

Please see the associated ADEx data file for a comparison of laboratory reporting limits that were achieved with the regulatory Numerical Standards requested on the Chain of Custody.

For additional information, please contact Client Services at 800-624-9220.

TO-13

The surrogate recoveries for L1201718-01 through -05 were below the acceptance criteria for Fluoranthene-d10 (0%), Benzo(a)Pyrene-d12 (0%); however, re-extraction could not be performed due to the sample matrix. The results of the original analysis are reported.

The surrogate recoveries for L1201718-04 were outside the acceptance criteria for Pyrene-d10 (27%), Benzo(b)Fluoranthene-d12 (24%), Fluoranthene-d10 (0%), Benzo(a)Pyrene-d12 (0%); however, re-extraction could not be performed due to lack of additional sample. The results of the original analysis are reported; however, all associated compounds are considered to have a potential bias.

Project Name:	RI AIRPORT CORPORATION	**Lab Number:**	L1201718
Project Number:	32-1-5	**Report Date:**	02/09/12

Case Narrative (continued)

I, the undersigned, attest under the pains and penalties of perjury that, to the best of my knowledge and belief and based upon my personal inquiry of those responsible for providing the information contained in this analytical report, such information is accurate and complete. This certificate of analysis is not complete unless this page accompanies any and all pages of this report.

Authorized Signature: Peter Henriksen

Title: Technical Director/Representative Date: 02/09/12

AIR

Project Name: RI AIRPORT CORPORATION **Lab Number:** L1201718

Project Number: 32-1-5 **Report Date:** 02/09/12

SAMPLE RESULTS

Lab ID:	L1201718-01	Date Collected:	01/28/12 00:00
Client ID:	LD-P20120128	Date Received:	02/01/12
Sample Location:	WARWICK, RI	Field Prep:	Not Specified
Matrix:	Air Cartridge	Extraction Method:	EPA 3540C
Analytical Method:	1,8270C-SIM	Extraction Date:	02/02/12 19:00
Analytical Date:	02/07/12 12:22		
Analyst:	JS		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PAHs in Air - Mansfield Lab						
Naphthalene	7590		ng/cart	500	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Pyrene-d10	71		60-120
Benzo(b)fluoranthene-d12	72		60-120
Fluoranthene-d10	**0**	Q	60-120
Benzo(a)pyrene-d12	**0**	Q	60-120

Project Name: RI AIRPORT CORPORATION **Lab Number:** L1201718

Project Number: 32-1-5 **Report Date:** 02/09/12

SAMPLE RESULTS

Lab ID:	L1201718-02	Date Collected:	01/28/12 00:00
Client ID:	PB-P20120128	Date Received:	02/01/12
Sample Location:	WARWICK, RI	Field Prep:	Not Specified
Matrix:	Air Cartridge	Extraction Method:	EPA 3540C
Analytical Method:	1,8270C-SIM	Extraction Date:	02/02/12 19:00
Analytical Date:	02/07/12 12:54		
Analyst:	JS		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PAHs in Air - Mansfield Lab						
Naphthalene	6660		ng/cart	500	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Pyrene-d10	64		60-120
Benzo(b)fluoranthene-d12	63		60-120
Fluoranthene-d10	**0**	Q	60-120
Benzo(a)pyrene-d12	**0**	Q	60-120

Project Name: RI AIRPORT CORPORATION **Lab Number:** L1201718

Project Number: 32-1-5 **Report Date:** 02/09/12

SAMPLE RESULTS

Lab ID:	L1201718-03	Date Collected:	01/28/12 00:00
Client ID:	FS-P20120128	Date Received:	02/01/12
Sample Location:	WARWICK, RI	Field Prep:	Not Specified
Matrix:	Air Cartridge	Extraction Method:	EPA 3540C
Analytical Method:	1,8270C-SIM	Extraction Date:	02/02/12 19:00
Analytical Date:	02/07/12 13:26		
Analyst:	JS		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PAHs in Air - Mansfield Lab						
Naphthalene	10600		ng/cart	500	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Pyrene-d10	94		60-120
Benzo(b)fluoranthene-d12	101		60-120
Fluoranthene-d10	**0**	Q	60-120
Benzo(a)pyrene-d12	**0**	Q	60-120

Project Name: RI AIRPORT CORPORATION **Lab Number:** L1201718

Project Number: 32-1-5 **Report Date:** 02/09/12

SAMPLE RESULTS

Lab ID:	L1201718-04	Date Collected:	01/28/12 00:00
Client ID:	FV-P20120128	Date Received:	02/01/12
Sample Location:	WARWICK, RI	Field Prep:	Not Specified
Matrix:	Air Cartridge	Extraction Method:	EPA 3540C
Analytical Method:	1,8270C-SIM	Extraction Date:	02/02/12 19:00
Analytical Date:	02/07/12 13:58		
Analyst:	JS		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PAHs in Air - Mansfield Lab						
Naphthalene	4450		ng/cart	500	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Pyrene-d10	**27**	Q	60-120
Benzo(b)fluoranthene-d12	**24**	Q	60-120
Fluoranthene-d10	**0**	Q	60-120
Benzo(a)pyrene-d12	**0**	Q	60-120

Project Name: RI AIRPORT CORPORATION **Lab Number:** L1201718

Project Number: 32-1-5 **Report Date:** 02/09/12

SAMPLE RESULTS

Lab ID:	L1201718-05	Date Collected:	01/29/12 00:00
Client ID:	FV-FIELD BLANK	Date Received:	02/01/12
Sample Location:	WARWICK, RI	Field Prep:	Not Specified
Matrix:	Air Cartridge	Extraction Method:	EPA 3540C
Analytical Method:	1,8270C-SIM	Extraction Date:	02/02/12 19:00
Analytical Date:	02/07/12 14:31		
Analyst:	JS		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PAHs in Air - Mansfield Lab						
Naphthalene	ND		ng/cart	500	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Pyrene-d10	96		60-120
Benzo(b)fluoranthene-d12	108		60-120
Fluoranthene-d10	**0**	Q	60-120
Benzo(a)pyrene-d12	**0**	Q	60-120

Project Name: RI AIRPORT CORPORATION
Project Number: 32-1-5

Lab Number: L1201718
Report Date: 02/09/12

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8270C-SIM
Analytical Date: 02/07/12 11:17
Analyst: JS

Extraction Method: EPA 3540C
Extraction Date: 02/02/12 19:00

Parameter	Result	Qualifier	Units	RL	MDL
PAHs in Air - Mansfield Lab for sample(s): 01-05 Batch: WG516575-1					
Naphthalene	ND		ng/cart	500	--

Surrogate	%Recovery	Qualifier	Acceptance Criteria
Pyrene-d10	93		60-120
Benzo(b)fluoranthene-d12	108		60-120
Fluoranthene-d10	90		60-120
Benzo(a)pyrene-d12	78		60-120

Lab Control Sample Analysis

Batch Quality Control

Project Name: RI AIRPORT CORPORATION

Project Number: 32-1-5

Lab Number: L1201718

Report Date: 02/09/12

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
PAHs in Air - Mansfield Lab Associated sample(s): 01-05 Batch: WG516575-2								
Naphthalene	102		-		60-120	-		

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
Pyrene-d10	94				60-120
Benzo(b)fluoranthene-d12	106				60-120
Fluoranthene-d10	93				60-120
Benzo(a)pyrene-d12	85				60-120

Project Name: RI AIRPORT CORPORATION
Project Number: 32-1-5

Lab Number: L1201718
Report Date: 02/09/12

Sample Receipt and Container Information

Were project specific reporting limits specified? YES

Reagent H2O Preserved Vials Frozen on: NA

Cooler Information **Custody Seal**

Cooler	
A	Absent

Container Information

Container ID	Container Type	Cooler	pH	Temp deg C	Pres	Seal	Analysis(*)
L1201718-01A	PUF Air Cartridge - High or Low	A	NA	5.3	Y	Absent	A2-TO13(7),PUF-HI()
L1201718-02A	PUF Air Cartridge - High or Low	A	NA	5.3	Y	Absent	A2-TO13(7),PUF-HI()
L1201718-03A	PUF Air Cartridge - High or Low	A	NA	5.3	Y	Absent	A2-TO13(7),PUF-HI()
L1201718-04A	PUF Air Cartridge - High or Low	A	NA	5.3	Y	Absent	A2-TO13(7),PUF-HI()
L1201718-05A	PUF Air Cartridge - High or Low	A	NA	5.3	Y	Absent	A2-TO13(7),PUF-HI()

*Values in parentheses indicate holding time in days

Project Name:	RI AIRPORT CORPORATION	**Lab Number:**	L1201718
Project Number:	32-1-5	**Report Date:**	02/09/12

GLOSSARY

Acronyms

EPA	- Environmental Protection Agency.
LCS	- Laboratory Control Sample: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.
LCSD	- Laboratory Control Sample Duplicate: Refer to LCS.
LFB	- Laboratory Fortified Blank: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.
MDL	- Method Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The MDL includes any adjustments from dilutions, concentrations or moisture content, where applicable.
MS	- Matrix Spike Sample: A sample prepared by adding a known mass of target analyte to a specified amount of matrix sample for which an independent estimate of target analyte concentration is available.
MSD	- Matrix Spike Sample Duplicate: Refer to MS.
NA	- Not Applicable.
NC	- Not Calculated: Term is utilized when one or more of the results utilized in the calculation are non-detect at the parameter's reporting unit.
NI	- Not Ignitable.
RL	- Reporting Limit: The value at which an instrument can accurately measure an analyte at a specific concentration. The RL includes any adjustments from dilutions, concentrations or moisture content, where applicable.
RPD	- Relative Percent Difference: The results from matrix and/or matrix spike duplicates are primarily designed to assess the precision of analytical results in a given matrix and are expressed as relative percent difference (RPD). Values which are less than five times the reporting limit for any individual parameter are evaluated by utilizing the absolute difference between the values; although the RPD value will be provided in the report.
SRM	- Standard Reference Material: A reference sample of a known or certified value that is of the same or similar matrix as the associated field samples.

Footnotes

1	- The reference for this analyte should be considered modified since this analyte is absent from the target analyte list of the original method.

Terms

Analytical Method: Both the document from which the method originates and the analytical reference method. (Example: EPA 8260B is shown as 1,8260B.) The codes for the reference method documents are provided in the References section of the Addendum.

Data Qualifiers

A	- Spectra identified as "Aldol Condensation Product".
B	- The analyte was detected above the reporting limit in the associated method blank. Flag only applies to associated field samples that have detectable concentrations of the analyte at less than five times (5x) the concentration found in the blank. For MCP-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For DOD-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank AND the analyte was detected above one-half the reporting limit (or above the reporting limit for common lab contaminants) in the associated method blank. For NJ-Air-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte above the reporting limit.
C	- Co-elution: The target analyte co-elutes with a known lab standard (i.e. surrogate, internal standards, etc.) for co-extracted analyses.
D	- Concentration of analyte was quantified from diluted analysis. Flag only applies to field samples that have detectable concentrations of the analyte.
E	- Concentration of analyte exceeds the range of the calibration curve and/or linear range of the instrument.
G	- The concentration may be biased high due to matrix interferences (i.e, co-elution) with non-target compound(s). The result should be considered estimated.
H	- The analysis of pH was performed beyond the regulatory-required holding time of 15 minutes from the time of sample collection.
I	- The RPD between the results for the two columns exceeds the method-specified criteria; however, the lower value has been reported due to obvious interference.
M	- Reporting Limit (RL) exceeds the MCP CAM Reporting Limit for this analyte.
NJ	- Presumptive evidence of compound. This represents an estimated concentration for Tentatively Identified Compounds (TICs), where the identification is based on a mass spectral library search.

Report Format: Data Usability Report

Project Name:	RI AIRPORT CORPORATION	**Lab Number:**	L1201718
Project Number:	32-1-5	**Report Date:**	02/09/12

Data Qualifiers

P - The RPD between the results for the two columns exceeds the method-specified criteria.

Q - The quality control sample exceeds the associated acceptance criteria. For DOD-related projects, LCS and/or Continuing Calibration Standard exceedences are also qualified on all associated sample results. Note: This flag is not applicable for matrix spike recoveries when the sample concentration is greater than 4x the spike added or for batch duplicate RPD when the sample concentrations are less than 5x the RL. (Metals only.)

R - Analytical results are from sample re-analysis.

RE - Analytical results are from sample re-extraction.

J - Estimated value. This represents an estimated concentration for Tentatively Identified Compounds (TICs).

ND - Not detected at the reporting limit (RL) for the sample.

Report Format: Data Usability Report

REFERENCES

1 Test Methods for Evaluating Solid Waste: Physical/Chemical Methods. EPA SW-846. Third Edition. Updates I - IIIA, 1997.

LIMITATION OF LIABILITIES

Alpha Analytical performs services with reasonable care and diligence normal to the analytical testing laboratory industry. In the event of an error, the sole and exclusive responsibility of Alpha Analytical shall be to re-perform the work at it's own expense. In no event shall Alpha Analytical be held liable for any incidental, consequential or special damages, including but not limited to, damages in any way connected with the use of, interpretation of, information or analysis provided by Alpha Analytical.

We strongly urge our clients to comply with EPA protocol regarding sample volume, preservation, cooling, containers, sampling procedures, holding time and splitting of samples in the field.

Certificate/Approval Program Summary

Last revised January 30, 2012 – Mansfield Facility

The following list includes only those analytes/methods for which certification/approval is currently held.
For a complete listing of analytes for the referenced methods, please contact your Alpha Customer Service Representative.

Connecticut Department of Public Health Certificate/Lab ID: PH-0141.

Wastewater/Non-Potable Water (Inorganic Parameters: pH, Turbidity, Conductivity, Alkalinity, Aluminum, Antimony, Arsenic, Barium, Beryllium, Boron, Cadmium, Calcium, Chromium, Cobalt, Copper, Iron, Lead, Magnesium, Manganese, Mercury, Molybdenum, Nickel, Potassium, Selenium, Silver, Sodium, Strontium, Thallium, Tin, Vanadium, Zinc, Total Residue (Solids), Total Suspended Solids (non-filterable), Total Cyanide. Organic Parameters: PCBs, Organochlorine Pesticides, Technical Chlordane, Toxaphene, Acid Extractables, Benzidines, Phthalate Esters, Nitrosamines, Nitroaromatics & Isophorone, PAHs, Haloethers, Chlorinated Hydrocarbons, Volatile Organics.)

Solid Waste/Soil (Inorganic Parameters: pH, Aluminum, Antimony, Arsenic, Barium, Beryllium, Cadmium, Calcium, Chromium, Hexavalent Chromium, Cobalt, Copper, Iron, Lead, Magnesium, Manganese, Mercury, Molybdenum, Nickel, Potassium, Selenium, Silver, Sodium, Thallium, Vanadium, Zinc, Total Organic Carbon, Total Cyanide, Corrosivity, TCLP 1311. Organic Parameters: PCBs, Organochlorine Pesticides, Technical Chlordane, Toxaphene, Volatile Organics, Acid Extractables, Benzidines, Phthalates, Nitrosamines, Nitroaromatics & Cyclic Ketones, PAHs, Haloethers, Chlorinated Hydrocarbons.)

Florida Department of Health Certificate/Lab ID: E87814. ***NELAP Accredited.***

Non-Potable Water (Inorganic Parameters: SM2320B, SM2540D, SM2540G.)

Solid & Chemical Materials (Inorganic Parameters: 6020, 7470, 7471, 9045. Organic Parameters: EPA 8260, 8270, 8082, 8081.)

Air & Emissions (EPA TO-15.)

Louisiana Department of Environmental Quality Certificate/Lab ID: 03090. ***NELAP Accredited.***

Non-Potable Water (Inorganic Parameters: EPA 180.1, 245.7, 1631E, 3020, 6020A, 7470A, 9040, 9050A, SM2320B, 2540D, 2540G, 4500H-B, Organic Parameters: EPA 3510C, 3580A, 3630C, 3640A, 3660B, 3665A, 5030B, 8015D, 3570, 8081B, 8082A, 8260B, 8270C, 8270D.)

Solid & Chemical Materials (Inorganic Parameters: EPA 1311, 3050, 3051A, 3060A, 6020A, 7196A, 7470A, 7471B, 7474, 9040B, 9045C, 9060. Organic Parameters: EPA 3540C, 3570B, 3580A, 3630C, 3640A, 3660, 3665A, 5035, 8015D, 8081B, 8082A, 8260B, 8270C, 8270D.)

Biological Tissue (Inorganic Parameters: EPA 6020A. Organic Parameters: EPA 3570, 3510C, 3610B, 3630C, 3640A, 8270C, 8270D.)

Air & Emissions (EPA TO-15.)

New Hampshire Department of Environmental Services Certificate/Lab ID: 2206. ***NELAP Accredited.***

Non-Potable Water (Inorganic Parameters: EPA 245.7, 1631E, 6020A, 7470A, 9040B, 9050A, SM2540D, 2540G, 4500H+B, 2320B. Organic Parameters: EPA 8081B, 8082A, 8260B, 8270C, 8015D.)

Solid & Chemical Materials (Inorganic Parameters: SW-846 1311, 1312, 3050B, 3051A, 3060A, 6020A, 7471A, 9040B, 9045C, 7196A. Organic Parameters: SW-846 3540C, 3580A, 3630C, 3640A, 3660B, 3665A, 5035, 8260B, 8270C, 8015D, 8082A, 8081B.)

New Jersey Department of Environmental Protection Certificate/Lab ID: MA015. ***NELAP Accredited.***

Non-Potable Water (Inorganic Parameters: SW-846 1312, 3010, 3020A, SM2320B, SM2540D, 2540G, EPA 180.1, 1631E, SW-846 7470A, 9040B, 6020, 9050A. Organic Parameters: SW-846 3510C, 3580A, 5030B, 5035L, 5035H, 3630C, 3640A, 3660B, 3665A, 8015B 8081A, 8082, 8260B, 8270C)

Solid & Chemical Materials (Inorganic Parameters: SW-846 6020, 1311, 1312, 3050B, 3051, 3060A, 7196A, 7470A, 7471A, 7474, 9040B, 9045C, 9060. Organic Parameters: SW-846 3540C, 3570, 3580A, 5030B, 5035L, 5035H, 3630C, 3640A, 3660B, 3665A, 8081A, 8082, 8260B, 8270C, 8015B.)

Atmospheric Organic Parameters (EPA TO-15)

Biological Tissue (Inorganic Parameters: SW-846 6020 Organic Parameters: SW-846 8270C, 3510C, 3570, 3610C, 3630C, 3640A)

New York Department of Health Certificate/Lab ID: 11627. ***NELAP Accredited.***

Non-Potable Water (Inorganic Parameters: SM2320B, SM2540D, EPA 200.8, 6020, 1631E, 245.1, 245.7, 7470A, 9014, 9040B, 9050, 120.1, 4500CN-E, 4500H-B, EPA 376.2, 180.1, 3020A. Organic Parameters: EPA 8260B, 8270C, 8081A, 8082, 3510C, 5030B.)

Solid & Hazardous Waste (Inorganic Parameters: EPA 6020, 7196A, 3060A, 7471A, 7474, 9014, 9040B, 9045C, 9010B. Organic Parameters: EPA 8260B, 8270C, 8081A, DRO 8015B, 8082, 1311, 1312, 3050B, 3580, 3570, 3051, 5035, 5030B.)

Air & Emissions (EPA TO-15.)

Pennsylvania Certificate/Lab ID: 68-02089 ***NELAP Accredited***

Solid & Hazardous Waste (Inorganic Parameters: EPA 6020A,7471B, 7474. Organic Parameters: EPA3050B, 3540C, 3630C, 8270C, 8081B, 8082A.)

Rhode Island Department of Health Certificate/Lab ID: LAO00299. ***NELAP Accredited via LA-DEQ.***

Refer to LA-DEQ Certificate for Non-Potable Water.

Texas Commission of Environmental Quality Certificate/Lab ID: T104704419-08-TX. ***NELAP Accredited.***

Solid & Chemical Materials (Inorganic Parameters: EPA 6020, 7470, 7471, 1311, 7196, 9040, 9045, 9060. Organic Parameters: EPA 8015, 8270, 8260, 8081, 8082.)

Air (Organic Parameters: EPA TO-15)

Washington State Department of Ecology Certificate/Lab ID: C954. *Non-Potable Water* (Inorganic Parameters: SM2540D, 180.1, 1631E.)

Solid & Chemical Materials (Inorganic Parameters: EPA 6020, 7470, 7471, 7474, 9045C, 9050A, 9060. Organic Parameters: EPA 8081, 8082, 8015 Mod, 8270.)

Virginia Division of Consolidated Laboratory Services Certificate/Lab ID:460194. ***NELAP Accredited.***

Non-Potable Water (Inorganic Parameters:EPA 3020A,6020A,245.7,9040B,SM4500H-B. Organic Parameters: EPA 3510C,3640A,3660B,3665A,8270C,8270D,8082A,8081B.)

Solid & Chemical Materials (Inorganic Parameters: EPA 6020A,7470A,7471B,9040B,9045C,3050B,3051. Organic Parameters: EPA 3540C, 3580A, 3630C, 3640A, 3660B, 3665A, 3570, 8270C, 8270D, 8081B, 8082A, 8015D.)

U.S. Army Corps of Engineers

Department of Defense, L-A-B Certificate/Lab ID: L2217.01.

Non-Potable Water (Inorganic Parameters: EPA 6020A, SM4500H-B. Organic Parameters: 3020A, 3510C, 5030B, 8260B, 8270C, 8270C-ALK-PAH, 8082, 8081A, 8015D-SHC, 8015D.)

Solid & Hazardous Waste (Inorganic Parameters: EPA 1311, 1312, 3050B, 6020A, 7471A, 9045C, 9060, SM 2540G, ASTM D422-63. Organic Parameters: EPA 3580A, 3570, 3540C, 5035A, 8260B, 8270C, 8270-ALK-PAH, 8082, 8081A, 8015D-SHC, 8015D.

Air & Emissions (EPA TO-15.)

Analytes Not Accredited by NELAP

Certification is not available by NELAP for the following analytes: **8270C:** Biphenyl. **TO-15:** Halothane, 2,4,4-Trimethyl-2-pentene, 2,4,4-Trimethyl-1-pentene, Thiophene, 2-Methylthiophene, 3-Methylthiophene, 2-Ethylthiophene, 1,2,3-Trimethylbenzene, Indan, Indene, 1,2,4,5-Tetramethylbenzene, Benzothiophene, 2-Methylnaphthalene, 1-Methylnaphthalene.

AIR ANALYSIS

PAGE 1 OF 1

CHAIN OF CUSTODY

ALPHA ANALYTICAL
320 Forbes Blvd, Mansfield, MA 02048
TEL: 508-822-9300 FAX: 508-822-3288

Serial_No:02124

Date Rec'd in Lab:

ALPHA Job #: L1201718

Client Information

Client: Advanced Monitoring Methods
Address:
Phone: 720-581-1182
Fax:
Email: Tom@admm2.com
☐ These samples have been previously analyzed by Alpha

Project Information

Project Name: RI Airport Corporation
Project Location: Warwick RI
Project #:
Project Manager: Tom Brauch
ALPHA Quote #:

Turn-Around Time

☐ Standard ☐ RUSH *(only confirmed if pre-approved!)*
Date Due: **Time:**

Report Information - Data Deliverables

☐ FAX
☐ ADEx
Criteria Checker:
(Default based on Regulatory Criteria Indicated)
Other Formats:
☐ EMAIL (standard pdf report)
☐ Additional Deliverables:
Report to: (if different than Project Manager)

Billing Information

☐ Same as Client info | PO #:

Regulatory Requirements/Report Limits

State/Fed	Program	Criteria

Other Project Specific Requirements/Comments:

All Columns Below Must Be Filled Out

	ALPHA Lab ID (Lab Use Only)	Sample ID	Collection Date	Start Time	End Time	Initial Vacuum	Final Vacuum	Sample Matrix*	Sampler's Initials	Can Size	I D Can	I D - Flow Controller	TO-14A by TO-15	TO-15	TO-15 SIM	APH	FIXED GASES	TO-13A	TO-4 / TO-10	Sample Comments (i.e. PID)
01	HPX-0028	LD-P20120128	1/28/12						dE											Lydick
02	HPX-18	PB-P20120128	1/28/12						dE											Pembroke
03	HPX-79	FS-P20120128	1/28/12						dE											Fire Station
04	HPX-71	FV-P20120128	1/28/12						dE											Field View
05	HPX-72	FV-Field Blank	1/29/12						dE											Field Blank - FV

*SAMPLE MATRIX CODES
AA = Ambient Air (Indoor/Outdoor)
SV = Soil Vapor/Landfill Gas/SVE
Other = Please Specify

Container Type

Please print clearly, legibly and completely. Samples can not be logged in and turnaround time clock will not start until any ambiguities are resolved. All samples submitted are subject to Alpha's Terms and Conditions. See reverse side.

Relinquished By:	Date/Time	Received By:	Date/Time:
Layla Ernst	1/29/12 1:25	P. Gilbert	2/1/12 0950
P. Gilbert	2/1/12 1105		2/1/12 11:05

Form No: 101-02 (19-Jun-09)

ANALYTICAL REPORT

Lab Number:	L1202388
Client:	Advanced Monitoring Methods LLC 710 Golf Club Dr Castle Rock, CO 80108
ATTN:	Tom Brauch
Phone:	(720) 897-7792
Project Name:	RIAC
Project Number:	Not Specified
Report Date:	02/20/12

Certifications & Approvals: NY (11627), CT (PH-0141), NH (2206), NJ NELAP (MA015), RI (LAO00299), PA (68-02089), LA NELAP (03090), FL (E87814), TX (T104704419), WA (C954), DOD (L2217.01), USDA (Permit #P330-11-00109), US Army Corps of Engineers.

320 Forbes Boulevard, Mansfield, MA 02048-1806
508-822-9300 (Fax) 508-822-3288 800-624-9220 - www.alphalab.com

Project Name: RIAC
Project Number: Not Specified

Lab Number: L1202388
Report Date: 02/20/12

Alpha Sample ID	Client ID	Sample Location	Collection Date/Time
L1202388-01	LDP20120203	WARWICK, RI	02/03/12 00:00
L1202388-02	FSP20120203	WARWICK, RI	02/03/12 00:00
L1202388-03	FVP20120203	WARWICK, RI	02/03/12 00:00
L1202388-04	PBP20120203	WARWICK, RI	02/03/12 00:00

Project Name: RIAC
Project Number: Not Specified

Lab Number: L1202388
Report Date: 02/20/12

Case Narrative

The samples were received in accordance with the Chain of Custody and no significant deviations were encountered during the preparation or analysis unless otherwise noted. Sample Receipt, Container Information, and the Chain of Custody are located at the back of the report.

Results contained within this report relate only to the samples submitted under this Alpha Lab Number and meet all of the requirements of NELAC, for all NELAC accredited parameters. The data presented in this report is organized by parameter (i.e. VOC, SVOC, etc.). Sample specific Quality Control data (i.e. Surrogate Spike Recovery) is reported at the end of the target analyte list for each individual sample, followed by the Laboratory Batch Quality Control at the end of each parameter. If a sample was re-analyzed or re-extracted due to a required quality control corrective action and if both sets of data are reported, the Laboratory ID of the re-analysis or re-extraction is designated with an "R" or "RE", respectively. When multiple Batch Quality Control elements are reported (e.g. more than one LCS), the associated samples for each element are noted in the grey shaded header line of each data table. Any Laboratory Batch, Sample Specific % recovery or RPD value that is outside the listed Acceptance Criteria is bolded in the report. Soil/sediments, solids and tissues are reported on a dry weight basis unless otherwise noted. Definitions of all data qualifiers and acronyms used in this report are provided in the Glossary located at the back of the report.

Please see the associated ADEx data file for a comparison of laboratory reporting limits that were achieved with the regulatory Numerical Standards requested on the Chain of Custody.

For additional information, please contact Client Services at 800-624-9220.

I, the undersigned, attest under the pains and penalties of perjury that, to the best of my knowledge and belief and based upon my personal inquiry of those responsible for providing the information contained in this analytical report, such information is accurate and complete. This certificate of analysis is not complete unless this page accompanies any and all pages of this report.

Authorized Signature:  Peter Henriksen

Title: Technical Director/Representative Date: 02/20/12

AIR

Project Name: RIAC
Lab Number: L1202388
Project Number: Not Specified
Report Date: 02/20/12

SAMPLE RESULTS

Lab ID:	L1202388-01	Date Collected:	02/03/12 00:00
Client ID:	LDP20120203	Date Received:	02/10/12
Sample Location:	WARWICK, RI	Field Prep:	Not Specified
Matrix:	Air Cartridge	Extraction Method:	EPA 3540C
Analytical Method:	1,8270C-SIM	Extraction Date:	02/10/12 15:53
Analytical Date:	02/16/12 22:04		
Analyst:	CM		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PAHs in Air - Mansfield Lab						
Naphthalene	12400		ng/cart	500	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Pyrene-d10	96		60-120
Benzo(b)fluoranthene-d12	113		60-120
Fluoranthene-d10	92		60-120
Benzo(a)pyrene-d12	92		60-120

Project Name: RIAC
Lab Number: L1202388
Project Number: Not Specified
Report Date: 02/20/12

SAMPLE RESULTS

Lab ID:	L1202388-02	Date Collected:	02/03/12 00:00
Client ID:	FSP20120203	Date Received:	02/10/12
Sample Location:	WARWICK, RI	Field Prep:	Not Specified
Matrix:	Air Cartridge	Extraction Method:	EPA 3540C
Analytical Method:	1,8270C-SIM	Extraction Date:	02/10/12 15:53
Analytical Date:	02/16/12 22:36		
Analyst:	CM		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PAHs in Air - Mansfield Lab						
Naphthalene	14800		ng/cart	500	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Pyrene-d10	96		60-120
Benzo(b)fluoranthene-d12	111		60-120
Fluoranthene-d10	97		60-120
Benzo(a)pyrene-d12	101		60-120

Project Name: RIAC
Lab Number: L1202388
Project Number: Not Specified
Report Date: 02/20/12

SAMPLE RESULTS

Lab ID:	L1202388-03	Date Collected:	02/03/12 00:00
Client ID:	FVP20120203	Date Received:	02/10/12
Sample Location:	WARWICK, RI	Field Prep:	Not Specified
Matrix:	Air Cartridge	Extraction Method:	EPA 3540C
Analytical Method:	1,8270C-SIM	Extraction Date:	02/10/12 15:53
Analytical Date:	02/16/12 23:08		
Analyst:	CM		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PAHs in Air - Mansfield Lab						
Naphthalene	14600		ng/cart	500	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Pyrene-d10	95		60-120
Benzo(b)fluoranthene-d12	111		60-120
Fluoranthene-d10	94		60-120
Benzo(a)pyrene-d12	99		60-120

Project Name: RIAC
Lab Number: L1202388
Project Number: Not Specified
Report Date: 02/20/12

SAMPLE RESULTS

Lab ID:	L1202388-04	Date Collected:	02/03/12 00:00
Client ID:	PBP20120203	Date Received:	02/10/12
Sample Location:	WARWICK, RI	Field Prep:	Not Specified
Matrix:	Air Cartridge	Extraction Method:	EPA 3540C
Analytical Method:	1,8270C-SIM	Extraction Date:	02/10/12 15:53
Analytical Date:	02/16/12 23:39		
Analyst:	CM		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PAHs in Air - Mansfield Lab						
Naphthalene	12800		ng/cart	500	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Pyrene-d10	97		60-120
Benzo(b)fluoranthene-d12	113		60-120
Fluoranthene-d10	92		60-120
Benzo(a)pyrene-d12	99		60-120

Project Name: RIAC
Project Number: Not Specified

Lab Number: L1202388
Report Date: 02/20/12

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8270C-SIM
Analytical Date: 02/16/12 20:59
Analyst: CM

Extraction Method: EPA 3540C
Extraction Date: 02/10/12 15:53

Parameter	Result	Qualifier	Units	RL	MDL
PAHs in Air - Mansfield Lab for sample(s): 01-04 Batch: WG517924-1					
Naphthalene	ND		ng/cart	500	--

Surrogate	%Recovery	Qualifier	Acceptance Criteria
Pyrene-d10	95		60-120
Benzo(b)fluoranthene-d12	107		60-120
Fluoranthene-d10	102		60-120
Benzo(a)pyrene-d12	100		60-120

Lab Control Sample Analysis

Batch Quality Control

Project Name: RIAC
Project Number: Not Specified

Lab Number: L1202388
Report Date: 02/20/12

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
PAHs in Air - Mansfield Lab Associated sample(s): 01-04 Batch: WG517924-2								
Naphthalene	110		-		60-120	-		

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
Pyrene-d10	95				60-120
Benzo(b)fluoranthene-d12	110				60-120
Fluoranthene-d10	104				60-120
Benzo(a)pyrene-d12	108				60-120

Project Name: RIAC
Project Number: Not Specified

Lab Number: L1202388
Report Date: 02/20/12

Sample Receipt and Container Information

Were project specific reporting limits specified? YES

Reagent H2O Preserved Vials Frozen on: NA

Cooler Information **Custody Seal**

Cooler	
A	Absent

Container Information

Container ID	Container Type	Cooler	pH	Temp deg C	Pres	Seal	Analysis(*)
L1202388-01A	PUF Air Cartridge - High or Low	A	NA	4.7	Y	Absent	A2-TO13(7),PUF-HI()
L1202388-02A	PUF Air Cartridge - High or Low	A	NA	4.7	Y	Absent	A2-TO13(7),PUF-HI()
L1202388-03A	PUF Air Cartridge - High or Low	A	NA	4.7	Y	Absent	A2-TO13(7),PUF-HI()
L1202388-04A	PUF Air Cartridge - High or Low	A	NA	4.7	Y	Absent	A2-TO13(7),PUF-HI()

*Values in parentheses indicate holding time in days

Project Name:	RIAC	**Lab Number:**	L1202388
Project Number:	Not Specified	**Report Date:**	02/20/12

GLOSSARY

Acronyms

EPA	- Environmental Protection Agency.
LCS	- Laboratory Control Sample: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.
LCSD	- Laboratory Control Sample Duplicate: Refer to LCS.
LFB	- Laboratory Fortified Blank: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.
MDL	- Method Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The MDL includes any adjustments from dilutions, concentrations or moisture content, where applicable.
MS	- Matrix Spike Sample: A sample prepared by adding a known mass of target analyte to a specified amount of matrix sample for which an independent estimate of target analyte concentration is available.
MSD	- Matrix Spike Sample Duplicate: Refer to MS.
NA	- Not Applicable.
NC	- Not Calculated: Term is utilized when one or more of the results utilized in the calculation are non-detect at the parameter's reporting unit.
NI	- Not Ignitable.
RL	- Reporting Limit: The value at which an instrument can accurately measure an analyte at a specific concentration. The RL includes any adjustments from dilutions, concentrations or moisture content, where applicable.
RPD	- Relative Percent Difference: The results from matrix and/or matrix spike duplicates are primarily designed to assess the precision of analytical results in a given matrix and are expressed as relative percent difference (RPD). Values which are less than five times the reporting limit for any individual parameter are evaluated by utilizing the absolute difference between the values; although the RPD value will be provided in the report.
SRM	- Standard Reference Material: A reference sample of a known or certified value that is of the same or similar matrix as the associated field samples.

Footnotes

1	- The reference for this analyte should be considered modified since this analyte is absent from the target analyte list of the original method.

Terms

Analytical Method: Both the document from which the method originates and the analytical reference method. (Example: EPA 8260B is shown as 1,8260B.) The codes for the reference method documents are provided in the References section of the Addendum.

Data Qualifiers

A	- Spectra identified as "Aldol Condensation Product".
B	- The analyte was detected above the reporting limit in the associated method blank. Flag only applies to associated field samples that have detectable concentrations of the analyte at less than five times (5x) the concentration found in the blank. For MCP-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For DOD-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank AND the analyte was detected above one-half the reporting limit (or above the reporting limit for common lab contaminants) in the associated method blank. For NJ-Air-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte above the reporting limit.
C	- Co-elution: The target analyte co-elutes with a known lab standard (i.e. surrogate, internal standards, etc.) for co-extracted analyses.
D	- Concentration of analyte was quantified from diluted analysis. Flag only applies to field samples that have detectable concentrations of the analyte.
E	- Concentration of analyte exceeds the range of the calibration curve and/or linear range of the instrument.
G	- The concentration may be biased high due to matrix interferences (i.e, co-elution) with non-target compound(s). The result should be considered estimated.
H	- The analysis of pH was performed beyond the regulatory-required holding time of 15 minutes from the time of sample collection.
I	- The RPD between the results for the two columns exceeds the method-specified criteria; however, the lower value has been reported due to obvious interference.
M	- Reporting Limit (RL) exceeds the MCP CAM Reporting Limit for this analyte.
NJ	- Presumptive evidence of compound. This represents an estimated concentration for Tentatively Identified Compounds (TICs), where the identification is based on a mass spectral library search.

Report Format: Data Usability Report

Project Name:	RIAC	**Lab Number:**	L1202388
Project Number:	Not Specified	**Report Date:**	02/20/12

Data Qualifiers

P - The RPD between the results for the two columns exceeds the method-specified criteria.

Q - The quality control sample exceeds the associated acceptance criteria. For DOD-related projects, LCS and/or Continuing Calibration Standard exceedences are also qualified on all associated sample results. Note: This flag is not applicable for matrix spike recoveries when the sample concentration is greater than 4x the spike added or for batch duplicate RPD when the sample concentrations are less than 5x the RL. (Metals only.)

R - Analytical results are from sample re-analysis.

RE - Analytical results are from sample re-extraction.

J - Estimated value. This represents an estimated concentration for Tentatively Identified Compounds (TICs).

ND - Not detected at the reporting limit (RL) for the sample.

Report Format: Data Usability Report

Project Name: RIAC
Project Number: Not Specified
Lab Number: L1202388
Report Date: 02/20/12

REFERENCES

1 Test Methods for Evaluating Solid Waste: Physical/Chemical Methods. EPA SW-846. Third Edition. Updates I - IIIA, 1997.

LIMITATION OF LIABILITIES

Alpha Analytical performs services with reasonable care and diligence normal to the analytical testing laboratory industry. In the event of an error, the sole and exclusive responsibility of Alpha Analytical shall be to re-perform the work at it's own expense. In no event shall Alpha Analytical be held liable for any incidental, consequential or special damages, including but not limited to, damages in any way connected with the use of, interpretation of, information or analysis provided by Alpha Analytical.

We strongly urge our clients to comply with EPA protocol regarding sample volume, preservation, cooling, containers, sampling procedures, holding time and splitting of samples in the field.

Certificate/Approval Program Summary

Last revised January 30, 2012 – Mansfield Facility

The following list includes only those analytes/methods for which certification/approval is currently held.
For a complete listing of analytes for the referenced methods, please contact your Alpha Customer Service Representative.

Connecticut Department of Public Health Certificate/Lab ID: PH-0141.

Wastewater/Non-Potable Water (Inorganic Parameters: pH, Turbidity, Conductivity, Alkalinity, Aluminum, Antimony, Arsenic, Barium, Beryllium, Boron, Cadmium, Calcium, Chromium, Cobalt, Copper, Iron, Lead, Magnesium, Manganese, Mercury, Molybdenum, Nickel, Potassium, Selenium, Silver, Sodium, Strontium, Thallium, Tin, Vanadium, Zinc, Total Residue (Solids), Total Suspended Solids (non-filterable), Total Cyanide. Organic Parameters: PCBs, Organochlorine Pesticides, Technical Chlordane, Toxaphene, Acid Extractables, Benzidines, Phthalate Esters, Nitrosamines, Nitroaromatics & Isophorone, PAHs, Haloethers, Chlorinated Hydrocarbons, Volatile Organics.)

Solid Waste/Soil (Inorganic Parameters: pH, Aluminum, Antimony, Arsenic, Barium, Beryllium, Cadmium, Calcium, Chromium, Hexavalent Chromium, Cobalt, Copper, Iron, Lead, Magnesium, Manganese, Mercury, Molybdenum, Nickel, Potassium, Selenium, Silver, Sodium, Thallium, Vanadium, Zinc, Total Organic Carbon, Total Cyanide, Corrosivity, TCLP 1311. Organic Parameters: PCBs, Organochlorine Pesticides, Technical Chlordane, Toxaphene, Volatile Organics, Acid Extractables, Benzidines, Phthalates, Nitrosamines, Nitroaromatics & Cyclic Ketones, PAHs, Haloethers, Chlorinated Hydrocarbons.)

Florida Department of Health Certificate/Lab ID: E87814. ***NELAP Accredited.***

Non-Potable Water (Inorganic Parameters: SM2320B, SM2540D, SM2540G.)

Solid & Chemical Materials (Inorganic Parameters: 6020, 7470, 7471, 9045. Organic Parameters: EPA 8260, 8270, 8082, 8081.)

Air & Emissions (EPA TO-15.)

Louisiana Department of Environmental Quality Certificate/Lab ID: 03090. ***NELAP Accredited.***

Non-Potable Water (Inorganic Parameters: EPA 180.1, 245.7, 1631E, 3020, 6020A, 7470A, 9040, 9050A, SM2320B, 2540D, 2540G, 4500H-B, Organic Parameters: EPA 3510C, 3580A, 3630C, 3640A, 3660B, 3665A, 5030B, 8015D, 3570, 8081B, 8082A, 8260B, 8270C, 8270D.)

Solid & Chemical Materials (Inorganic Parameters: EPA 1311, 3050, 3051A, 3060A, 6020A, 7196A, 7470A, 7471B, 7474, 9040B, 9045C, 9060. Organic Parameters: EPA 3540C, 3570B, 3580A, 3630C, 3640A, 3660, 3665A, 5035, 8015D, 8081B, 8082A, 8260B, 8270C, 8270D.)

Biological Tissue (Inorganic Parameters: EPA 6020A. Organic Parameters: EPA 3570, 3510C, 3610B, 3630C, 3640A, 8270C, 8270D.)

Air & Emissions (EPA TO-15.)

New Hampshire Department of Environmental Services Certificate/Lab ID: 2206. ***NELAP Accredited.***

Non-Potable Water (Inorganic Parameters: EPA 245.7, 1631E, 6020A, 7470A, 9040B, 9050A, SM2540D, 2540G, 4500H+B, 2320B. Organic Parameters: EPA 8081B, 8082A, 8260B, 8270C, 8015D.)

Solid & Chemical Materials (Inorganic Parameters: SW-846 1311, 1312, 3050B, 3051A, 3060A, 6020A, 7471A, 9040B, 9045C, 7196A. Organic Parameters: SW-846 3540C, 3580A, 3630C, 3640A, 3660B, 3665A, 5035, 8260B, 8270C, 8015D, 8082A, 8081B.)

New Jersey Department of Environmental Protection Certificate/Lab ID: MA015. ***NELAP Accredited.***

Non-Potable Water (Inorganic Parameters: SW-846 1312, 3010, 3020A, SM2320B, SM2540D, 2540G, EPA 180.1, 1631E, SW-846 7470A, 9040B, 6020, 9050A. Organic Parameters: SW-846 3510C, 3580A, 5030B, 5035L, 5035H, 3630C, 3640A, 3660B, 3665A, 8015B 8081A, 8082, 8260B, 8270C)

Solid & Chemical Materials (Inorganic Parameters: SW-846 6020, 1311, 1312, 3050B, 3051, 3060A, 7196A, 7470A, 7471A, 7474, 9040B, 9045C, 9060. Organic Parameters: SW-846 3540C, 3570, 3580A, 5030B, 5035L, 5035H, 3630C, 3640A, 3660B, 3665A, 8081A, 8082, 8260B, 8270C, 8015B.)

Atmospheric Organic Parameters (EPA TO-15)

Biological Tissue (Inorganic Parameters: SW-846 6020 Organic Parameters: SW-846 8270C, 3510C, 3570, 3610C, 3630C, 3640A)

New York Department of Health Certificate/Lab ID: 11627. ***NELAP Accredited.***

Non-Potable Water (Inorganic Parameters: SM2320B, SM2540D, EPA 200.8, 6020, 1631E, 245.1, 245.7, 7470A, 9014, 9040B, 9050, 120.1, 4500CN-E, 4500H-B, EPA 376.2, 180.1, 3020A. Organic Parameters: EPA 8260B, 8270C, 8081A, 8082, 3510C, 5030B.)

Solid & Hazardous Waste (Inorganic Parameters: EPA 6020, 7196A, 3060A, 7471A, 7474, 9014, 9040B, 9045C, 9010B. Organic Parameters: EPA 8260B, 8270C, 8081A, DRO 8015B, 8082, 1311, 1312, 3050B, 3580, 3570, 3051, 5035, 5030B.)

Air & Emissions (EPA TO-15.)

Pennsylvania Certificate/Lab ID: 68-02089 ***NELAP Accredited***

Solid & Hazardous Waste (Inorganic Parameters: EPA 6020A,7471B, 7474. Organic Parameters: EPA3050B, 3540C, 3630C, 8270C, 8081B, 8082A.)

Rhode Island Department of Health Certificate/Lab ID: LAO00299. ***NELAP Accredited via LA-DEQ.***

Refer to LA-DEQ Certificate for Non-Potable Water.

Texas Commission of Environmental Quality Certificate/Lab ID: T104704419-08-TX. ***NELAP Accredited.***

Solid & Chemical Materials (Inorganic Parameters: EPA 6020, 7470, 7471, 1311, 7196, 9040, 9045, 9060. Organic Parameters: EPA 8015, 8270, 8260, 8081, 8082.)

Air (Organic Parameters: EPA TO-15)

Washington State Department of Ecology Certificate/Lab ID: C954. *Non-Potable Water* (Inorganic Parameters: SM2540D, 180.1, 1631E.)

Solid & Chemical Materials (Inorganic Parameters: EPA 6020, 7470, 7471, 7474, 9045C, 9050A, 9060. Organic Parameters: EPA 8081, 8082, 8015 Mod, 8270.)

Virginia Division of Consolidated Laboratory Services Certificate/Lab ID:460194. ***NELAP Accredited.***

Non-Potable Water (Inorganic Parameters:EPA 3020A,6020A,245.7,9040B,SM4500H-B. Organic Parameters: EPA 3510C,3640A,3660B,3665A,8270C,8270D,8082A,8081B.)

Solid & Chemical Materials (Inorganic Parameters: EPA 6020A,7470A,7471B,9040B,9045C,3050B,3051. Organic Parameters: EPA 3540C, 3580A, 3630C, 3640A, 3660B, 3665A, 3570, 8270C, 8270D, 8081B, 8082A, 8015D.)

U.S. Army Corps of Engineers

Department of Defense, L-A-B Certificate/Lab ID: L2217.01.

Non-Potable Water (Inorganic Parameters: EPA 6020A, SM4500H-B. Organic Parameters: 3020A, 3510C, 5030B, 8260B, 8270C, 8270C-ALK-PAH, 8082, 8081A, 8015D-SHC, 8015D.)

Solid & Hazardous Waste (Inorganic Parameters: EPA 1311, 1312, 3050B, 6020A, 7471A, 9045C, 9060, SM 2540G, ASTM D422-63. Organic Parameters: EPA 3580A, 3570, 3540C, 5035A, 8260B, 8270C, 8270-ALK-PAH, 8082, 8081A, 8015D-SHC, 8015D.

Air & Emissions (EPA TO-15.)

Analytes Not Accredited by NELAP

Certification is not available by NELAP for the following analytes: **8270C:** Biphenyl. **TO-15:** Halothane, 2,4,4-Trimethyl-2-pentene, 2,4,4-Trimethyl-1-pentene, Thiophene, 2-Methylthiophene, 3-Methylthiophene, 2-Ethylthiophene, 1,2,3-Trimethylbenzene, Indan, Indene, 1,2,4,5-Tetramethylbenzene, Benzothiophene, 2-Methylnaphthalene, 1-Methylnaphthalene.

AIR ANALYSIS

PAGE 1 OF 1

CHAIN OF CUSTODY

ALPHA ANALYTICAL
320 Forbes Blvd, Mansfield, MA 02048
TEL: 508-822-9300 FAX: 508-822-3288

Serial_No:02201222

Date Rec'd in Lab:

ALPHA Job #: L1202388

Client Information

Client: Advanced Monitoring Methods
Address:
Phone: 720-551-1182
Fax:
Email: Tom@adv-m2.com
☑ These samples have been previously analyzed by Alpha

Project Information

Project Name: RIAC
Project Location: Warwick RI
Project #:
Project Manager: Tom Brault
ALPHA Quote #:

Turn-Around Time

☐ Standard ☐ RUSH *(only confirmed if pre-approved!)*

Date Due: **Time:**

Report Information - Data Deliverables

☐ FAX
☐ ADEx
Criteria Checker:
(Default based on Regulatory Criteria Indicated)
Other Formats:
☐ EMAIL (standard pdf report)
☐ Additional Deliverables:
Report to: (if different than Project Manager)

Billing Information

☐ Same as Client info PO #:

Regulatory Requirements/Report Limits

State/Fed	Program	Criteria

Other Project Specific Requirements/Comments:

All Columns Below Must Be Filled Out

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection Date	Start Time	End Time	Initial Vacuum	Final Vacuum	Sample Matrix*	Sampler's Initials	Can Size	I D Can	I D - Flow Controller	ANALYSIS TO-14A by TO-15	TO-15	TO-15 SIM	APH	FIXED GASES	TO-13A	TO-4 / TO-10	Sample Comments (i.e. PID)
01 HPX084	LDP20120203	2/3/12						AT											Wyatt
02 HPX040	FSP20120203																		Fire Station
03 HPX059	FVP20120203																		Field View
04 HPX000	PBP20120203																		Pembroke

*SAMPLE MATRIX CODES
AA = Ambient Air (Indoor/Outdoor)
SV = Soil Vapor/Landfill Gas/SVE
Other = Please Specify

Container Type

Relinquished By:	Date/Time	Received By:	Date/Time:
[signature]	2/9/12 4:00	[signature]	1413 2/10/12

Please print clearly, legibly and completely. Samples can not be logged in and turnaround time clock will not start until any ambiguities are resolved. All samples submitted are subject to Alpha's Terms and Conditions. See reverse side.

Form No: 101-02 (19-Jun-09)

ANALYTICAL REPORT

Lab Number:	L1202390
Client:	Advanced Monitoring Methods LLC 710 Golf Club Dr Castle Rock, CO 80108
ATTN:	Tom Brauch
Phone:	(720) 897-7792
Project Name:	RIAC
Project Number:	Not Specified
Report Date:	02/20/12

Certifications & Approvals: NY (11627), CT (PH-0141), NH (2206), NJ NELAP (MA015), RI (LAO00299), PA (68-02089), LA NELAP (03090), FL (E87814), TX (T104704419), WA (C954), DOD (L2217.01), USDA (Permit #P330-11-00109), US Army Corps of Engineers.

320 Forbes Boulevard, Mansfield, MA 02048-1806
508-822-9300 (Fax) 508-822-3288 800-624-9220 - www.alphalab.com

Project Name: RIAC
Project Number: Not Specified

Lab Number: L1202390
Report Date: 02/20/12

Alpha Sample ID	Client ID	Sample Location	Collection Date/Time
L1202390-01	LDP20120209	WARWICK, RI	02/09/12 00:00
L1202390-02	FSP20120209	WARWICK, RI	02/09/12 00:00
L1202390-03	FVP20120209	WARWICK, RI	02/09/12 00:00
L1202390-04	PBP20120209	WARWICK, RI	02/09/12 00:00

Project Name: RIAC
Project Number: Not Specified

Lab Number: L1202390
Report Date: 02/20/12

Case Narrative

The samples were received in accordance with the Chain of Custody and no significant deviations were encountered during the preparation or analysis unless otherwise noted. Sample Receipt, Container Information, and the Chain of Custody are located at the back of the report.

Results contained within this report relate only to the samples submitted under this Alpha Lab Number and meet all of the requirements of NELAC, for all NELAC accredited parameters. The data presented in this report is organized by parameter (i.e. VOC, SVOC, etc.). Sample specific Quality Control data (i.e. Surrogate Spike Recovery) is reported at the end of the target analyte list for each individual sample, followed by the Laboratory Batch Quality Control at the end of each parameter. If a sample was re-analyzed or re-extracted due to a required quality control corrective action and if both sets of data are reported, the Laboratory ID of the re-analysis or re-extraction is designated with an "R" or "RE", respectively. When multiple Batch Quality Control elements are reported (e.g. more than one LCS), the associated samples for each element are noted in the grey shaded header line of each data table. Any Laboratory Batch, Sample Specific % recovery or RPD value that is outside the listed Acceptance Criteria is bolded in the report. Soil/sediments, solids and tissues are reported on a dry weight basis unless otherwise noted. Definitions of all data qualifiers and acronyms used in this report are provided in the Glossary located at the back of the report.

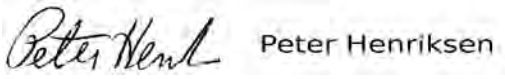
Please see the associated ADEx data file for a comparison of laboratory reporting limits that were achieved with the regulatory Numerical Standards requested on the Chain of Custody.

For additional information, please contact Client Services at 800-624-9220.

PAH's in Air TO-13

The surrogate recoveries for L1202390-01 were outside the acceptance criteria for Fluoranthene-d10 (32%), Benzo(a)Pyrene-d12 (26%); however, re-extraction could not be performed due to lack of additional sample. The results of the original analysis are reported; however, all associated compounds are considered to have a potential bias.

I, the undersigned, attest under the pains and penalties of perjury that, to the best of my knowledge and belief and based upon my personal inquiry of those responsible for providing the information contained in this analytical report, such information is accurate and complete. This certificate of analysis is not complete unless this page accompanies any and all pages of this report.

Authorized Signature:  Peter Henriksen

Title: Technical Director/Representative Date: 02/20/12

AIR

Project Name: RIAC
Lab Number: L1202390
Project Number: Not Specified
Report Date: 02/20/12

SAMPLE RESULTS

Lab ID:	L1202390-01	Date Collected:	02/09/12 00:00
Client ID:	LDP20120209	Date Received:	02/10/12
Sample Location:	WARWICK, RI	Field Prep:	Not Specified
Matrix:	Air Cartridge	Extraction Method:	EPA 3540C
Analytical Method:	1,8270C-SIM	Extraction Date:	02/10/12 15:53
Analytical Date:	02/17/12 00:11		
Analyst:	CM		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PAHs in Air - Mansfield Lab						
Naphthalene	19300		ng/cart	500	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Pyrene-d10	64		60-120
Benzo(b)fluoranthene-d12	64		60-120
Fluoranthene-d10	**32**	Q	60-120
Benzo(a)pyrene-d12	**26**	Q	60-120

Project Name: RIAC
Lab Number: L1202390
Project Number: Not Specified
Report Date: 02/20/12

SAMPLE RESULTS

Lab ID:	L1202390-02	Date Collected:	02/09/12 00:00
Client ID:	FSP20120209	Date Received:	02/10/12
Sample Location:	WARWICK, RI	Field Prep:	Not Specified
Matrix:	Air Cartridge	Extraction Method:	EPA 3540C
Analytical Method:	1,8270C-SIM	Extraction Date:	02/10/12 15:53
Analytical Date:	02/17/12 00:43		
Analyst:	CM		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PAHs in Air - Mansfield Lab						
Naphthalene	26000		ng/cart	500	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Pyrene-d10	97		60-120
Benzo(b)fluoranthene-d12	113		60-120
Fluoranthene-d10	95		60-120
Benzo(a)pyrene-d12	100		60-120

Project Name: RIAC
Lab Number: L1202390
Project Number: Not Specified
Report Date: 02/20/12

SAMPLE RESULTS

Lab ID:	L1202390-03	Date Collected:	02/09/12 00:00
Client ID:	FVP20120209	Date Received:	02/10/12
Sample Location:	WARWICK, RI	Field Prep:	Not Specified
Matrix:	Air Cartridge	Extraction Method:	EPA 3540C
Analytical Method:	1,8270C-SIM	Extraction Date:	02/10/12 15:53
Analytical Date:	02/17/12 01:15		
Analyst:	CM		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PAHs in Air - Mansfield Lab						
Naphthalene	30900		ng/cart	500	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Pyrene-d10	95		60-120
Benzo(b)fluoranthene-d12	108		60-120
Fluoranthene-d10	93		60-120
Benzo(a)pyrene-d12	95		60-120

Project Name: RIAC
Lab Number: L1202390
Project Number: Not Specified
Report Date: 02/20/12

SAMPLE RESULTS

Lab ID:	L1202390-04	Date Collected:	02/09/12 00:00
Client ID:	PBP20120209	Date Received:	02/10/12
Sample Location:	WARWICK, RI	Field Prep:	Not Specified
Matrix:	Air Cartridge	Extraction Method:	EPA 3540C
Analytical Method:	1,8270C-SIM	Extraction Date:	02/10/12 15:53
Analytical Date:	02/17/12 01:47		
Analyst:	CM		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PAHs in Air - Mansfield Lab						
Naphthalene	25500		ng/cart	500	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Pyrene-d10	97		60-120
Benzo(b)fluoranthene-d12	112		60-120
Fluoranthene-d10	94		60-120
Benzo(a)pyrene-d12	98		60-120

Project Name: RIAC
Project Number: Not Specified

Lab Number: L1202390
Report Date: 02/20/12

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8270C-SIM
Analytical Date: 02/16/12 20:59
Analyst: CM

Extraction Method: EPA 3540C
Extraction Date: 02/10/12 15:53

Parameter	Result	Qualifier	Units	RL	MDL
PAHs in Air - Mansfield Lab for sample(s): 01-04 Batch: WG517924-1					
Naphthalene	ND		ng/cart	500	--

Surrogate	%Recovery	Qualifier	Acceptance Criteria
Pyrene-d10	95		60-120
Benzo(b)fluoranthene-d12	107		60-120
Fluoranthene-d10	102		60-120
Benzo(a)pyrene-d12	100		60-120

Lab Control Sample Analysis

Batch Quality Control

Project Name: RIAC
Project Number: Not Specified

Lab Number: L1202390
Report Date: 02/20/12

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
PAHs in Air - Mansfield Lab Associated sample(s): 01-04 Batch: WG517924-2								
Naphthalene	110		-		60-120	-		

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
Pyrene-d10	95				60-120
Benzo(b)fluoranthene-d12	110				60-120
Fluoranthene-d10	104				60-120
Benzo(a)pyrene-d12	108				60-120

Project Name: RIAC
Project Number: Not Specified

Lab Number: L1202390
Report Date: 02/20/12

Sample Receipt and Container Information

Were project specific reporting limits specified? YES

Reagent H2O Preserved Vials Frozen on: NA

Cooler Information Custody Seal

Cooler	
A	Absent

Container Information

Container ID	Container Type	Cooler	pH	Temp deg C	Pres	Seal	Analysis(*)
L1202390-01A	PUF Air Cartridge - High or Low	A	NA	4.7	Y	Absent	A2-TO13(7),PUF-HI()
L1202390-02A	PUF Air Cartridge - High or Low	A	NA	4.7	Y	Absent	A2-TO13(7),PUF-HI()
L1202390-03A	PUF Air Cartridge - High or Low	A	NA	4.7	Y	Absent	A2-TO13(7),PUF-HI()
L1202390-04A	PUF Air Cartridge - High or Low	A	NA	4.7	Y	Absent	A2-TO13(7),PUF-HI()

*Values in parentheses indicate holding time in days

Project Name: RIAC **Lab Number:** L1202390

Project Number: Not Specified **Report Date:** 02/20/12

GLOSSARY

Acronyms

EPA - Environmental Protection Agency.

LCS - Laboratory Control Sample: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.

LCSD - Laboratory Control Sample Duplicate: Refer to LCS.

LFB - Laboratory Fortified Blank: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.

MDL - Method Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The MDL includes any adjustments from dilutions, concentrations or moisture content, where applicable.

MS - Matrix Spike Sample: A sample prepared by adding a known mass of target analyte to a specified amount of matrix sample for which an independent estimate of target analyte concentration is available.

MSD - Matrix Spike Sample Duplicate: Refer to MS.

NA - Not Applicable.

NC - Not Calculated: Term is utilized when one or more of the results utilized in the calculation are non-detect at the parameter's reporting unit.

NI - Not Ignitable.

RL - Reporting Limit: The value at which an instrument can accurately measure an analyte at a specific concentration. The RL includes any adjustments from dilutions, concentrations or moisture content, where applicable.

RPD - Relative Percent Difference: The results from matrix and/or matrix spike duplicates are primarily designed to assess the precision of analytical results in a given matrix and are expressed as relative percent difference (RPD). Values which are less than five times the reporting limit for any individual parameter are evaluated by utilizing the absolute difference between the values; although the RPD value will be provided in the report.

SRM - Standard Reference Material: A reference sample of a known or certified value that is of the same or similar matrix as the associated field samples.

Footnotes

1 - The reference for this analyte should be considered modified since this analyte is absent from the target analyte list of the original method.

Terms

Analytical Method: Both the document from which the method originates and the analytical reference method. (Example: EPA 8260B is shown as 1,8260B.) The codes for the reference method documents are provided in the References section of the Addendum.

Data Qualifiers

A - Spectra identified as "Aldol Condensation Product".

B - The analyte was detected above the reporting limit in the associated method blank. Flag only applies to associated field samples that have detectable concentrations of the analyte at less than five times (5x) the concentration found in the blank. For MCP-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For DOD-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank AND the analyte was detected above one-half the reporting limit (or above the reporting limit for common lab contaminants) in the associated method blank. For NJ-Air-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte above the reporting limit.

C - Co-elution: The target analyte co-elutes with a known lab standard (i.e. surrogate, internal standards, etc.) for co-extracted analyses.

D - Concentration of analyte was quantified from diluted analysis. Flag only applies to field samples that have detectable concentrations of the analyte.

E - Concentration of analyte exceeds the range of the calibration curve and/or linear range of the instrument.

G - The concentration may be biased high due to matrix interferences (i.e, co-elution) with non-target compound(s). The result should be considered estimated.

H - The analysis of pH was performed beyond the regulatory-required holding time of 15 minutes from the time of sample collection.

I - The RPD between the results for the two columns exceeds the method-specified criteria; however, the lower value has been reported due to obvious interference.

M - Reporting Limit (RL) exceeds the MCP CAM Reporting Limit for this analyte.

NJ - Presumptive evidence of compound. This represents an estimated concentration for Tentatively Identified Compounds (TICs), where the identification is based on a mass spectral library search.

Report Format: Data Usability Report

Project Name:	RIAC	**Lab Number:**	L1202390
Project Number:	Not Specified	**Report Date:**	02/20/12

Data Qualifiers

P - The RPD between the results for the two columns exceeds the method-specified criteria.

Q - The quality control sample exceeds the associated acceptance criteria. For DOD-related projects, LCS and/or Continuing Calibration Standard exceedences are also qualified on all associated sample results. Note: This flag is not applicable for matrix spike recoveries when the sample concentration is greater than 4x the spike added or for batch duplicate RPD when the sample concentrations are less than 5x the RL. (Metals only.)

R - Analytical results are from sample re-analysis.

RE - Analytical results are from sample re-extraction.

J - Estimated value. This represents an estimated concentration for Tentatively Identified Compounds (TICs).

ND - Not detected at the reporting limit (RL) for the sample.

Report Format: Data Usability Report

Project Name: RIAC
Project Number: Not Specified
Lab Number: L1202390
Report Date: 02/20/12

REFERENCES

1 Test Methods for Evaluating Solid Waste: Physical/Chemical Methods. EPA SW-846. Third Edition. Updates I - IIIA, 1997.

LIMITATION OF LIABILITIES

Alpha Analytical performs services with reasonable care and diligence normal to the analytical testing laboratory industry. In the event of an error, the sole and exclusive responsibility of Alpha Analytical shall be to re-perform the work at it's own expense. In no event shall Alpha Analytical be held liable for any incidental, consequential or special damages, including but not limited to, damages in any way connected with the use of, interpretation of, information or analysis provided by Alpha Analytical.

We strongly urge our clients to comply with EPA protocol regarding sample volume, preservation, cooling, containers, sampling procedures, holding time and splitting of samples in the field.

Certificate/Approval Program Summary

Last revised January 30, 2012 – Mansfield Facility

The following list includes only those analytes/methods for which certification/approval is currently held.
For a complete listing of analytes for the referenced methods, please contact your Alpha Customer Service Representative.

Connecticut Department of Public Health Certificate/Lab ID: PH-0141.

Wastewater/Non-Potable Water (Inorganic Parameters: pH, Turbidity, Conductivity, Alkalinity, Aluminum, Antimony, Arsenic, Barium, Beryllium, Boron, Cadmium, Calcium, Chromium, Cobalt, Copper, Iron, Lead, Magnesium, Manganese, Mercury, Molybdenum, Nickel, Potassium, Selenium, Silver, Sodium, Strontium, Thallium, Tin, Vanadium, Zinc, Total Residue (Solids), Total Suspended Solids (non-filterable), Total Cyanide. Organic Parameters: PCBs, Organochlorine Pesticides, Technical Chlordane, Toxaphene, Acid Extractables, Benzidines, Phthalate Esters, Nitrosamines, Nitroaromatics & Isophorone, PAHs, Haloethers, Chlorinated Hydrocarbons, Volatile Organics.)

Solid Waste/Soil (Inorganic Parameters: pH, Aluminum, Antimony, Arsenic, Barium, Beryllium, Cadmium, Calcium, Chromium, Hexavalent Chromium, Cobalt, Copper, Iron, Lead, Magnesium, Manganese, Mercury, Molybdenum, Nickel, Potassium, Selenium, Silver, Sodium, Thallium, Vanadium, Zinc, Total Organic Carbon, Total Cyanide, Corrosivity, TCLP 1311. Organic Parameters: PCBs, Organochlorine Pesticides, Technical Chlordane, Toxaphene, Volatile Organics, Acid Extractables, Benzidines, Phthalates, Nitrosamines, Nitroaromatics & Cyclic Ketones, PAHs, Haloethers, Chlorinated Hydrocarbons.)

Florida Department of Health Certificate/Lab ID: E87814. ***NELAP Accredited.***

Non-Potable Water (Inorganic Parameters: SM2320B, SM2540D, SM2540G.)

Solid & Chemical Materials (Inorganic Parameters: 6020, 7470, 7471, 9045. Organic Parameters: EPA 8260, 8270, 8082, 8081.)

Air & Emissions (EPA TO-15.)

Louisiana Department of Environmental Quality Certificate/Lab ID: 03090. ***NELAP Accredited.***

Non-Potable Water (Inorganic Parameters: EPA 180.1, 245.7, 1631E, 3020, 6020A, 7470A, 9040, 9050A, SM2320B, 2540D, 2540G, 4500H-B, Organic Parameters: EPA 3510C, 3580A, 3630C, 3640A, 3660B, 3665A, 5030B, 8015D, 3570, 8081B, 8082A, 8260B, 8270C, 8270D.)

Solid & Chemical Materials (Inorganic Parameters: EPA 1311, 3050, 3051A, 3060A, 6020A, 7196A, 7470A, 7471B, 7474, 9040B, 9045C, 9060. Organic Parameters: EPA 3540C, 3570B, 3580A, 3630C, 3640A, 3660, 3665A, 5035, 8015D, 8081B, 8082A, 8260B, 8270C, 8270D.)

Biological Tissue (Inorganic Parameters: EPA 6020A. Organic Parameters: EPA 3570, 3510C, 3610B, 3630C, 3640A, 8270C, 8270D.)

Air & Emissions (EPA TO-15.)

New Hampshire Department of Environmental Services Certificate/Lab ID: 2206. ***NELAP Accredited.***

Non-Potable Water (Inorganic Parameters: EPA 245.7, 1631E, 6020A, 7470A, 9040B, 9050A, SM2540D, 2540G, 4500H+B, 2320B. Organic Parameters: EPA 8081B, 8082A, 8260B, 8270C, 8015D.)

Solid & Chemical Materials (Inorganic Parameters: SW-846 1311, 1312, 3050B, 3051A, 3060A, 6020A, 7471A, 9040B, 9045C, 7196A. Organic Parameters: SW-846 3540C, 3580A, 3630C, 3640A, 3660B, 3665A, 5035, 8260B, 8270C, 8015D, 8082A, 8081B.)

New Jersey Department of Environmental Protection Certificate/Lab ID: MA015. ***NELAP Accredited.***

Non-Potable Water (Inorganic Parameters: SW-846 1312, 3010, 3020A, SM2320B, SM2540D, 2540G, EPA 180.1, 1631E, SW-846 7470A, 9040B, 6020, 9050A. Organic Parameters: SW-846 3510C, 3580A, 5030B, 5035L, 5035H, 3630C, 3640A, 3660B, 3665A, 8015B 8081A, 8082, 8260B, 8270C)

Solid & Chemical Materials (Inorganic Parameters: SW-846 6020, 1311, 1312, 3050B, 3051, 3060A, 7196A, 7470A, 7471A, 7474, 9040B, 9045C, 9060. Organic Parameters: SW-846 3540C, 3570, 3580A, 5030B, 5035L, 5035H, 3630C, 3640A, 3660B, 3665A, 8081A, 8082, 8260B, 8270C, 8015B.)

Atmospheric Organic Parameters (EPA TO-15)

Biological Tissue (Inorganic Parameters: SW-846 6020 Organic Parameters: SW-846 8270C, 3510C, 3570, 3610C, 3630C, 3640A)

New York Department of Health Certificate/Lab ID: 11627. ***NELAP Accredited.***

Non-Potable Water (Inorganic Parameters: SM2320B, SM2540D, EPA 200.8, 6020, 1631E, 245.1, 245.7, 7470A, 9014, 9040B, 9050, 120.1, 4500CN-E, 4500H-B, EPA 376.2, 180.1, 3020A. Organic Parameters: EPA 8260B, 8270C, 8081A, 8082, 3510C, 5030B.)

Solid & Hazardous Waste (Inorganic Parameters: EPA 6020, 7196A, 3060A, 7471A, 7474, 9014, 9040B, 9045C, 9010B. Organic Parameters: EPA 8260B, 8270C, 8081A, DRO 8015B, 8082, 1311, 1312, 3050B, 3580, 3570, 3051, 5035, 5030B.)

Air & Emissions (EPA TO-15.)

Pennsylvania Certificate/Lab ID: 68-02089 ***NELAP Accredited***

Solid & Hazardous Waste (Inorganic Parameters: EPA 6020A,7471B, 7474. Organic Parameters: EPA3050B, 3540C, 3630C, 8270C, 8081B, 8082A.)

Rhode Island Department of Health Certificate/Lab ID: LAO00299. ***NELAP Accredited via LA-DEQ.***

Refer to LA-DEQ Certificate for Non-Potable Water.

Texas Commission of Environmental Quality Certificate/Lab ID: T104704419-08-TX. ***NELAP Accredited.***

Solid & Chemical Materials (Inorganic Parameters: EPA 6020, 7470, 7471, 1311, 7196, 9040, 9045, 9060. Organic Parameters: EPA 8015, 8270, 8260, 8081, 8082.)

Air (Organic Parameters: EPA TO-15)

Washington State Department of Ecology Certificate/Lab ID: C954. *Non-Potable Water* (Inorganic Parameters: SM2540D, 180.1, 1631E.)

Solid & Chemical Materials (Inorganic Parameters: EPA 6020, 7470, 7471, 7474, 9045C, 9050A, 9060. Organic Parameters: EPA 8081, 8082, 8015 Mod, 8270.)

Virginia Division of Consolidated Laboratory Services Certificate/Lab ID:460194. ***NELAP Accredited.***

Non-Potable Water (Inorganic Parameters:EPA 3020A,6020A,245.7,9040B,SM4500H-B. Organic Parameters: EPA 3510C,3640A,3660B,3665A,8270C,8270D,8082A,8081B.)

Solid & Chemical Materials (Inorganic Parameters: EPA 6020A,7470A,7471B,9040B,9045C,3050B,3051. Organic Parameters: EPA 3540C, 3580A, 3630C, 3640A, 3660B, 3665A, 3570, 8270C, 8270D, 8081B, 8082A, 8015D.)

U.S. Army Corps of Engineers

Department of Defense, L-A-B Certificate/Lab ID: L2217.01.

Non-Potable Water (Inorganic Parameters: EPA 6020A, SM4500H-B. Organic Parameters: 3020A, 3510C, 5030B, 8260B, 8270C, 8270C-ALK-PAH, 8082, 8081A, 8015D-SHC, 8015D.)

Solid & Hazardous Waste (Inorganic Parameters: EPA 1311, 1312, 3050B, 6020A, 7471A, 9045C, 9060, SM 2540G, ASTM D422-63. Organic Parameters: EPA 3580A, 3570, 3540C, 5035A, 8260B, 8270C, 8270-ALK-PAH, 8082, 8081A, 8015D-SHC, 8015D.

Air & Emissions (EPA TO-15.)

Analytes Not Accredited by NELAP

Certification is not available by NELAP for the following analytes: **8270C:** Biphenyl. **TO-15:** Halothane, 2,4,4-Trimethyl-2-pentene, 2,4,4-Trimethyl-1-pentene, Thiophene, 2-Methylthiophene, 3-Methylthiophene, 2-Ethylthiophene, 1,2,3-Trimethylbenzene, Indan, Indene, 1,2,4,5-Tetramethylbenzene, Benzothiophene, 2-Methylnaphthalene, 1-Methylnaphthalene.

AIR ANALYSIS

PAGE 1 OF 1

CHAIN OF CUSTODY

320 Forbes Blvd, Mansfield, MA 02048
TEL: 508-822-9300 FAX: 508-822-3288

Serial_No:02221

Date Rec'd in Lab:

ALPHA Job #: L1202390

Client Information

Client: Advanced Monitoring Methods

Address:

Phone: 720-581-1182

Fax:

Email: Tom@advm2.com

☐ These samples have been previously analyzed by Alpha

Project Information

Project Name: RIAC

Project Location: Warwick

Project #:

Project Manager: Brad Tom

ALPHA Quote #:

Turn-Around Time

☐ Standard ☐ RUSH *(only confirmed if pre-approved!)*

Date Due: **Time:**

Report Information - Data Deliverables

☐ FAX
☐ ADEx
Criteria Checker:
(Default based on Regulatory Criteria Indicated)
Other Formats:
☐ EMAIL (standard pdf report)
☐ Additional Deliverables:

Report to: (if different than Project Manager)

Billing Information

☐ Same as Client info PO #:

Regulatory Requirements/Report Limits

State/Fed	Program	Criteria

Other Project Specific Requirements/Comments:

All Columns Below Must Be Filled Out

	ALPHA Lab ID (Lab Use Only)	Sample ID	Collection Date	Start Time	End Time	Initial Vacuum	Final Vacuum	Sample Matrix*	Sampler's Initials	Can Size	ID Can	ID - Flow Controller	ANALYSIS: TO-14A by TO-15	TO-15	TO-15 SIM	APH	FIXED GASES	TO-13A	TO-4 / TO-10	Sample Comments (i.e. PID)
01	HPX0CL	LDP20120209	2/9/12						LE											Lydick
02	HPX090	FSP20120209	2/9/12																	Fire Station
03	HPX051	FVP20120209	2/9/12																	Field View
04	HPX083	PBP20120209	2/9/12																	Pembroke

*SAMPLE MATRIX CODES

AA = Ambient Air (Indoor/Outdoor)
SV = Soil Vapor/Landfill Gas/SVE
Other = Please Specify

Container Type

Please print clearly, legibly and completely. Samples can not be logged in and turnaround time clock will not start until any ambiguities are resolved. All samples submitted are subject to Alpha's Terms and Conditions. See reverse side.

Relinquished By:	Date/Time	Received By:	Date/Time:
Laura Ernst	2/10/12 14:13		1413 2/10/12

Form No: 101-02 (19-Jun-09)

ANALYTICAL REPORT

Lab Number:	L1202775
Client:	Advanced Monitoring Methods LLC 710 Golf Club Dr Castle Rock, CO 80108
ATTN:	Tom Brauch
Phone:	(720) 897-7792
Project Name:	RI AIRPORT CORPORATION
Project Number:	32-1-5
Report Date:	02/29/12

Certifications & Approvals: NY (11627), CT (PH-0141), NH (2206), NJ NELAP (MA015), RI (LAO00299), PA (68-02089), LA NELAP (03090), FL (E87814), TX (T104704419), WA (C954), DOD (L2217.01), USDA (Permit #P330-11-00109), US Army Corps of Engineers.

320 Forbes Boulevard, Mansfield, MA 02048-1806
508-822-9300 (Fax) 508-822-3288 800-624-9220 - www.alphalab.com

Project Name: RI AIRPORT CORPORATION
Project Number: 32-1-5

Lab Number: L1202775
Report Date: 02/29/12

Alpha Sample ID	Client ID	Sample Location	Collection Date/Time
L1202775-01	LD-P-20120215	WARWICK, RI	02/15/12 00:00
L1202775-02	PB-P-20120215	WARWICK, RI	02/15/12 00:00
L1202775-03	FS-P-20120215	WARWICK, RI	02/15/12 00:00
L1202775-04	FV-P-20120215	WARWICK, RI	02/15/12 00:00

Project Name: RI AIRPORT CORPORATION **Lab Number:** L1202775
Project Number: 32-1-5 **Report Date:** 02/29/12

Case Narrative

The samples were received in accordance with the Chain of Custody and no significant deviations were encountered during the preparation or analysis unless otherwise noted. Sample Receipt, Container Information, and the Chain of Custody are located at the back of the report.

Results contained within this report relate only to the samples submitted under this Alpha Lab Number and meet all of the requirements of NELAC, for all NELAC accredited parameters. The data presented in this report is organized by parameter (i.e. VOC, SVOC, etc.). Sample specific Quality Control data (i.e. Surrogate Spike Recovery) is reported at the end of the target analyte list for each individual sample, followed by the Laboratory Batch Quality Control at the end of each parameter. If a sample was re-analyzed or re-extracted due to a required quality control corrective action and if both sets of data are reported, the Laboratory ID of the re-analysis or re-extraction is designated with an "R" or "RE", respectively. When multiple Batch Quality Control elements are reported (e.g. more than one LCS), the associated samples for each element are noted in the grey shaded header line of each data table. Any Laboratory Batch, Sample Specific % recovery or RPD value that is outside the listed Acceptance Criteria is bolded in the report. Soil/sediments, solids and tissues are reported on a dry weight basis unless otherwise noted. Definitions of all data qualifiers and acronyms used in this report are provided in the Glossary located at the back of the report.

Please see the associated ADEx data file for a comparison of laboratory reporting limits that were achieved with the regulatory Numerical Standards requested on the Chain of Custody.

For additional information, please contact Client Services at 800-624-9220.

PAHs in Air

L1202775-01 through 04 have elevated detection limits due to the dilution required by the elevated concentrations of target compounds in the samples.

The surrogate recoveries for WG519504-1 were outside the acceptance criteria for Pyrene-d10 (50%), Benzo(b)Fluoranthene-d12 (51%), Fluoranthene-d10 (52%), Benzo(a)Pyrene-d12 (44%); however, re-extraction could not be performed due to lack of additional sample. The results of the original analysis are reported; however, all associated compounds are considered to have a potential bias.

I, the undersigned, attest under the pains and penalties of perjury that, to the best of my knowledge and belief and based upon my personal inquiry of those responsible for providing the information contained in this analytical report, such information is accurate and complete. This certificate of analysis is not complete unless this page accompanies any and all pages of this report.

Authorized Signature: Peter Henriksen

Title: Technical Director/Representative Date: 02/29/12

AIR

Project Name: RI AIRPORT CORPORATION **Lab Number:** L1202775

Project Number: 32-1-5 **Report Date:** 02/29/12

SAMPLE RESULTS

Lab ID:	L1202775-01	Date Collected:	02/15/12 00:00
Client ID:	LD-P-20120215	Date Received:	02/17/12
Sample Location:	WARWICK, RI	Field Prep:	Not Specified
Matrix:	Air Cartridge	Extraction Method:	EPA 3540C
Analytical Method:	1,8270C-SIM	Extraction Date:	02/21/12 16:09
Analytical Date:	02/27/12 10:11		
Analyst:	CM		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PAHs in Air - Mansfield Lab						
Naphthalene	53700		ng/cart	1000	--	2

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Pyrene-d10	86		60-120
Benzo(b)fluoranthene-d12	105		60-120
Fluoranthene-d10	105		60-120
Benzo(a)pyrene-d12	100		60-120

Project Name: RI AIRPORT CORPORATION **Lab Number:** L1202775

Project Number: 32-1-5 **Report Date:** 02/29/12

SAMPLE RESULTS

Lab ID:	L1202775-02	Date Collected:	02/15/12 00:00
Client ID:	PB-P-20120215	Date Received:	02/17/12
Sample Location:	WARWICK, RI	Field Prep:	Not Specified
Matrix:	Air Cartridge	Extraction Method:	EPA 3540C
Analytical Method:	1,8270C-SIM	Extraction Date:	02/21/12 16:09
Analytical Date:	02/27/12 10:44		
Analyst:	CM		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PAHs in Air - Mansfield Lab						
Naphthalene	53400		ng/cart	1000	--	2

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Pyrene-d10	90		60-120
Benzo(b)fluoranthene-d12	110		60-120
Fluoranthene-d10	102		60-120
Benzo(a)pyrene-d12	105		60-120

Project Name: RI AIRPORT CORPORATION **Lab Number:** L1202775

Project Number: 32-1-5 **Report Date:** 02/29/12

SAMPLE RESULTS

Lab ID:	L1202775-03	Date Collected:	02/15/12 00:00
Client ID:	FS-P-20120215	Date Received:	02/17/12
Sample Location:	WARWICK, RI	Field Prep:	Not Specified
Matrix:	Air Cartridge	Extraction Method:	EPA 3540C
Analytical Method:	1,8270C-SIM	Extraction Date:	02/21/12 16:09
Analytical Date:	02/27/12 11:16		
Analyst:	CM		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PAHs in Air - Mansfield Lab						
Naphthalene	51800		ng/cart	1000	--	2

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Pyrene-d10	85		60-120
Benzo(b)fluoranthene-d12	103		60-120
Fluoranthene-d10	98		60-120
Benzo(a)pyrene-d12	95		60-120

Project Name: RI AIRPORT CORPORATION **Lab Number:** L1202775

Project Number: 32-1-5 **Report Date:** 02/29/12

SAMPLE RESULTS

Lab ID:	L1202775-04	Date Collected:	02/15/12 00:00
Client ID:	FV-P-20120215	Date Received:	02/17/12
Sample Location:	WARWICK, RI	Field Prep:	Not Specified
Matrix:	Air Cartridge	Extraction Method:	EPA 3540C
Analytical Method:	1,8270C-SIM	Extraction Date:	02/21/12 16:09
Analytical Date:	02/27/12 11:48		
Analyst:	CM		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PAHs in Air - Mansfield Lab						
Naphthalene	60600		ng/cart	1000	--	2

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Pyrene-d10	90		60-120
Benzo(b)fluoranthene-d12	111		60-120
Fluoranthene-d10	101		60-120
Benzo(a)pyrene-d12	100		60-120

Project Name: RI AIRPORT CORPORATION
Project Number: 32-1-5

Lab Number: L1202775
Report Date: 02/29/12

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8270C-SIM
Analytical Date: 02/27/12 09:07
Analyst: CM

Extraction Method: EPA 3540C
Extraction Date: 02/21/12 16:09

Parameter	Result	Qualifier	Units	RL	MDL
PAHs in Air - Mansfield Lab for sample(s): 01-04 Batch: WG519504-1					
Naphthalene	ND		ng/cart	500	--

Surrogate	%Recovery	Qualifier	Acceptance Criteria
Pyrene-d10	**50**	Q	60-120
Benzo(b)fluoranthene-d12	**51**	Q	60-120
Fluoranthene-d10	**52**	Q	60-120
Benzo(a)pyrene-d12	**44**	Q	60-120

Lab Control Sample Analysis

Batch Quality Control

Project Name: RI AIRPORT CORPORATION

Project Number: 32-1-5

Lab Number: L1202775

Report Date: 02/29/12

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
PAHs in Air - Mansfield Lab Associated sample(s): 01-04 Batch: WG519504-2								
Naphthalene	79		-		60-120	-		

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
Pyrene-d10	70				60-120
Benzo(b)fluoranthene-d12	79				60-120
Fluoranthene-d10	74				60-120
Benzo(a)pyrene-d12	71				60-120

Project Name: RI AIRPORT CORPORATION
Project Number: 32-1-5

Lab Number: L1202775
Report Date: 02/29/12

Sample Receipt and Container Information

Were project specific reporting limits specified? YES

Reagent H2O Preserved Vials Frozen on: NA

Cooler Information **Custody Seal**

Cooler	
A	Absent

Container Information

Container ID	Container Type	Cooler	pH	Temp deg C	Pres	Seal	Analysis(*)
L1202775-01A	PUF Air Cartridge - High or Low	A	N/A		Y	Absent	A2-TO13(7)
L1202775-02A	PUF Air Cartridge - High or Low	A	N/A		Y	Absent	A2-TO13(7)
L1202775-03A	PUF Air Cartridge - High or Low	A	N/A		Y	Absent	A2-TO13(7)
L1202775-04A	PUF Air Cartridge - High or Low	A	N/A		Y	Absent	A2-TO13(7)

*Values in parentheses indicate holding time in days

Project Name:	RI AIRPORT CORPORATION	**Lab Number:**	L1202775
Project Number:	32-1-5	**Report Date:**	02/29/12

GLOSSARY

Acronyms

EPA	- Environmental Protection Agency.
LCS	- Laboratory Control Sample: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.
LCSD	- Laboratory Control Sample Duplicate: Refer to LCS.
LFB	- Laboratory Fortified Blank: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.
MDL	- Method Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The MDL includes any adjustments from dilutions, concentrations or moisture content, where applicable.
MS	- Matrix Spike Sample: A sample prepared by adding a known mass of target analyte to a specified amount of matrix sample for which an independent estimate of target analyte concentration is available.
MSD	- Matrix Spike Sample Duplicate: Refer to MS.
NA	- Not Applicable.
NC	- Not Calculated: Term is utilized when one or more of the results utilized in the calculation are non-detect at the parameter's reporting unit.
NI	- Not Ignitable.
RL	- Reporting Limit: The value at which an instrument can accurately measure an analyte at a specific concentration. The RL includes any adjustments from dilutions, concentrations or moisture content, where applicable.
RPD	- Relative Percent Difference: The results from matrix and/or matrix spike duplicates are primarily designed to assess the precision of analytical results in a given matrix and are expressed as relative percent difference (RPD). Values which are less than five times the reporting limit for any individual parameter are evaluated by utilizing the absolute difference between the values; although the RPD value will be provided in the report.
SRM	- Standard Reference Material: A reference sample of a known or certified value that is of the same or similar matrix as the associated field samples.

Footnotes

1	- The reference for this analyte should be considered modified since this analyte is absent from the target analyte list of the original method.

Terms

Analytical Method: Both the document from which the method originates and the analytical reference method. (Example: EPA 8260B is shown as 1,8260B.) The codes for the reference method documents are provided in the References section of the Addendum.

Data Qualifiers

A	- Spectra identified as "Aldol Condensation Product".
B	- The analyte was detected above the reporting limit in the associated method blank. Flag only applies to associated field samples that have detectable concentrations of the analyte at less than five times (5x) the concentration found in the blank. For MCP-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For DOD-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank AND the analyte was detected above one-half the reporting limit (or above the reporting limit for common lab contaminants) in the associated method blank. For NJ-Air-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte above the reporting limit.
C	- Co-elution: The target analyte co-elutes with a known lab standard (i.e. surrogate, internal standards, etc.) for co-extracted analyses.
D	- Concentration of analyte was quantified from diluted analysis. Flag only applies to field samples that have detectable concentrations of the analyte.
E	- Concentration of analyte exceeds the range of the calibration curve and/or linear range of the instrument.
G	- The concentration may be biased high due to matrix interferences (i.e, co-elution) with non-target compound(s). The result should be considered estimated.
H	- The analysis of pH was performed beyond the regulatory-required holding time of 15 minutes from the time of sample collection.
I	- The RPD between the results for the two columns exceeds the method-specified criteria; however, the lower value has been reported due to obvious interference.
M	- Reporting Limit (RL) exceeds the MCP CAM Reporting Limit for this analyte.
NJ	- Presumptive evidence of compound. This represents an estimated concentration for Tentatively Identified Compounds (TICs), where the identification is based on a mass spectral library search.

Report Format: Data Usability Report

Project Name:	RI AIRPORT CORPORATION	**Lab Number:**	L1202775
Project Number:	32-1-5	**Report Date:**	02/29/12

Data Qualifiers

P - The RPD between the results for the two columns exceeds the method-specified criteria.

Q - The quality control sample exceeds the associated acceptance criteria. For DOD-related projects, LCS and/or Continuing Calibration Standard exceedences are also qualified on all associated sample results. Note: This flag is not applicable for matrix spike recoveries when the sample concentration is greater than 4x the spike added or for batch duplicate RPD when the sample concentrations are less than 5x the RL. (Metals only.)

R - Analytical results are from sample re-analysis.

RE - Analytical results are from sample re-extraction.

J - Estimated value. This represents an estimated concentration for Tentatively Identified Compounds (TICs).

ND - Not detected at the reporting limit (RL) for the sample.

Report Format: Data Usability Report

REFERENCES

1 Test Methods for Evaluating Solid Waste: Physical/Chemical Methods. EPA SW-846. Third Edition. Updates I - IIIA, 1997.

LIMITATION OF LIABILITIES

Alpha Analytical performs services with reasonable care and diligence normal to the analytical testing laboratory industry. In the event of an error, the sole and exclusive responsibility of Alpha Analytical shall be to re-perform the work at it's own expense. In no event shall Alpha Analytical be held liable for any incidental, consequential or special damages, including but not limited to, damages in any way connected with the use of, interpretation of, information or analysis provided by Alpha Analytical.

We strongly urge our clients to comply with EPA protocol regarding sample volume, preservation, cooling, containers, sampling procedures, holding time and splitting of samples in the field.

Certificate/Approval Program Summary

Last revised January 30, 2012 – Mansfield Facility

The following list includes only those analytes/methods for which certification/approval is currently held.
For a complete listing of analytes for the referenced methods, please contact your Alpha Customer Service Representative.

Connecticut Department of Public Health Certificate/Lab ID: PH-0141.

Wastewater/Non-Potable Water (Inorganic Parameters: pH, Turbidity, Conductivity, Alkalinity, Aluminum, Antimony, Arsenic, Barium, Beryllium, Boron, Cadmium, Calcium, Chromium, Cobalt, Copper, Iron, Lead, Magnesium, Manganese, Mercury, Molybdenum, Nickel, Potassium, Selenium, Silver, Sodium, Strontium, Thallium, Tin, Vanadium, Zinc, Total Residue (Solids), Total Suspended Solids (non-filterable), Total Cyanide. Organic Parameters: PCBs, Organochlorine Pesticides, Technical Chlordane, Toxaphene, Acid Extractables, Benzidines, Phthalate Esters, Nitrosamines, Nitroaromatics & Isophorone, PAHs, Haloethers, Chlorinated Hydrocarbons, Volatile Organics.)

Solid Waste/Soil (Inorganic Parameters: pH, Aluminum, Antimony, Arsenic, Barium, Beryllium, Cadmium, Calcium, Chromium, Hexavalent Chromium, Cobalt, Copper, Iron, Lead, Magnesium, Manganese, Mercury, Molybdenum, Nickel, Potassium, Selenium, Silver, Sodium, Thallium, Vanadium, Zinc, Total Organic Carbon, Total Cyanide, Corrosivity, TCLP 1311. Organic Parameters: PCBs, Organochlorine Pesticides, Technical Chlordane, Toxaphene, Volatile Organics, Acid Extractables, Benzidines, Phthalates, Nitrosamines, Nitroaromatics & Cyclic Ketones, PAHs, Haloethers, Chlorinated Hydrocarbons.)

Florida Department of Health Certificate/Lab ID: E87814. ***NELAP Accredited.***

Non-Potable Water (Inorganic Parameters: SM2320B, SM2540D, SM2540G.)

Solid & Chemical Materials (Inorganic Parameters: 6020, 7470, 7471, 9045. Organic Parameters: EPA 8260, 8270, 8082, 8081.)

Air & Emissions (EPA TO-15.)

Louisiana Department of Environmental Quality Certificate/Lab ID: 03090. ***NELAP Accredited.***

Non-Potable Water (Inorganic Parameters: EPA 180.1, 245.7, 1631E, 3020, 6020A, 7470A, 9040, 9050A, SM2320B, 2540D, 2540G, 4500H-B, Organic Parameters: EPA 3510C, 3580A, 3630C, 3640A, 3660B, 3665A, 5030B, 8015D, 3570, 8081B, 8082A, 8260B, 8270C, 8270D.)

Solid & Chemical Materials (Inorganic Parameters: EPA 1311, 3050, 3051A, 3060A, 6020A, 7196A, 7470A, 7471B, 7474, 9040B, 9045C, 9060. Organic Parameters: EPA 3540C, 3570B, 3580A, 3630C, 3640A, 3660, 3665A, 5035, 8015D, 8081B, 8082A, 8260B, 8270C, 8270D.)

Biological Tissue (Inorganic Parameters: EPA 6020A. Organic Parameters: EPA 3570, 3510C, 3610B, 3630C, 3640A, 8270C, 8270D.)

Air & Emissions (EPA TO-15.)

New Hampshire Department of Environmental Services Certificate/Lab ID: 2206. ***NELAP Accredited.***

Non-Potable Water (Inorganic Parameters: EPA 245.7, 1631E, 6020A, 7470A, 9040B, 9050A, SM2540D, 2540G, 4500H+B, 2320B. Organic Parameters: EPA 8081B, 8082A, 8260B, 8270C, 8015D.)

Solid & Chemical Materials (Inorganic Parameters: SW-846 1311, 1312, 3050B, 3051A, 3060A, 6020A, 7471A, 9040B, 9045C, 7196A. Organic Parameters: SW-846 3540C, 3580A, 3630C, 3640A, 3660B, 3665A, 5035, 8260B, 8270C, 8015D, 8082A, 8081B.)

New Jersey Department of Environmental Protection Certificate/Lab ID: MA015. ***NELAP Accredited.***

Non-Potable Water (Inorganic Parameters: SW-846 1312, 3010, 3020A, SM2320B, SM2540D, 2540G, EPA 180.1, 1631E, SW-846 7470A, 9040B, 6020, 9050A. Organic Parameters: SW-846 3510C, 3580A, 5030B, 5035L, 5035H, 3630C, 3640A, 3660B, 3665A, 8015B 8081A, 8082, 8260B, 8270C)

Solid & Chemical Materials (Inorganic Parameters: SW-846 6020, 1311, 1312, 3050B, 3051, 3060A, 7196A, 7470A, 7471A, 7474, 9040B, 9045C, 9060. Organic Parameters: SW-846 3540C, 3570, 3580A, 5030B, 5035L, 5035H, 3630C, 3640A, 3660B, 3665A, 8081A, 8082, 8260B, 8270C, 8015B.)

Atmospheric Organic Parameters (EPA TO-15)

Biological Tissue (Inorganic Parameters: SW-846 6020 Organic Parameters: SW-846 8270C, 3510C, 3570, 3610C, 3630C, 3640A)

New York Department of Health Certificate/Lab ID: 11627. ***NELAP Accredited.***

Non-Potable Water (Inorganic Parameters: SM2320B, SM2540D, EPA 200.8, 6020, 1631E, 245.1, 245.7, 7470A, 9014, 9040B, 9050, 120.1, 4500CN-E, 4500H-B, EPA 376.2, 180.1, 3020A. Organic Parameters: EPA 8260B, 8270C, 8081A, 8082, 3510C, 5030B.)

Solid & Hazardous Waste (Inorganic Parameters: EPA 6020, 7196A, 3060A, 7471A, 7474, 9014, 9040B, 9045C, 9010B. Organic Parameters: EPA 8260B, 8270C, 8081A, DRO 8015B, 8082, 1311, 1312, 3050B, 3580, 3570, 3051, 5035, 5030B.)

Air & Emissions (EPA TO-15.)

Pennsylvania Certificate/Lab ID: 68-02089 ***NELAP Accredited***

Solid & Hazardous Waste (Inorganic Parameters: EPA 6020A,7471B, 7474. Organic Parameters: EPA3050B, 3540C, 3630C, 8270C, 8081B, 8082A.)

Rhode Island Department of Health Certificate/Lab ID: LAO00299. ***NELAP Accredited via LA-DEQ.***

Refer to LA-DEQ Certificate for Non-Potable Water.

Texas Commission of Environmental Quality Certificate/Lab ID: T104704419-08-TX. ***NELAP Accredited.***

Solid & Chemical Materials (Inorganic Parameters: EPA 6020, 7470, 7471, 1311, 7196, 9040, 9045, 9060. Organic Parameters: EPA 8015, 8270, 8260, 8081, 8082.)

Air (Organic Parameters: EPA TO-15)

Washington State Department of Ecology Certificate/Lab ID: C954. *Non-Potable Water* (Inorganic Parameters: SM2540D, 180.1, 1631E.)

Solid & Chemical Materials (Inorganic Parameters: EPA 6020, 7470, 7471, 7474, 9045C, 9050A, 9060. Organic Parameters: EPA 8081, 8082, 8015 Mod, 8270.)

Virginia Division of Consolidated Laboratory Services Certificate/Lab ID:460194. ***NELAP Accredited.***

Non-Potable Water (Inorganic Parameters:EPA 3020A,6020A,245.7,9040B,SM4500H-B. Organic Parameters: EPA 3510C,3640A,3660B,3665A,8270C,8270D,8082A,8081B.)

Solid & Chemical Materials (Inorganic Parameters: EPA 6020A,7470A,7471B,9040B,9045C,3050B,3051. Organic Parameters: EPA 3540C, 3580A, 3630C, 3640A, 3660B, 3665A, 3570, 8270C, 8270D, 8081B, 8082A, 8015D.)

U.S. Army Corps of Engineers

Department of Defense, L-A-B Certificate/Lab ID: L2217.01.

Non-Potable Water (Inorganic Parameters: EPA 6020A, SM4500H-B. Organic Parameters: 3020A, 3510C, 5030B, 8260B, 8270C, 8270C-ALK-PAH, 8082, 8081A, 8015D-SHC, 8015D.)

Solid & Hazardous Waste (Inorganic Parameters: EPA 1311, 1312, 3050B, 6020A, 7471A, 9045C, 9060, SM 2540G, ASTM D422-63. Organic Parameters: EPA 3580A, 3570, 3540C, 5035A, 8260B, 8270C, 8270-ALK-PAH, 8082, 8081A, 8015D-SHC, 8015D.

Air & Emissions (EPA TO-15.)

Analytes Not Accredited by NELAP

Certification is not available by NELAP for the following analytes: **8270C:** Biphenyl. **TO-15:** Halothane, 2,4,4-Trimethyl-2-pentene, 2,4,4-Trimethyl-1-pentene, Thiophene, 2-Methylthiophene, 3-Methylthiophene, 2-Ethylthiophene, 1,2,3-Trimethylbenzene, Indan, Indene, 1,2,4,5-Tetramethylbenzene, Benzothiophene, 2-Methylnaphthalene, 1-Methylnaphthalene.

AIR ANALYSIS

PAGE OF

CHAIN OF CUSTODY

ALPHA ANALYTICAL

320 Forbes Blvd, Mansfield, MA 02048
TEL: 508-822-9300 FAX: 508-822-3288

Serial_No:02297:50

Date Rec'd in Lab:

ALPHA Job #: L1202775

Client Information

Client: Advanced Monitoring Methods
Address: 710 Golf Club Dr.
Castle Rock, CO
Phone: 720-581-1182
Fax:
Email: Tom@advm2.com

Project Information

Project Name: RI Airport Corporation
Project Location: Warwick, Rhode Island
Project #: L1202388
Project Manager: Tom Brauch
ALPHA Quote #:

Turn-Around-Time

☐ Standard ☐ Rush (only confirmed if pre-approved)

Date Due: Time:

Report/Data Deliverables Information

☐ FAX ☐ EMAIL
☐ ADEx ☐ Add'l Deliverables

Billing Information

☐ Same as Client info PO #:

Regulatory Requirements/Report Limits

State/Fed	Program	Criteria

☒ These samples have been Previously analyzed by Alpha

Other Project Specific Requirements/Comments:

Analysis

All Columns Below Must Be Filled Out

Alpha Lab Use Only	Sample ID	Collection Date	Collection Start Time	Collection End Time	Initial Vac	Final Vac	Sample Matrix*	Sampler Initials	Can Size	ID Can	ID Flow Controller	TO-14A by TO-15	TO-15	TO-15 SIM	APH	FIXED GASES	TO-13A	TO-4 / TO-10	Sample Specific Comments (i.e. PID)
- 1	LD-P-20120215	2/15/12	00.00	00.00			AA	LE		18		☐	☐	☐	☐	☐	☒	☐	Lydick
- 2	PB-P-20120215	2/15/12	00.00	00.00			AA	LE		43		☐	☐	☐	☐	☐	☒	☐	Pembroke
- 3	FS-P-20120215	2/15/12	00.00	00.00			AA	LE		74		☐	☐	☐	☐	☐	☒	☐	Fire Station
- 4	FV-P-20120215	2/15/12	00.00	00.00			AA	LE		79		☐	☐	☐	☐	☐	☒	☐	Field View
												☐	☐	☐	☐	☐	☐	☐	
												☐	☐	☐	☐	☐	☐	☐	
											Container Type	-	-	-	-	-	-	-	

***SAMPLE MATRIX CODES:**

AA = Ambient Air (Indoor/Outdoor)
SV = Soil Vapor/Landfill Gas/SVE
Other = Please Specify

Relinquished By	Date/Time	Received By:	Date/Time
Laura Ernst	2/16/12 1:12	P. Gillett	2/17/12 0930
P. Gillett	2/17/12 1020		2/17/12 1020

Please print clearly & legibly and completely. Samples can not be logged in and turn around time clock will not start until any ambiguities are resolved. All samples submitted are subject to Alpha's Payment Terms.

Form 101-02 (I)
Revised 29-Dec-09

ANALYTICAL REPORT

Lab Number:	L1203161
Client:	Advanced Monitoring Methods LLC 710 Golf Club Dr Castle Rock, CO 80108
ATTN:	Tom Brauch
Phone:	(720) 897-7792
Project Name:	RI AIRPORT CORPORATION
Project Number:	32-1-5
Report Date:	03/05/12

Certifications & Approvals: NY (11627), CT (PH-0141), NH (2206), NJ NELAP (MA015), RI (LAO00299), PA (68-02089), LA NELAP (03090), FL (E87814), TX (T104704419), WA (C954), DOD (L2217.01), USDA (Permit #P330-11-00109), US Army Corps of Engineers.

320 Forbes Boulevard, Mansfield, MA 02048-1806
508-822-9300 (Fax) 508-822-3288 800-624-9220 - www.alphalab.com

Project Name: RI AIRPORT CORPORATION
Project Number: 32-1-5

Lab Number: L1203161
Report Date: 03/05/12

Alpha Sample ID	Client ID	Sample Location	Collection Date/Time
L1203161-01	LD-P-20120221	WARWICK, RI	02/21/12 00:00
L1203161-02	PB-P-20120221	WARWICK, RI	02/21/12 00:00
L1203161-03	FS-P-20120221	WARWICK, RI	02/21/12 00:00
L1203161-04	FV-P-20120221	WARWICK, RI	02/21/12 00:00

Project Name: RI AIRPORT CORPORATION **Lab Number:** L1203161
Project Number: 32-1-5 **Report Date:** 03/05/12

Case Narrative

The samples were received in accordance with the Chain of Custody and no significant deviations were encountered during the preparation or analysis unless otherwise noted. Sample Receipt, Container Information, and the Chain of Custody are located at the back of the report.

Results contained within this report relate only to the samples submitted under this Alpha Lab Number and meet all of the requirements of NELAC, for all NELAC accredited parameters. The data presented in this report is organized by parameter (i.e. VOC, SVOC, etc.). Sample specific Quality Control data (i.e. Surrogate Spike Recovery) is reported at the end of the target analyte list for each individual sample, followed by the Laboratory Batch Quality Control at the end of each parameter. If a sample was re-analyzed or re-extracted due to a required quality control corrective action and if both sets of data are reported, the Laboratory ID of the re-analysis or re-extraction is designated with an "R" or "RE", respectively. When multiple Batch Quality Control elements are reported (e.g. more than one LCS), the associated samples for each element are noted in the grey shaded header line of each data table. Any Laboratory Batch, Sample Specific % recovery or RPD value that is outside the listed Acceptance Criteria is bolded in the report. Soil/sediments, solids and tissues are reported on a dry weight basis unless otherwise noted. Definitions of all data qualifiers and acronyms used in this report are provided in the Glossary located at the back of the report.

Please see the associated ADEx data file for a comparison of laboratory reporting limits that were achieved with the regulatory Numerical Standards requested on the Chain of Custody.

For additional information, please contact Client Services at 800-624-9220.

PAHs in Air

I, the undersigned, attest under the pains and penalties of perjury that, to the best of my knowledge and belief and based upon my personal inquiry of those responsible for providing the information contained in this analytical report, such information is accurate and complete. This certificate of analysis is not complete unless this page accompanies any and all pages of this report.

Authorized Signature: Christopher J. Anderson

Title: Technical Director/Representative Date: 03/05/12

AIR

Project Name: RI AIRPORT CORPORATION **Lab Number:** L1203161

Project Number: 32-1-5 **Report Date:** 03/05/12

SAMPLE RESULTS

Lab ID:	L1203161-01	Date Collected:	02/21/12 00:00
Client ID:	LD-P-20120221	Date Received:	02/24/12
Sample Location:	WARWICK, RI	Field Prep:	Not Specified
Matrix:	Air Cartridge	Extraction Method:	EPA 3540C
Analytical Method:	1,8270C-SIM	Extraction Date:	02/28/12 13:59
Analytical Date:	03/02/12 11:40		
Analyst:	CM		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PAHs in Air - Mansfield Lab						
Naphthalene	16400		ng/cart	500	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Pyrene-d10	92		60-120
Benzo(b)fluoranthene-d12	111		60-120
Fluoranthene-d10	96		60-120
Benzo(a)pyrene-d12	101		60-120

Project Name: RI AIRPORT CORPORATION **Lab Number:** L1203161

Project Number: 32-1-5 **Report Date:** 03/05/12

SAMPLE RESULTS

Lab ID:	L1203161-02	Date Collected:	02/21/12 00:00
Client ID:	PB-P-20120221	Date Received:	02/24/12
Sample Location:	WARWICK, RI	Field Prep:	Not Specified
Matrix:	Air Cartridge	Extraction Method:	EPA 3540C
Analytical Method:	1,8270C-SIM	Extraction Date:	02/28/12 13:59
Analytical Date:	03/02/12 12:12		
Analyst:	CM		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PAHs in Air - Mansfield Lab						
Naphthalene	13500		ng/cart	500	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Pyrene-d10	93		60-120
Benzo(b)fluoranthene-d12	111		60-120
Fluoranthene-d10	97		60-120
Benzo(a)pyrene-d12	101		60-120

Project Name: RI AIRPORT CORPORATION **Lab Number:** L1203161

Project Number: 32-1-5 **Report Date:** 03/05/12

SAMPLE RESULTS

Lab ID:	L1203161-03	Date Collected:	02/21/12 00:00
Client ID:	FS-P-20120221	Date Received:	02/24/12
Sample Location:	WARWICK, RI	Field Prep:	Not Specified
Matrix:	Air Cartridge	Extraction Method:	EPA 3540C
Analytical Method:	1,8270C-SIM	Extraction Date:	02/28/12 13:59
Analytical Date:	03/02/12 12:44		
Analyst:	CM		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PAHs in Air - Mansfield Lab						
Naphthalene	13800		ng/cart	500	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Pyrene-d10	91		60-120
Benzo(b)fluoranthene-d12	112		60-120
Fluoranthene-d10	91		60-120
Benzo(a)pyrene-d12	92		60-120

Project Name: RI AIRPORT CORPORATION **Lab Number:** L1203161

Project Number: 32-1-5 **Report Date:** 03/05/12

SAMPLE RESULTS

Lab ID:	L1203161-04	Date Collected:	02/21/12 00:00
Client ID:	FV-P-20120221	Date Received:	02/24/12
Sample Location:	WARWICK, RI	Field Prep:	Not Specified
Matrix:	Air Cartridge	Extraction Method:	EPA 3540C
Analytical Method:	1,8270C-SIM	Extraction Date:	02/28/12 13:59
Analytical Date:	03/02/12 13:17		
Analyst:	CM		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PAHs in Air - Mansfield Lab						
Naphthalene	15100		ng/cart	500	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Pyrene-d10	91		60-120
Benzo(b)fluoranthene-d12	106		60-120
Fluoranthene-d10	95		60-120
Benzo(a)pyrene-d12	84		60-120

Project Name: RI AIRPORT CORPORATION
Project Number: 32-1-5

Lab Number: L1203161
Report Date: 03/05/12

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8270C-SIM
Analytical Date: 03/02/12 10:36
Analyst: CM

Extraction Method: EPA 3540C
Extraction Date: 02/28/12 13:59

Parameter	Result	Qualifier	Units	RL	MDL
PAHs in Air - Mansfield Lab for sample(s): 01-04 Batch: WG520544-1					
Naphthalene	ND		ng/cart	500	--

Surrogate	%Recovery	Qualifier	Acceptance Criteria
Pyrene-d10	98		60-120
Benzo(b)fluoranthene-d12	108		60-120
Fluoranthene-d10	96		60-120
Benzo(a)pyrene-d12	93		60-120

Lab Control Sample Analysis

Batch Quality Control

Project Name: RI AIRPORT CORPORATION

Project Number: 32-1-5

Lab Number: L1203161

Report Date: 03/05/12

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
PAHs in Air - Mansfield Lab Associated sample(s): 01-04 Batch: WG520544-2								
Naphthalene	98		-		60-120	-		

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
Pyrene-d10	95				60-120
Benzo(b)fluoranthene-d12	104				60-120
Fluoranthene-d10	94				60-120
Benzo(a)pyrene-d12	94				60-120

Project Name: RI AIRPORT CORPORATION
Project Number: 32-1-5

Lab Number: L1203161
Report Date: 03/05/12

Sample Receipt and Container Information

Were project specific reporting limits specified? YES

Reagent H2O Preserved Vials Frozen on: NA

Cooler Information **Custody Seal**

Cooler	
A	Absent

Container Information

Container ID	Container Type	Cooler	pH	Temp deg C	Pres	Seal	Analysis(*)
L1203161-01A	PUF Air Cartridge - High or Low	A	N/A		Y	Absent	A2-TO13(7)
L1203161-02A	PUF Air Cartridge - High or Low	A	N/A		Y	Absent	A2-TO13(7)
L1203161-03A	PUF Air Cartridge - High or Low	A	N/A		Y	Absent	A2-TO13(7)
L1203161-04A	PUF Air Cartridge - High or Low	A	N/A		Y	Absent	A2-TO13(7)

*Values in parentheses indicate holding time in days

Project Name:	RI AIRPORT CORPORATION	**Lab Number:**	L1203161
Project Number:	32-1-5	**Report Date:**	03/05/12

GLOSSARY

Acronyms

EPA	- Environmental Protection Agency.
LCS	- Laboratory Control Sample: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.
LCSD	- Laboratory Control Sample Duplicate: Refer to LCS.
LFB	- Laboratory Fortified Blank: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.
MDL	- Method Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The MDL includes any adjustments from dilutions, concentrations or moisture content, where applicable.
MS	- Matrix Spike Sample: A sample prepared by adding a known mass of target analyte to a specified amount of matrix sample for which an independent estimate of target analyte concentration is available.
MSD	- Matrix Spike Sample Duplicate: Refer to MS.
NA	- Not Applicable.
NC	- Not Calculated: Term is utilized when one or more of the results utilized in the calculation are non-detect at the parameter's reporting unit.
NI	- Not Ignitable.
RL	- Reporting Limit: The value at which an instrument can accurately measure an analyte at a specific concentration. The RL includes any adjustments from dilutions, concentrations or moisture content, where applicable.
RPD	- Relative Percent Difference: The results from matrix and/or matrix spike duplicates are primarily designed to assess the precision of analytical results in a given matrix and are expressed as relative percent difference (RPD). Values which are less than five times the reporting limit for any individual parameter are evaluated by utilizing the absolute difference between the values; although the RPD value will be provided in the report.
SRM	- Standard Reference Material: A reference sample of a known or certified value that is of the same or similar matrix as the associated field samples.

Footnotes

1	- The reference for this analyte should be considered modified since this analyte is absent from the target analyte list of the original method.

Terms

Analytical Method: Both the document from which the method originates and the analytical reference method. (Example: EPA 8260B is shown as 1,8260B.) The codes for the reference method documents are provided in the References section of the Addendum.

Data Qualifiers

A	- Spectra identified as "Aldol Condensation Product".
B	- The analyte was detected above the reporting limit in the associated method blank. Flag only applies to associated field samples that have detectable concentrations of the analyte at less than five times (5x) the concentration found in the blank. For MCP-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For DOD-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank AND the analyte was detected above one-half the reporting limit (or above the reporting limit for common lab contaminants) in the associated method blank. For NJ-Air-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte above the reporting limit.
C	- Co-elution: The target analyte co-elutes with a known lab standard (i.e. surrogate, internal standards, etc.) for co-extracted analyses.
D	- Concentration of analyte was quantified from diluted analysis. Flag only applies to field samples that have detectable concentrations of the analyte.
E	- Concentration of analyte exceeds the range of the calibration curve and/or linear range of the instrument.
G	- The concentration may be biased high due to matrix interferences (i.e, co-elution) with non-target compound(s). The result should be considered estimated.
H	- The analysis of pH was performed beyond the regulatory-required holding time of 15 minutes from the time of sample collection.
I	- The RPD between the results for the two columns exceeds the method-specified criteria; however, the lower value has been reported due to obvious interference.
M	- Reporting Limit (RL) exceeds the MCP CAM Reporting Limit for this analyte.
NJ	- Presumptive evidence of compound. This represents an estimated concentration for Tentatively Identified Compounds (TICs), where the identification is based on a mass spectral library search.

Report Format: Data Usability Report

Project Name:	RI AIRPORT CORPORATION	**Lab Number:**	L1203161
Project Number:	32-1-5	**Report Date:**	03/05/12

Data Qualifiers

P - The RPD between the results for the two columns exceeds the method-specified criteria.

Q - The quality control sample exceeds the associated acceptance criteria. For DOD-related projects, LCS and/or Continuing Calibration Standard exceedences are also qualified on all associated sample results. Note: This flag is not applicable for matrix spike recoveries when the sample concentration is greater than 4x the spike added or for batch duplicate RPD when the sample concentrations are less than 5x the RL. (Metals only.)

R - Analytical results are from sample re-analysis.

RE - Analytical results are from sample re-extraction.

J - Estimated value. This represents an estimated concentration for Tentatively Identified Compounds (TICs).

ND - Not detected at the reporting limit (RL) for the sample.

Report Format: Data Usability Report

Project Name:	RI AIRPORT CORPORATION	**Lab Number:**	L1203161
Project Number:	32-1-5	**Report Date:**	03/05/12

REFERENCES

1 Test Methods for Evaluating Solid Waste: Physical/Chemical Methods. EPA SW-846. Third Edition. Updates I - IIIA, 1997.

LIMITATION OF LIABILITIES

Alpha Analytical performs services with reasonable care and diligence normal to the analytical testing laboratory industry. In the event of an error, the sole and exclusive responsibility of Alpha Analytical shall be to re-perform the work at it's own expense. In no event shall Alpha Analytical be held liable for any incidental, consequential or special damages, including but not limited to, damages in any way connected with the use of, interpretation of, information or analysis provided by Alpha Analytical.

We strongly urge our clients to comply with EPA protocol regarding sample volume, preservation, cooling, containers, sampling procedures, holding time and splitting of samples in the field.

Certificate/Approval Program Summary

Last revised January 30, 2012 – Mansfield Facility

The following list includes only those analytes/methods for which certification/approval is currently held.
For a complete listing of analytes for the referenced methods, please contact your Alpha Customer Service Representative.

Connecticut Department of Public Health Certificate/Lab ID: PH-0141.

Wastewater/Non-Potable Water (Inorganic Parameters: pH, Turbidity, Conductivity, Alkalinity, Aluminum, Antimony, Arsenic, Barium, Beryllium, Boron, Cadmium, Calcium, Chromium, Cobalt, Copper, Iron, Lead, Magnesium, Manganese, Mercury, Molybdenum, Nickel, Potassium, Selenium, Silver, Sodium, Strontium, Thallium, Tin, Vanadium, Zinc, Total Residue (Solids), Total Suspended Solids (non-filterable), Total Cyanide. Organic Parameters: PCBs, Organochlorine Pesticides, Technical Chlordane, Toxaphene, Acid Extractables, Benzidines, Phthalate Esters, Nitrosamines, Nitroaromatics & Isophorone, PAHs, Haloethers, Chlorinated Hydrocarbons, Volatile Organics.)

Solid Waste/Soil (Inorganic Parameters: pH, Aluminum, Antimony, Arsenic, Barium, Beryllium, Cadmium, Calcium, Chromium, Hexavalent Chromium, Cobalt, Copper, Iron, Lead, Magnesium, Manganese, Mercury, Molybdenum, Nickel, Potassium, Selenium, Silver, Sodium, Thallium, Vanadium, Zinc, Total Organic Carbon, Total Cyanide, Corrosivity, TCLP 1311. Organic Parameters: PCBs, Organochlorine Pesticides, Technical Chlordane, Toxaphene, Volatile Organics, Acid Extractables, Benzidines, Phthalates, Nitrosamines, Nitroaromatics & Cyclic Ketones, PAHs, Haloethers, Chlorinated Hydrocarbons.)

Florida Department of Health Certificate/Lab ID: E87814. ***NELAP Accredited.***

Non-Potable Water (Inorganic Parameters: SM2320B, SM2540D, SM2540G.)

Solid & Chemical Materials (Inorganic Parameters: 6020, 7470, 7471, 9045. Organic Parameters: EPA 8260, 8270, 8082, 8081.)

Air & Emissions (EPA TO-15.)

Louisiana Department of Environmental Quality Certificate/Lab ID: 03090. ***NELAP Accredited.***

Non-Potable Water (Inorganic Parameters: EPA 180.1, 245.7, 1631E, 3020, 6020A, 7470A, 9040, 9050A, SM2320B, 2540D, 2540G, 4500H-B, Organic Parameters: EPA 3510C, 3580A, 3630C, 3640A, 3660B, 3665A, 5030B, 8015D, 3570, 8081B, 8082A, 8260B, 8270C, 8270D.)

Solid & Chemical Materials (Inorganic Parameters: EPA 1311, 3050, 3051A, 3060A, 6020A, 7196A, 7470A, 7471B, 7474, 9040B, 9045C, 9060. Organic Parameters: EPA 3540C, 3570B, 3580A, 3630C, 3640A, 3660, 3665A, 5035, 8015D, 8081B, 8082A, 8260B, 8270C, 8270D.)

Biological Tissue (Inorganic Parameters: EPA 6020A. Organic Parameters: EPA 3570, 3510C, 3610B, 3630C, 3640A, 8270C, 8270D.)

Air & Emissions (EPA TO-15.)

New Hampshire Department of Environmental Services Certificate/Lab ID: 2206. ***NELAP Accredited.***

Non-Potable Water (Inorganic Parameters: EPA 245.7, 1631E, 6020A, 7470A, 9040B, 9050A, SM2540D, 2540G, 4500H+B, 2320B. Organic Parameters: EPA 8081B, 8082A, 8260B, 8270C, 8015D.)

Solid & Chemical Materials (Inorganic Parameters: SW-846 1311, 1312, 3050B, 3051A, 3060A, 6020A, 7471A, 9040B, 9045C, 7196A. Organic Parameters: SW-846 3540C, 3580A, 3630C, 3640A, 3660B, 3665A, 5035, 8260B, 8270C, 8015D, 8082A, 8081B.)

New Jersey Department of Environmental Protection Certificate/Lab ID: MA015. ***NELAP Accredited.***

Non-Potable Water (Inorganic Parameters: SW-846 1312, 3010, 3020A, SM2320B, SM2540D, 2540G, EPA 180.1, 1631E, SW-846 7470A, 9040B, 6020, 9050A. Organic Parameters: SW-846 3510C, 3580A, 5030B, 5035L, 5035H, 3630C, 3640A, 3660B, 3665A, 8015B 8081A, 8082, 8260B, 8270C)

Solid & Chemical Materials (Inorganic Parameters: SW-846 6020, 1311, 1312, 3050B, 3051, 3060A, 7196A, 7470A, 7471A, 7474, 9040B, 9045C, 9060. Organic Parameters: SW-846 3540C, 3570, 3580A, 5030B, 5035L, 5035H, 3630C, 3640A, 3660B, 3665A, 8081A, 8082, 8260B, 8270C, 8015B.)

Atmospheric Organic Parameters (EPA TO-15)

Biological Tissue (Inorganic Parameters: SW-846 6020 Organic Parameters: SW-846 8270C, 3510C, 3570, 3610C, 3630C, 3640A)

New York Department of Health Certificate/Lab ID: 11627. ***NELAP Accredited.***

Non-Potable Water (Inorganic Parameters: SM2320B, SM2540D, EPA 200.8, 6020, 1631E, 245.1, 245.7, 7470A, 9014, 9040B, 9050, 120.1, 4500CN-E, 4500H-B, EPA 376.2, 180.1, 3020A. Organic Parameters: EPA 8260B, 8270C, 8081A, 8082, 3510C, 5030B.)

Solid & Hazardous Waste (Inorganic Parameters: EPA 6020, 7196A, 3060A, 7471A, 7474, 9014, 9040B, 9045C, 9010B. Organic Parameters: EPA 8260B, 8270C, 8081A, DRO 8015B, 8082, 1311, 1312, 3050B, 3580, 3570, 3051, 5035, 5030B.)

Air & Emissions (EPA TO-15.)

Pennsylvania Certificate/Lab ID: 68-02089 ***NELAP Accredited***

Solid & Hazardous Waste (Inorganic Parameters: EPA 6020A,7471B, 7474. Organic Parameters: EPA3050B, 3540C, 3630C, 8270C, 8081B, 8082A.)

Rhode Island Department of Health Certificate/Lab ID: LAO00299. ***NELAP Accredited via LA-DEQ.***

Refer to LA-DEQ Certificate for Non-Potable Water.

Texas Commission of Environmental Quality Certificate/Lab ID: T104704419-08-TX. ***NELAP Accredited.***

Solid & Chemical Materials (Inorganic Parameters: EPA 6020, 7470, 7471, 1311, 7196, 9040, 9045, 9060. Organic Parameters: EPA 8015, 8270, 8260, 8081, 8082.)

Air (Organic Parameters: EPA TO-15)

Washington State Department of Ecology Certificate/Lab ID: C954. *Non-Potable Water* (Inorganic Parameters: SM2540D, 180.1, 1631E.)

Solid & Chemical Materials (Inorganic Parameters: EPA 6020, 7470, 7471, 7474, 9045C, 9050A, 9060. Organic Parameters: EPA 8081, 8082, 8015 Mod, 8270.)

Virginia Division of Consolidated Laboratory Services Certificate/Lab ID:460194. ***NELAP Accredited.***

Non-Potable Water (Inorganic Parameters:EPA 3020A,6020A,245.7,9040B,SM4500H-B. Organic Parameters: EPA 3510C,3640A,3660B,3665A,8270C,8270D,8082A,8081B.)

Solid & Chemical Materials (Inorganic Parameters: EPA 6020A,7470A,7471B,9040B,9045C,3050B,3051. Organic Parameters: EPA 3540C, 3580A, 3630C, 3640A, 3660B, 3665A, 3570, 8270C, 8270D, 8081B, 8082A, 8015D.)

U.S. Army Corps of Engineers

Department of Defense, L-A-B Certificate/Lab ID: L2217.01.

Non-Potable Water (Inorganic Parameters: EPA 6020A, SM4500H-B. Organic Parameters: 3020A, 3510C, 5030B, 8260B, 8270C, 8270C-ALK-PAH, 8082, 8081A, 8015D-SHC, 8015D.)

Solid & Hazardous Waste (Inorganic Parameters: EPA 1311, 1312, 3050B, 6020A, 7471A, 9045C, 9060, SM 2540G, ASTM D422-63. Organic Parameters: EPA 3580A, 3570, 3540C, 5035A, 8260B, 8270C, 8270-ALK-PAH, 8082, 8081A, 8015D-SHC, 8015D.

Air & Emissions (EPA TO-15.)

Analytes Not Accredited by NELAP

Certification is not available by NELAP for the following analytes: **8270C:** Biphenyl. **TO-15:** Halothane, 2,4,4-Trimethyl-2-pentene, 2,4,4-Trimethyl-1-pentene, Thiophene, 2-Methylthiophene, 3-Methylthiophene, 2-Ethylthiophene, 1,2,3-Trimethylbenzene, Indan, Indene, 1,2,4,5-Tetramethylbenzene, Benzothiophene, 2-Methylnaphthalene, 1-Methylnaphthalene.

AIR ANALYSIS

PAGE OF

CHAIN OF CUSTODY

ALPHA ANALYTICAL

320 Forbes Blvd, Mansfield, MA 02048
TEL: 508-822-9300 FAX: 508-822-3288

Serial_No:03057:09

Date Rec'd in Lab:

ALPHA Job #: L1203161

Client Information

Client: Advanced Monitoring Methods
Address: 710 Golf Club Dr.
Castle Rock, CO
Phone: 720-581-1182
Fax:
Email: Tom@advm2.com

Project Information

Project Name: RI Airport Corporation
Project Location: Warwick, Rhode Island
Project #: L1202388
Project Manager: Tom Brauch
ALPHA Quote #:

Turn-Around-Time

☐ Standard ☐ Rush (only confirmed if pre-approved)

Date Due: Time:

Report/Data Deliverables Information

☐ FAX ☐ EMAIL
☐ ADEx ☐ Add'l Deliverables

Billing Information

☐ Same as Client info PO #:

Regulatory Requirements/Report Limits

State/Fed	Program	Criteria

☒ These samples have been Previously analyzed by Alpha

Other Project Specific Requirements/Comments:

Analysis

All Columns Below Must Be Filled Out

Alpha Lab Use Only	Sample ID	Collection Date	Collection Start Time	Collection End Time	Initial Vac	Final Vac	Sample Matrix*	Sampler Initials	Can Size	ID Can	ID Flow Controller	TO-14A by TO-15	TO-15	TO-15 SIM	APH	FIXED GASES	TO-13A	TO-4 / TO-10	Sample Specific Comments (i.e. PID)
-1	LD-P-20120221	2/21/12	00.00	00.00			AA	LE		106		☐	☐	☐	☐	☐	☒	☐	Lydick
-2	PB-P-20120221	2/21/12	00.00	00.00			AA	LE		47		☐	☐	☐	☐	☐	☒	☐	Pembroke
-3	FS-P-20120221	2/21/12	00.00	00.00			AA	LE		91		☐	☐	☐	☐	☐	☒	☐	Fire Station
-4	FV-P-20120221	2/21/12	00.00	00.00			AA	LE		71		☐	☐	☐	☐	☐	☒	☐	Field View
												☐	☐	☐	☐	☐	☐	☐	
												☐	☐	☐	☐	☐	☐	☐	
	Container Type											-	-	-	-	-	-	-	

***SAMPLE MATRIX CODES:**

AA = Ambient Air (Indoor/Outdoor)
SV = Soil Vapor/Landfill Gas/SVE
Other = Please Specify

Relinquished By:	Date/Time	Received By:	Date/Time
Laura Ernst	2/24/12	T. Rundell	2/24/12
T. Rundell	2/24/12 1773 8:53	UPS	2/24/12 1611
UPS	2/24/12 1773	Ellen Sullivan	2/24/12 1634

Please print clearly & legibly and completely. Samples can not be logged in and turn around time clock will not start until any ambiguities are resolved. All samples submitted are subject to Alpha's Payment Terms.

Form 101-02 (I)
Revised 29-Dec-09

ANALYTICAL REPORT

Lab Number:	L1203499
Client:	Advanced Monitoring Methods LLC 710 Golf Club Dr Castle Rock, CO 80108
ATTN:	Tom Brauch
Phone:	(720) 897-7792
Project Name:	RI AIRPORT CORPORATION
Project Number:	32-1-5
Report Date:	03/13/12

Certifications & Approvals: NY (11627), CT (PH-0141), NH (2206), NJ NELAP (MA015), RI (LAO00299), PA (68-02089), LA NELAP (03090), FL (E87814), TX (T104704419), WA (C954), DOD (L2217.01), USDA (Permit #P330-11-00109), US Army Corps of Engineers.

320 Forbes Boulevard, Mansfield, MA 02048-1806
508-822-9300 (Fax) 508-822-3288 800-624-9220 - www.alphalab.com

Project Name: RI AIRPORT CORPORATION
Project Number: 32-1-5

Lab Number: L1203499
Report Date: 03/13/12

Alpha Sample ID	Client ID	Sample Location	Collection Date/Time
L1203499-01	LD-P-20120227	WARWICK, RI	02/27/12 00:00
L1203499-02	PB-P-20120227	WARWICK, RI	02/27/12 00:00
L1203499-03	FS-P-20120227	WARWICK, RI	02/27/12 00:00
L1203499-04	FV-P-20120227	WARWICK, RI	02/27/12 00:00

Project Name: RI AIRPORT CORPORATION **Lab Number:** L1203499
Project Number: 32-1-5 **Report Date:** 03/13/12

Case Narrative

The samples were received in accordance with the Chain of Custody and no significant deviations were encountered during the preparation or analysis unless otherwise noted. Sample Receipt, Container Information, and the Chain of Custody are located at the back of the report.

Results contained within this report relate only to the samples submitted under this Alpha Lab Number and meet all of the requirements of NELAC, for all NELAC accredited parameters. The data presented in this report is organized by parameter (i.e. VOC, SVOC, etc.). Sample specific Quality Control data (i.e. Surrogate Spike Recovery) is reported at the end of the target analyte list for each individual sample, followed by the Laboratory Batch Quality Control at the end of each parameter. If a sample was re-analyzed or re-extracted due to a required quality control corrective action and if both sets of data are reported, the Laboratory ID of the re-analysis or re-extraction is designated with an "R" or "RE", respectively. When multiple Batch Quality Control elements are reported (e.g. more than one LCS), the associated samples for each element are noted in the grey shaded header line of each data table. Any Laboratory Batch, Sample Specific % recovery or RPD value that is outside the listed Acceptance Criteria is bolded in the report. Performance criteria for CAM and RCP methods allow for some LCS compound failures to occur and still be within method compliance. In these instances, the specific failures are not narrated but are noted in the associated QC table. This information is also incorporated in the Data Usability format for our Data Merger tool where it can be reviewed along with any associated usability implications. Soil/sediments, solids and tissues are reported on a dry weight basis unless otherwise noted. Definitions of all data qualifiers and acronyms used in this report are provided in the Glossary located at the back of the report.

Please see the associated ADEx data file for a comparison of laboratory reporting limits that were achieved with the regulatory Numerical Standards requested on the Chain of Custody.

Please contact Client Services at 800-624-9220 with any questions.

PAHs in Air TO-13

The surrogate recoveries for L1203499-01 were outside the acceptance criteria for Benzo(b)Fluoranthene-d12 (126%); however, re-extraction could not be performed due to lack of additional sample. The results of the original analysis are reported; however, all associated compounds are considered to have a potential bias.

The surrogate recoveries for L1203499-03 were outside the acceptance criteria for Benzo(b)Fluoranthene-d12 (125%); however, re-extraction could not be performed due to lack of additional sample. The results of the original analysis are reported; however, all associated compounds are considered to have a potential bias.

Project Name:	RI AIRPORT CORPORATION	**Lab Number:**	L1203499
Project Number:	32-1-5	**Report Date:**	03/13/12

Case Narrative (continued)

I, the undersigned, attest under the pains and penalties of perjury that, to the best of my knowledge and belief and based upon my personal inquiry of those responsible for providing the information contained in this analytical report, such information is accurate and complete. This certificate of analysis is not complete unless this page accompanies any and all pages of this report.

Authorized Signature: Peter Henriksen

Title: Technical Director/Representative Date: 03/13/12

AIR

Project Name: RI AIRPORT CORPORATION **Lab Number:** L1203499

Project Number: 32-1-5 **Report Date:** 03/13/12

SAMPLE RESULTS

Lab ID:	L1203499-01	Date Collected:	02/27/12 00:00
Client ID:	LD-P-20120227	Date Received:	02/29/12
Sample Location:	WARWICK, RI	Field Prep:	Not Specified
Matrix:	Air Cartridge	Extraction Method:	EPA 3540C
Analytical Method:	1,8270C-SIM	Extraction Date:	03/05/12 14:14
Analytical Date:	03/11/12 14:41		
Analyst:	CM		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PAHs in Air - Mansfield Lab						
Naphthalene	28200		ng/cart	500	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Pyrene-d10	97		60-120
Benzo(b)fluoranthene-d12	**126**	Q	60-120
Fluoranthene-d10	100		60-120
Benzo(a)pyrene-d12	94		60-120

Project Name: RI AIRPORT CORPORATION **Lab Number:** L1203499

Project Number: 32-1-5 **Report Date:** 03/13/12

SAMPLE RESULTS

Lab ID:	L1203499-02	Date Collected:	02/27/12 00:00
Client ID:	PB-P-20120227	Date Received:	02/29/12
Sample Location:	WARWICK, RI	Field Prep:	Not Specified
Matrix:	Air Cartridge	Extraction Method:	EPA 3540C
Analytical Method:	1,8270C-SIM	Extraction Date:	03/05/12 14:14
Analytical Date:	03/11/12 15:13		
Analyst:	CM		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PAHs in Air - Mansfield Lab						
Naphthalene	26800		ng/cart	500	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Pyrene-d10	95		60-120
Benzo(b)fluoranthene-d12	120		60-120
Fluoranthene-d10	100		60-120
Benzo(a)pyrene-d12	91		60-120

Project Name: RI AIRPORT CORPORATION **Lab Number:** L1203499

Project Number: 32-1-5 **Report Date:** 03/13/12

SAMPLE RESULTS

Lab ID:	L1203499-03	Date Collected:	02/27/12 00:00
Client ID:	FS-P-20120227	Date Received:	02/29/12
Sample Location:	WARWICK, RI	Field Prep:	Not Specified
Matrix:	Air Cartridge	Extraction Method:	EPA 3540C
Analytical Method:	1,8270C-SIM	Extraction Date:	03/05/12 14:14
Analytical Date:	03/11/12 15:45		
Analyst:	CM		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PAHs in Air - Mansfield Lab						
Naphthalene	27300		ng/cart	500	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Pyrene-d10	99		60-120
Benzo(b)fluoranthene-d12	**125**	Q	60-120
Fluoranthene-d10	106		60-120
Benzo(a)pyrene-d12	97		60-120

Project Name: RI AIRPORT CORPORATION **Lab Number:** L1203499

Project Number: 32-1-5 **Report Date:** 03/13/12

SAMPLE RESULTS

Lab ID:	L1203499-04	Date Collected:	02/27/12 00:00
Client ID:	FV-P-20120227	Date Received:	02/29/12
Sample Location:	WARWICK, RI	Field Prep:	Not Specified
Matrix:	Air Cartridge	Extraction Method:	EPA 3540C
Analytical Method:	1,8270C-SIM	Extraction Date:	03/05/12 14:14
Analytical Date:	03/11/12 16:16		
Analyst:	CM		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PAHs in Air - Mansfield Lab						
Naphthalene	32000		ng/cart	500	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Pyrene-d10	100		60-120
Benzo(b)fluoranthene-d12	120		60-120
Fluoranthene-d10	103		60-120
Benzo(a)pyrene-d12	99		60-120

Project Name: RI AIRPORT CORPORATION
Project Number: 32-1-5

Lab Number: L1203499
Report Date: 03/13/12

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8270C-SIM
Analytical Date: 03/11/12 13:38
Analyst: CM

Extraction Method: EPA 3540C
Extraction Date: 03/05/12 14:14

Parameter	Result	Qualifier	Units	RL	MDL
PAHs in Air - Mansfield Lab for sample(s): 01-04 Batch: WG521462-1					
Naphthalene	ND		ng/cart	500	--

Surrogate	%Recovery	Qualifier	Acceptance Criteria
Pyrene-d10	95		60-120
Benzo(b)fluoranthene-d12	118		60-120
Fluoranthene-d10	95		60-120
Benzo(a)pyrene-d12	93		60-120

Lab Control Sample Analysis

Batch Quality Control

Project Name: RI AIRPORT CORPORATION
Project Number: 32-1-5

Lab Number: L1203499
Report Date: 03/13/12

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
PAHs in Air - Mansfield Lab Associated sample(s): 01-04 Batch: WG521462-2								
Naphthalene	100		-		60-120	-		

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
Pyrene-d10	95				60-120
Benzo(b)fluoranthene-d12	116				60-120
Fluoranthene-d10	99				60-120
Benzo(a)pyrene-d12	99				60-120

Project Name: RI AIRPORT CORPORATION
Project Number: 32-1-5

Lab Number: L1203499
Report Date: 03/13/12

Sample Receipt and Container Information

Were project specific reporting limits specified? YES

Reagent H2O Preserved Vials Frozen on: NA

Cooler Information **Custody Seal**

Cooler	
A	Absent

Container Information

Container ID	Container Type	Cooler	pH	Temp deg C	Pres	Seal	Analysis(*)
L1203499-01A	PUF Air Cartridge - High or Low	A	N/A		Y	Absent	A2-TO13(7),PUF-HI()
L1203499-02A	PUF Air Cartridge - High or Low	A	N/A	3.5	Y	Absent	A2-TO13(7),PUF-HI()
L1203499-03A	PUF Air Cartridge - High or Low	A	N/A	3.5	Y	Absent	A2-TO13(7),PUF-HI()
L1203499-04A	PUF Air Cartridge - High or Low	A	N/A	3.5	Y	Absent	A2-TO13(7),PUF-HI()

*Values in parentheses indicate holding time in days

Project Name:	RI AIRPORT CORPORATION	**Lab Number:**	L1203499
Project Number:	32-1-5	**Report Date:**	03/13/12

GLOSSARY

Acronyms

EPA	- Environmental Protection Agency.
LCS	- Laboratory Control Sample: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.
LCSD	- Laboratory Control Sample Duplicate: Refer to LCS.
LFB	- Laboratory Fortified Blank: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.
MDL	- Method Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The MDL includes any adjustments from dilutions, concentrations or moisture content, where applicable.
MS	- Matrix Spike Sample: A sample prepared by adding a known mass of target analyte to a specified amount of matrix sample for which an independent estimate of target analyte concentration is available.
MSD	- Matrix Spike Sample Duplicate: Refer to MS.
NA	- Not Applicable.
NC	- Not Calculated: Term is utilized when one or more of the results utilized in the calculation are non-detect at the parameter's reporting unit.
NI	- Not Ignitable.
RL	- Reporting Limit: The value at which an instrument can accurately measure an analyte at a specific concentration. The RL includes any adjustments from dilutions, concentrations or moisture content, where applicable.
RPD	- Relative Percent Difference: The results from matrix and/or matrix spike duplicates are primarily designed to assess the precision of analytical results in a given matrix and are expressed as relative percent difference (RPD). Values which are less than five times the reporting limit for any individual parameter are evaluated by utilizing the absolute difference between the values; although the RPD value will be provided in the report.
SRM	- Standard Reference Material: A reference sample of a known or certified value that is of the same or similar matrix as the associated field samples.

Footnotes

1	- The reference for this analyte should be considered modified since this analyte is absent from the target analyte list of the original method.

Terms

Analytical Method: Both the document from which the method originates and the analytical reference method. (Example: EPA 8260B is shown as 1,8260B.) The codes for the reference method documents are provided in the References section of the Addendum.

Data Qualifiers

A	- Spectra identified as "Aldol Condensation Product".
B	- The analyte was detected above the reporting limit in the associated method blank. Flag only applies to associated field samples that have detectable concentrations of the analyte at less than five times (5x) the concentration found in the blank. For MCP-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For DOD-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank AND the analyte was detected above one-half the reporting limit (or above the reporting limit for common lab contaminants) in the associated method blank. For NJ-Air-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte above the reporting limit.
C	- Co-elution: The target analyte co-elutes with a known lab standard (i.e. surrogate, internal standards, etc.) for co-extracted analyses.
D	- Concentration of analyte was quantified from diluted analysis. Flag only applies to field samples that have detectable concentrations of the analyte.
E	- Concentration of analyte exceeds the range of the calibration curve and/or linear range of the instrument.
G	- The concentration may be biased high due to matrix interferences (i.e, co-elution) with non-target compound(s). The result should be considered estimated.
H	- The analysis of pH was performed beyond the regulatory-required holding time of 15 minutes from the time of sample collection.
I	- The RPD between the results for the two columns exceeds the method-specified criteria; however, the lower value has been reported due to obvious interference.
M	- Reporting Limit (RL) exceeds the MCP CAM Reporting Limit for this analyte.
NJ	- Presumptive evidence of compound. This represents an estimated concentration for Tentatively Identified Compounds (TICs), where the identification is based on a mass spectral library search.

Report Format: Data Usability Report

Project Name:	RI AIRPORT CORPORATION	**Lab Number:**	L1203499
Project Number:	32-1-5	**Report Date:**	03/13/12

Data Qualifiers

P - The RPD between the results for the two columns exceeds the method-specified criteria.

Q - The quality control sample exceeds the associated acceptance criteria. For DOD-related projects, LCS and/or Continuing Calibration Standard exceedences are also qualified on all associated sample results. Note: This flag is not applicable for matrix spike recoveries when the sample concentration is greater than 4x the spike added or for batch duplicate RPD when the sample concentrations are less than 5x the RL. (Metals only.)

R - Analytical results are from sample re-analysis.

RE - Analytical results are from sample re-extraction.

J - Estimated value. This represents an estimated concentration for Tentatively Identified Compounds (TICs).

ND - Not detected at the reporting limit (RL) for the sample.

Report Format: Data Usability Report

REFERENCES

1 Test Methods for Evaluating Solid Waste: Physical/Chemical Methods. EPA SW-846. Third Edition. Updates I - IIIA, 1997.

LIMITATION OF LIABILITIES

Alpha Analytical performs services with reasonable care and diligence normal to the analytical testing laboratory industry. In the event of an error, the sole and exclusive responsibility of Alpha Analytical shall be to re-perform the work at it's own expense. In no event shall Alpha Analytical be held liable for any incidental, consequential or special damages, including but not limited to, damages in any way connected with the use of, interpretation of, information or analysis provided by Alpha Analytical.

We strongly urge our clients to comply with EPA protocol regarding sample volume, preservation, cooling, containers, sampling procedures, holding time and splitting of samples in the field.

Certificate/Approval Program Summary

Last revised January 30, 2012 – Mansfield Facility

The following list includes only those analytes/methods for which certification/approval is currently held.
For a complete listing of analytes for the referenced methods, please contact your Alpha Customer Service Representative.

Connecticut Department of Public Health Certificate/Lab ID: PH-0141.

Wastewater/Non-Potable Water (Inorganic Parameters: pH, Turbidity, Conductivity, Alkalinity, Aluminum, Antimony, Arsenic, Barium, Beryllium, Boron, Cadmium, Calcium, Chromium, Cobalt, Copper, Iron, Lead, Magnesium, Manganese, Mercury, Molybdenum, Nickel, Potassium, Selenium, Silver, Sodium, Strontium, Thallium, Tin, Vanadium, Zinc, Total Residue (Solids), Total Suspended Solids (non-filterable), Total Cyanide. Organic Parameters: PCBs, Organochlorine Pesticides, Technical Chlordane, Toxaphene, Acid Extractables, Benzidines, Phthalate Esters, Nitrosamines, Nitroaromatics & Isophorone, PAHs, Haloethers, Chlorinated Hydrocarbons, Volatile Organics.)

Solid Waste/Soil (Inorganic Parameters: pH, Aluminum, Antimony, Arsenic, Barium, Beryllium, Cadmium, Calcium, Chromium, Hexavalent Chromium, Cobalt, Copper, Iron, Lead, Magnesium, Manganese, Mercury, Molybdenum, Nickel, Potassium, Selenium, Silver, Sodium, Thallium, Vanadium, Zinc, Total Organic Carbon, Total Cyanide, Corrosivity, TCLP 1311. Organic Parameters: PCBs, Organochlorine Pesticides, Technical Chlordane, Toxaphene, Volatile Organics, Acid Extractables, Benzidines, Phthalates, Nitrosamines, Nitroaromatics & Cyclic Ketones, PAHs, Haloethers, Chlorinated Hydrocarbons.)

Florida Department of Health Certificate/Lab ID: E87814. ***NELAP Accredited.***

Non-Potable Water (Inorganic Parameters: SM2320B, SM2540D, SM2540G.)

Solid & Chemical Materials (Inorganic Parameters: 6020, 7470, 7471, 9045. Organic Parameters: EPA 8260, 8270, 8082, 8081.)

Air & Emissions (EPA TO-15.)

Louisiana Department of Environmental Quality Certificate/Lab ID: 03090. ***NELAP Accredited.***

Non-Potable Water (Inorganic Parameters: EPA 180.1, 245.7, 1631E, 3020, 6020A, 7470A, 9040, 9050A, SM2320B, 2540D, 2540G, 4500H-B, Organic Parameters: EPA 3510C, 3580A, 3630C, 3640A, 3660B, 3665A, 5030B, 8015D, 3570, 8081B, 8082A, 8260B, 8270C, 8270D.)

Solid & Chemical Materials (Inorganic Parameters: EPA 1311, 3050, 3051A, 3060A, 6020A, 7196A, 7470A, 7471B, 7474, 9040B, 9045C, 9060. Organic Parameters: EPA 3540C, 3570B, 3580A, 3630C, 3640A, 3660, 3665A, 5035, 8015D, 8081B, 8082A, 8260B, 8270C, 8270D.)

Biological Tissue (Inorganic Parameters: EPA 6020A. Organic Parameters: EPA 3570, 3510C, 3610B, 3630C, 3640A, 8270C, 8270D.)

Air & Emissions (EPA TO-15.)

New Hampshire Department of Environmental Services Certificate/Lab ID: 2206. ***NELAP Accredited.***

Non-Potable Water (Inorganic Parameters: EPA 245.7, 1631E, 6020A, 7470A, 9040B, 9050A, SM2540D, 2540G, 4500H+B, 2320B. Organic Parameters: EPA 8081B, 8082A, 8260B, 8270C, 8015D.)

Solid & Chemical Materials (Inorganic Parameters: SW-846 1311, 1312, 3050B, 3051A, 3060A, 6020A, 7471A, 9040B, 9045C, 7196A. Organic Parameters: SW-846 3540C, 3580A, 3630C, 3640A, 3660B, 3665A, 5035, 8260B, 8270C, 8015D, 8082A, 8081B.)

New Jersey Department of Environmental Protection Certificate/Lab ID: MA015. ***NELAP Accredited.***

Non-Potable Water (Inorganic Parameters: SW-846 1312, 3010, 3020A, SM2320B, SM2540D, 2540G, EPA 180.1, 1631E, SW-846 7470A, 9040B, 6020, 9050A. Organic Parameters: SW-846 3510C, 3580A, 5030B, 5035L, 5035H, 3630C, 3640A, 3660B, 3665A, 8015B 8081A, 8082, 8260B, 8270C)

Solid & Chemical Materials (Inorganic Parameters: SW-846 6020, 1311, 1312, 3050B, 3051, 3060A, 7196A, 7470A, 7471A, 7474, 9040B, 9045C, 9060. Organic Parameters: SW-846 3540C, 3570, 3580A, 5030B, 5035L, 5035H, 3630C, 3640A, 3660B, 3665A, 8081A, 8082, 8260B, 8270C, 8015B.)

Atmospheric Organic Parameters (EPA TO-15)

Biological Tissue (Inorganic Parameters: SW-846 6020 Organic Parameters: SW-846 8270C, 3510C, 3570, 3610C, 3630C, 3640A)

New York Department of Health Certificate/Lab ID: 11627. ***NELAP Accredited.***

Non-Potable Water (Inorganic Parameters: SM2320B, SM2540D, EPA 200.8, 6020, 1631E, 245.1, 245.7, 7470A, 9014, 9040B, 9050, 120.1, 4500CN-E, 4500H-B, EPA 376.2, 180.1, 3020A. Organic Parameters: EPA 8260B, 8270C, 8081A, 8082, 3510C, 5030B.)

Solid & Hazardous Waste (Inorganic Parameters: EPA 6020, 7196A, 3060A, 7471A, 7474, 9014, 9040B, 9045C, 9010B. Organic Parameters: EPA 8260B, 8270C, 8081A, DRO 8015B, 8082, 1311, 1312, 3050B, 3580, 3570, 3051, 5035, 5030B.)

Air & Emissions (EPA TO-15.)

Pennsylvania Certificate/Lab ID: 68-02089 ***NELAP Accredited***

Solid & Hazardous Waste (Inorganic Parameters: EPA 6020A,7471B, 7474. Organic Parameters: EPA3050B, 3540C, 3630C, 8270C, 8081B, 8082A.)

Rhode Island Department of Health Certificate/Lab ID: LAO00299. ***NELAP Accredited via LA-DEQ.***

Refer to LA-DEQ Certificate for Non-Potable Water.

Texas Commission of Environmental Quality Certificate/Lab ID: T104704419-08-TX. ***NELAP Accredited.***

Solid & Chemical Materials (Inorganic Parameters: EPA 6020, 7470, 7471, 1311, 7196, 9040, 9045, 9060. Organic Parameters: EPA 8015, 8270, 8260, 8081, 8082.)

Air (Organic Parameters: EPA TO-15)

Washington State Department of Ecology Certificate/Lab ID: C954. *Non-Potable Water* (Inorganic Parameters: SM2540D, 180.1, 1631E.)

Solid & Chemical Materials (Inorganic Parameters: EPA 6020, 7470, 7471, 7474, 9045C, 9050A, 9060. Organic Parameters: EPA 8081, 8082, 8015 Mod, 8270.)

Virginia Division of Consolidated Laboratory Services Certificate/Lab ID:460194. ***NELAP Accredited.***

Non-Potable Water (Inorganic Parameters:EPA 3020A,6020A,245.7,9040B,SM4500H-B. Organic Parameters: EPA 3510C,3640A,3660B,3665A,8270C,8270D,8082A,8081B.)

Solid & Chemical Materials (Inorganic Parameters: EPA 6020A,7470A,7471B,9040B,9045C,3050B,3051. Organic Parameters: EPA 3540C, 3580A, 3630C, 3640A, 3660B, 3665A, 3570, 8270C, 8270D, 8081B, 8082A, 8015D.)

U.S. Army Corps of Engineers

Department of Defense, L-A-B Certificate/Lab ID: L2217.01.

Non-Potable Water (Inorganic Parameters: EPA 6020A, SM4500H-B. Organic Parameters: 3020A, 3510C, 5030B, 8260B, 8270C, 8270C-ALK-PAH, 8082, 8081A, 8015D-SHC, 8015D.)

Solid & Hazardous Waste (Inorganic Parameters: EPA 1311, 1312, 3050B, 6020A, 7471A, 9045C, 9060, SM 2540G, ASTM D422-63. Organic Parameters: EPA 3580A, 3570, 3540C, 5035A, 8260B, 8270C, 8270-ALK-PAH, 8082, 8081A, 8015D-SHC, 8015D.

Air & Emissions (EPA TO-15.)

Analytes Not Accredited by NELAP

Certification is not available by NELAP for the following analytes: **8270C:** Biphenyl. **TO-15:** Halothane, 2,4,4-Trimethyl-2-pentene, 2,4,4-Trimethyl-1-pentene, Thiophene, 2-Methylthiophene, 3-Methylthiophene, 2-Ethylthiophene, 1,2,3-Trimethylbenzene, Indan, Indene, 1,2,4,5-Tetramethylbenzene, Benzothiophene, 2-Methylnaphthalene, 1-Methylnaphthalene.

AIR ANALYSIS

PAGE 1 OF 1

CHAIN OF CUSTODY

ALPHA ANALYTICAL

320 Forbes Blvd, Mansfield, MA 02048
TEL: 508-822-9300 FAX: 508-822-3288

Serial_No:03133:05

Client Information

Client: Advanced Monitoring Methods
Address: 710 Golf Club Dr.
Castle Rock, CO
Phone: 720-581-1182
Fax:
Email: Tom@advm2.com

Project Information

Project Name: RI Airport Corporation
Project Location: Warwick, Rhode Island
Project #: L1202388
Project Manager: Tom Brauch
ALPHA Quote #:

Turn-Around-Time

☐ Standard ☐ Rush (only confirmed if pre-approved)

Date Due: Time:

☒ These samples have been Previously analyzed by Alpha

Other Project Specific Requirements/Comments:

Date Rec'd in Lab:

ALPHA Job #: L1203499

Report/Data Deliverables Information

☐ FAX ☐ EMAIL
☐ ADEx ☐ Add'l Deliverables

Billing Information

☐ Same as Client info PO #:

Regulatory Requirements/Report Limits

State/Fed	Program	Criteria

Analysis

All Columns Below Must Be Filled Out

Alpha Lab Use Only	Sample ID	Collection Date	Start Time	End Time	Initial Vac	Final Vac	Sample Matrix*	Sampler Initials	Can Size	ID Can	ID Flow Controller	TO-14A by TO-15	TO-15	TO-15 SIM	APH	FIXED GASES	TO-13A	TO-4 / TO-10	Sample Specific Comments (i.e. PID)
03499-01	LD-P-20120227	2/27/12	00.00	00.00			AA	LE		83		☐	☐	☐	☐	☐	☒	☐	Lydick
02	PB-P-20120227	2/27/12	00.00	00.00			AA	LE		24		☐	☐	☐	☐	☐	☒	☐	Pembroke
03	FS-P-20120227	2/27/12	00.00	00.00			AA	LE		BD		☐	☐	☐	☐	☐	☒	☐	Fire Station
04	FV-P-20120227	2/27/12	00.00	00.00			AA	LE		00		☐	☐	☐	☐	☐	☒	☐	Field View
												☐	☐	☐	☐	☐	☐	☐	
												☐	☐	☐	☐	☐	☐	☐	
											Container Type	-	-	-	-	-	-	-	

***SAMPLE MATRIX CODES:**

AA = Ambient Air (Indoor/Outdoor)
SV = Soil Vapor/Landfill Gas/SVE
Other = Please Specify

Relinquished By	Date/Time	Received By:	Date/Time
	2/28/12	T. Kindell	2/29/12 1130
T. Kindell	2/29/12 1635		2/29/12 17
	2/29/12 1820	Celia Sullivan	2/29/12 18:20

Please print clearly & legibly and completely. Samples can not be logged in and turn around time clock will not start until any ambiguities are resolved. All samples submitted are subject to Alpha's Payment Terms.

Form 101-02 (I)
Revised 29-Dec-09

ANALYTICAL REPORT

Lab Number:	L1203876
Client:	Advanced Monitoring Methods LLC 710 Golf Club Dr Castle Rock, CO 80108
ATTN:	Tom Brauch
Phone:	(720) 897-7792
Project Name:	RI AIRPORT CORPORATION
Project Number:	32-1-5
Report Date:	03/13/12

Certifications & Approvals: NY (11627), CT (PH-0141), NH (2206), NJ NELAP (MA015), RI (LAO00299), PA (68-02089), LA NELAP (03090), FL (E87814), TX (T104704419), WA (C954), DOD (L2217.01), USDA (Permit #P330-11-00109), US Army Corps of Engineers.

320 Forbes Boulevard, Mansfield, MA 02048-1806
508-822-9300 (Fax) 508-822-3288 800-624-9220 - www.alphalab.com

Project Name: RI AIRPORT CORPORATION
Project Number: 32-1-5

Lab Number: L1203876
Report Date: 03/13/12

Alpha Sample ID	Client ID	Sample Location	Collection Date/Time
L1203876-01	LD-P-20120304	WARWICK, RI	03/04/12 00:00
L1203876-02	PB-P-20120304	WARWICK, RI	03/04/12 00:00
L1203876-03	FS-P-20120304	WARWICK, RI	03/04/12 00:00
L1203876-04	FV-P-20120304	WARWICK, RI	03/04/12 00:00

Project Name: RI AIRPORT CORPORATION **Lab Number:** L1203876
Project Number: 32-1-5 **Report Date:** 03/13/12

Case Narrative

The samples were received in accordance with the Chain of Custody and no significant deviations were encountered during the preparation or analysis unless otherwise noted. Sample Receipt, Container Information, and the Chain of Custody are located at the back of the report.

Results contained within this report relate only to the samples submitted under this Alpha Lab Number and meet all of the requirements of NELAC, for all NELAC accredited parameters. The data presented in this report is organized by parameter (i.e. VOC, SVOC, etc.). Sample specific Quality Control data (i.e. Surrogate Spike Recovery) is reported at the end of the target analyte list for each individual sample, followed by the Laboratory Batch Quality Control at the end of each parameter. If a sample was re-analyzed or re-extracted due to a required quality control corrective action and if both sets of data are reported, the Laboratory ID of the re-analysis or re-extraction is designated with an "R" or "RE", respectively. When multiple Batch Quality Control elements are reported (e.g. more than one LCS), the associated samples for each element are noted in the grey shaded header line of each data table. Any Laboratory Batch, Sample Specific % recovery or RPD value that is outside the listed Acceptance Criteria is bolded in the report. Performance criteria for CAM and RCP methods allow for some LCS compound failures to occur and still be within method compliance. In these instances, the specific failures are not narrated but are noted in the associated QC table. This information is also incorporated in the Data Usability format for our Data Merger tool where it can be reviewed along with any associated usability implications. Soil/sediments, solids and tissues are reported on a dry weight basis unless otherwise noted. Definitions of all data qualifiers and acronyms used in this report are provided in the Glossary located at the back of the report.

Please see the associated ADEx data file for a comparison of laboratory reporting limits that were achieved with the regulatory Numerical Standards requested on the Chain of Custody.

Please contact Client Services at 800-624-9220 with any questions.

I, the undersigned, attest under the pains and penalties of perjury that, to the best of my knowledge and belief and based upon my personal inquiry of those responsible for providing the information contained in this analytical report, such information is accurate and complete. This certificate of analysis is not complete unless this page accompanies any and all pages of this report.

Authorized Signature:  Peter Henriksen

Title: Technical Director/Representative Date: 03/13/12

AIR

Project Name: RI AIRPORT CORPORATION **Lab Number:** L1203876

Project Number: 32-1-5 **Report Date:** 03/13/12

SAMPLE RESULTS

Lab ID:	L1203876-01	Date Collected:	03/04/12 00:00
Client ID:	LD-P-20120304	Date Received:	03/07/12
Sample Location:	WARWICK, RI	Field Prep:	Not Specified
Matrix:	Air Cartridge	Extraction Method:	EPA 3540C
Analytical Method:	1,8270C-SIM	Extraction Date:	03/08/12 11:41
Analytical Date:	03/11/12 17:51		
Analyst:	CM		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PAHs in Air - Mansfield Lab						
Naphthalene	13600		ng/cart	500	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Pyrene-d10	82		60-120
Benzo(b)fluoranthene-d12	101		60-120
Fluoranthene-d10	86		60-120
Benzo(a)pyrene-d12	83		60-120

Project Name: RI AIRPORT CORPORATION **Lab Number:** L1203876

Project Number: 32-1-5 **Report Date:** 03/13/12

SAMPLE RESULTS

Lab ID:	L1203876-02	Date Collected:	03/04/12 00:00
Client ID:	PB-P-20120304	Date Received:	03/07/12
Sample Location:	WARWICK, RI	Field Prep:	Not Specified
Matrix:	Air Cartridge	Extraction Method:	EPA 3540C
Analytical Method:	1,8270C-SIM	Extraction Date:	03/08/12 11:41
Analytical Date:	03/11/12 18:23		
Analyst:	CM		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PAHs in Air - Mansfield Lab						
Naphthalene	14600		ng/cart	500	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Pyrene-d10	86		60-120
Benzo(b)fluoranthene-d12	110		60-120
Fluoranthene-d10	91		60-120
Benzo(a)pyrene-d12	86		60-120

Project Name: RI AIRPORT CORPORATION **Lab Number:** L1203876

Project Number: 32-1-5 **Report Date:** 03/13/12

SAMPLE RESULTS

Lab ID:	L1203876-03	Date Collected:	03/04/12 00:00
Client ID:	FS-P-20120304	Date Received:	03/07/12
Sample Location:	WARWICK, RI	Field Prep:	Not Specified
Matrix:	Air Cartridge	Extraction Method:	EPA 3540C
Analytical Method:	1,8270C-SIM	Extraction Date:	03/08/12 11:41
Analytical Date:	03/11/12 18:54		
Analyst:	CM		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PAHs in Air - Mansfield Lab						
Naphthalene	13400		ng/cart	500	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Pyrene-d10	88		60-120
Benzo(b)fluoranthene-d12	108		60-120
Fluoranthene-d10	92		60-120
Benzo(a)pyrene-d12	90		60-120

Project Name: RI AIRPORT CORPORATION **Lab Number:** L1203876

Project Number: 32-1-5 **Report Date:** 03/13/12

SAMPLE RESULTS

Lab ID:	L1203876-04	Date Collected:	03/04/12 00:00
Client ID:	FV-P-20120304	Date Received:	03/07/12
Sample Location:	WARWICK, RI	Field Prep:	Not Specified
Matrix:	Air Cartridge	Extraction Method:	EPA 3540C
Analytical Method:	1,8270C-SIM	Extraction Date:	03/08/12 11:41
Analytical Date:	03/11/12 19:26		
Analyst:	CM		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PAHs in Air - Mansfield Lab						
Naphthalene	18100		ng/cart	500	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Pyrene-d10	90		60-120
Benzo(b)fluoranthene-d12	108		60-120
Fluoranthene-d10	95		60-120
Benzo(a)pyrene-d12	88		60-120

Project Name: RI AIRPORT CORPORATION
Project Number: 32-1-5

Lab Number: L1203876
Report Date: 03/13/12

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8270C-SIM
Analytical Date: 03/11/12 16:48
Analyst: CM

Extraction Method: EPA 3540C
Extraction Date: 03/08/12 11:41

Parameter	Result	Qualifier	Units	RL	MDL
PAHs in Air - Mansfield Lab for sample(s): 01-04 Batch: WG522050-1					
Naphthalene	ND		ng/cart	500	--

Surrogate	%Recovery	Qualifier	Acceptance Criteria
Pyrene-d10	95		60-120
Benzo(b)fluoranthene-d12	113		60-120
Fluoranthene-d10	101		60-120
Benzo(a)pyrene-d12	98		60-120

Lab Control Sample Analysis

Batch Quality Control

Project Name: RI AIRPORT CORPORATION

Project Number: 32-1-5

Lab Number: L1203876

Report Date: 03/13/12

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
PAHs in Air - Mansfield Lab Associated sample(s): 01-04 Batch: WG522050-2								
Naphthalene	83		-		60-120	-		

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
Pyrene-d10	82				60-120
Benzo(b)fluoranthene-d12	92				60-120
Fluoranthene-d10	88				60-120
Benzo(a)pyrene-d12	85				60-120

Project Name: RI AIRPORT CORPORATION
Project Number: 32-1-5

Lab Number: L1203876
Report Date: 03/13/12

Sample Receipt and Container Information

Were project specific reporting limits specified? YES

Reagent H2O Preserved Vials Frozen on: NA

Cooler Information Custody Seal

Cooler	
A	Absent

Container Information

Container ID	Container Type	Cooler	pH	Temp deg C	Pres	Seal	Analysis(*)
L1203876-01A	PUF Air Cartridge - High or Low	A	N/A	5.8	Y	Absent	A2-TO13(7),PUF-HI()
L1203876-02A	PUF Air Cartridge - High or Low	A	N/A	5.8	Y	Absent	A2-TO13(7),PUF-HI()
L1203876-03A	PUF Air Cartridge - High or Low	A	N/A	5.8	Y	Absent	A2-TO13(7),PUF-HI()
L1203876-04A	PUF Air Cartridge - High or Low	A	N/A	5.8	Y	Absent	A2-TO13(7),PUF-HI()

*Values in parentheses indicate holding time in days

Project Name:	RI AIRPORT CORPORATION	**Lab Number:**	L1203876
Project Number:	32-1-5	**Report Date:**	03/13/12

GLOSSARY

Acronyms

EPA	- Environmental Protection Agency.
LCS	- Laboratory Control Sample: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.
LCSD	- Laboratory Control Sample Duplicate: Refer to LCS.
LFB	- Laboratory Fortified Blank: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.
MDL	- Method Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The MDL includes any adjustments from dilutions, concentrations or moisture content, where applicable.
MS	- Matrix Spike Sample: A sample prepared by adding a known mass of target analyte to a specified amount of matrix sample for which an independent estimate of target analyte concentration is available.
MSD	- Matrix Spike Sample Duplicate: Refer to MS.
NA	- Not Applicable.
NC	- Not Calculated: Term is utilized when one or more of the results utilized in the calculation are non-detect at the parameter's reporting unit.
NI	- Not Ignitable.
RL	- Reporting Limit: The value at which an instrument can accurately measure an analyte at a specific concentration. The RL includes any adjustments from dilutions, concentrations or moisture content, where applicable.
RPD	- Relative Percent Difference: The results from matrix and/or matrix spike duplicates are primarily designed to assess the precision of analytical results in a given matrix and are expressed as relative percent difference (RPD). Values which are less than five times the reporting limit for any individual parameter are evaluated by utilizing the absolute difference between the values; although the RPD value will be provided in the report.
SRM	- Standard Reference Material: A reference sample of a known or certified value that is of the same or similar matrix as the associated field samples.

Footnotes

1	- The reference for this analyte should be considered modified since this analyte is absent from the target analyte list of the original method.

Terms

Analytical Method: Both the document from which the method originates and the analytical reference method. (Example: EPA 8260B is shown as 1,8260B.) The codes for the reference method documents are provided in the References section of the Addendum.

Data Qualifiers

A	- Spectra identified as "Aldol Condensation Product".
B	- The analyte was detected above the reporting limit in the associated method blank. Flag only applies to associated field samples that have detectable concentrations of the analyte at less than five times (5x) the concentration found in the blank. For MCP-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For DOD-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank AND the analyte was detected above one-half the reporting limit (or above the reporting limit for common lab contaminants) in the associated method blank. For NJ-Air-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte above the reporting limit.
C	- Co-elution: The target analyte co-elutes with a known lab standard (i.e. surrogate, internal standards, etc.) for co-extracted analyses.
D	- Concentration of analyte was quantified from diluted analysis. Flag only applies to field samples that have detectable concentrations of the analyte.
E	- Concentration of analyte exceeds the range of the calibration curve and/or linear range of the instrument.
G	- The concentration may be biased high due to matrix interferences (i.e, co-elution) with non-target compound(s). The result should be considered estimated.
H	- The analysis of pH was performed beyond the regulatory-required holding time of 15 minutes from the time of sample collection.
I	- The RPD between the results for the two columns exceeds the method-specified criteria; however, the lower value has been reported due to obvious interference.
M	- Reporting Limit (RL) exceeds the MCP CAM Reporting Limit for this analyte.
NJ	- Presumptive evidence of compound. This represents an estimated concentration for Tentatively Identified Compounds (TICs), where the identification is based on a mass spectral library search.

Report Format: Data Usability Report

Project Name:	RI AIRPORT CORPORATION	**Lab Number:**	L1203876
Project Number:	32-1-5	**Report Date:**	03/13/12

Data Qualifiers

P - The RPD between the results for the two columns exceeds the method-specified criteria.

Q - The quality control sample exceeds the associated acceptance criteria. For DOD-related projects, LCS and/or Continuing Calibration Standard exceedences are also qualified on all associated sample results. Note: This flag is not applicable for matrix spike recoveries when the sample concentration is greater than 4x the spike added or for batch duplicate RPD when the sample concentrations are less than 5x the RL. (Metals only.)

R - Analytical results are from sample re-analysis.

RE - Analytical results are from sample re-extraction.

J - Estimated value. This represents an estimated concentration for Tentatively Identified Compounds (TICs).

ND - Not detected at the reporting limit (RL) for the sample.

Report Format: Data Usability Report

REFERENCES

1 Test Methods for Evaluating Solid Waste: Physical/Chemical Methods. EPA SW-846. Third Edition. Updates I - IIIA, 1997.

LIMITATION OF LIABILITIES

Alpha Analytical performs services with reasonable care and diligence normal to the analytical testing laboratory industry. In the event of an error, the sole and exclusive responsibility of Alpha Analytical shall be to re-perform the work at it's own expense. In no event shall Alpha Analytical be held liable for any incidental, consequential or special damages, including but not limited to, damages in any way connected with the use of, interpretation of, information or analysis provided by Alpha Analytical.

We strongly urge our clients to comply with EPA protocol regarding sample volume, preservation, cooling, containers, sampling procedures, holding time and splitting of samples in the field.

Certificate/Approval Program Summary

Last revised January 30, 2012 – Mansfield Facility

The following list includes only those analytes/methods for which certification/approval is currently held.
For a complete listing of analytes for the referenced methods, please contact your Alpha Customer Service Representative.

Connecticut Department of Public Health Certificate/Lab ID: PH-0141.

Wastewater/Non-Potable Water (Inorganic Parameters: pH, Turbidity, Conductivity, Alkalinity, Aluminum, Antimony, Arsenic, Barium, Beryllium, Boron, Cadmium, Calcium, Chromium, Cobalt, Copper, Iron, Lead, Magnesium, Manganese, Mercury, Molybdenum, Nickel, Potassium, Selenium, Silver, Sodium, Strontium, Thallium, Tin, Vanadium, Zinc, Total Residue (Solids), Total Suspended Solids (non-filterable), Total Cyanide. Organic Parameters: PCBs, Organochlorine Pesticides, Technical Chlordane, Toxaphene, Acid Extractables, Benzidines, Phthalate Esters, Nitrosamines, Nitroaromatics & Isophorone, PAHs, Haloethers, Chlorinated Hydrocarbons, Volatile Organics.)

Solid Waste/Soil (Inorganic Parameters: pH, Aluminum, Antimony, Arsenic, Barium, Beryllium, Cadmium, Calcium, Chromium, Hexavalent Chromium, Cobalt, Copper, Iron, Lead, Magnesium, Manganese, Mercury, Molybdenum, Nickel, Potassium, Selenium, Silver, Sodium, Thallium, Vanadium, Zinc, Total Organic Carbon, Total Cyanide, Corrosivity, TCLP 1311. Organic Parameters: PCBs, Organochlorine Pesticides, Technical Chlordane, Toxaphene, Volatile Organics, Acid Extractables, Benzidines, Phthalates, Nitrosamines, Nitroaromatics & Cyclic Ketones, PAHs, Haloethers, Chlorinated Hydrocarbons.)

Florida Department of Health Certificate/Lab ID: E87814. ***NELAP Accredited.***

Non-Potable Water (Inorganic Parameters: SM2320B, SM2540D, SM2540G.)

Solid & Chemical Materials (Inorganic Parameters: 6020, 7470, 7471, 9045. Organic Parameters: EPA 8260, 8270, 8082, 8081.)

Air & Emissions (EPA TO-15.)

Louisiana Department of Environmental Quality Certificate/Lab ID: 03090. ***NELAP Accredited.***

Non-Potable Water (Inorganic Parameters: EPA 180.1, 245.7, 1631E, 3020, 6020A, 7470A, 9040, 9050A, SM2320B, 2540D, 2540G, 4500H-B, Organic Parameters: EPA 3510C, 3580A, 3630C, 3640A, 3660B, 3665A, 5030B, 8015D, 3570, 8081B, 8082A, 8260B, 8270C, 8270D.)

Solid & Chemical Materials (Inorganic Parameters: EPA 1311, 3050, 3051A, 3060A, 6020A, 7196A, 7470A, 7471B, 7474, 9040B, 9045C, 9060. Organic Parameters: EPA 3540C, 3570B, 3580A, 3630C, 3640A, 3660, 3665A, 5035, 8015D, 8081B, 8082A, 8260B, 8270C, 8270D.)

Biological Tissue (Inorganic Parameters: EPA 6020A. Organic Parameters: EPA 3570, 3510C, 3610B, 3630C, 3640A, 8270C, 8270D.)

Air & Emissions (EPA TO-15.)

New Hampshire Department of Environmental Services Certificate/Lab ID: 2206. ***NELAP Accredited.***

Non-Potable Water (Inorganic Parameters: EPA 245.7, 1631E, 6020A, 7470A, 9040B, 9050A, SM2540D, 2540G, 4500H+B, 2320B. Organic Parameters: EPA 8081B, 8082A, 8260B, 8270C, 8015D.)

Solid & Chemical Materials (Inorganic Parameters: SW-846 1311, 1312, 3050B, 3051A, 3060A, 6020A, 7471A, 9040B, 9045C, 7196A. Organic Parameters: SW-846 3540C, 3580A, 3630C, 3640A, 3660B, 3665A, 5035, 8260B, 8270C, 8015D, 8082A, 8081B.)

New Jersey Department of Environmental Protection Certificate/Lab ID: MA015. ***NELAP Accredited.***

Non-Potable Water (Inorganic Parameters: SW-846 1312, 3010, 3020A, SM2320B, SM2540D, 2540G, EPA 180.1, 1631E, SW-846 7470A, 9040B, 6020, 9050A. Organic Parameters: SW-846 3510C, 3580A, 5030B, 5035L, 5035H, 3630C, 3640A, 3660B, 3665A, 8015B 8081A, 8082, 8260B, 8270C)

Solid & Chemical Materials (Inorganic Parameters: SW-846 6020, 1311, 1312, 3050B, 3051, 3060A, 7196A, 7470A, 7471A, 7474, 9040B, 9045C, 9060. Organic Parameters: SW-846 3540C, 3570, 3580A, 5030B, 5035L, 5035H, 3630C, 3640A, 3660B, 3665A, 8081A, 8082, 8260B, 8270C, 8015B.)

Atmospheric Organic Parameters (EPA TO-15)

Biological Tissue (Inorganic Parameters: SW-846 6020 Organic Parameters: SW-846 8270C, 3510C, 3570, 3610C, 3630C, 3640A)

New York Department of Health Certificate/Lab ID: 11627. ***NELAP Accredited.***

Non-Potable Water (Inorganic Parameters: SM2320B, SM2540D, EPA 200.8, 6020, 1631E, 245.1, 245.7, 7470A, 9014, 9040B, 9050, 120.1, 4500CN-E, 4500H-B, EPA 376.2, 180.1, 3020A. Organic Parameters: EPA 8260B, 8270C, 8081A, 8082, 3510C, 5030B.)

Solid & Hazardous Waste (Inorganic Parameters: EPA 6020, 7196A, 3060A, 7471A, 7474, 9014, 9040B, 9045C, 9010B. Organic Parameters: EPA 8260B, 8270C, 8081A, DRO 8015B, 8082, 1311, 1312, 3050B, 3580, 3570, 3051, 5035, 5030B.)

Air & Emissions (EPA TO-15.)

Pennsylvania Certificate/Lab ID: 68-02089 ***NELAP Accredited***

Solid & Hazardous Waste (Inorganic Parameters: EPA 6020A,7471B, 7474. Organic Parameters: EPA3050B, 3540C, 3630C, 8270C, 8081B, 8082A.)

Rhode Island Department of Health Certificate/Lab ID: LAO00299. ***NELAP Accredited via LA-DEQ.***

Refer to LA-DEQ Certificate for Non-Potable Water.

Texas Commission of Environmental Quality Certificate/Lab ID: T104704419-08-TX. ***NELAP Accredited.***

Solid & Chemical Materials (Inorganic Parameters: EPA 6020, 7470, 7471, 1311, 7196, 9040, 9045, 9060. Organic Parameters: EPA 8015, 8270, 8260, 8081, 8082.)

Air (Organic Parameters: EPA TO-15)

Washington State Department of Ecology Certificate/Lab ID: C954. *Non-Potable Water* (Inorganic Parameters: SM2540D, 180.1, 1631E.)

Solid & Chemical Materials (Inorganic Parameters: EPA 6020, 7470, 7471, 7474, 9045C, 9050A, 9060. Organic Parameters: EPA 8081, 8082, 8015 Mod, 8270.)

Virginia Division of Consolidated Laboratory Services Certificate/Lab ID:460194. ***NELAP Accredited.***

Non-Potable Water (Inorganic Parameters:EPA 3020A,6020A,245.7,9040B,SM4500H-B. Organic Parameters: EPA 3510C,3640A,3660B,3665A,8270C,8270D,8082A,8081B.)

Solid & Chemical Materials (Inorganic Parameters: EPA 6020A,7470A,7471B,9040B,9045C,3050B,3051. Organic Parameters: EPA 3540C, 3580A, 3630C, 3640A, 3660B, 3665A, 3570, 8270C, 8270D, 8081B, 8082A, 8015D.)

U.S. Army Corps of Engineers

Department of Defense, L-A-B Certificate/Lab ID: L2217.01.

Non-Potable Water (Inorganic Parameters: EPA 6020A, SM4500H-B. Organic Parameters: 3020A, 3510C, 5030B, 8260B, 8270C, 8270C-ALK-PAH, 8082, 8081A, 8015D-SHC, 8015D.)

Solid & Hazardous Waste (Inorganic Parameters: EPA 1311, 1312, 3050B, 6020A, 7471A, 9045C, 9060, SM 2540G, ASTM D422-63. Organic Parameters: EPA 3580A, 3570, 3540C, 5035A, 8260B, 8270C, 8270-ALK-PAH, 8082, 8081A, 8015D-SHC, 8015D.

Air & Emissions (EPA TO-15.)

Analytes Not Accredited by NELAP

Certification is not available by NELAP for the following analytes: **8270C:** Biphenyl. **TO-15:** Halothane, 2,4,4-Trimethyl-2-pentene, 2,4,4-Trimethyl-1-pentene, Thiophene, 2-Methylthiophene, 3-Methylthiophene, 2-Ethylthiophene, 1,2,3-Trimethylbenzene, Indan, Indene, 1,2,4,5-Tetramethylbenzene, Benzothiophene, 2-Methylnaphthalene, 1-Methylnaphthalene.

AIR ANALYSIS

PAGE 1 OF 1

CHAIN OF CUSTODY

ALPHA ANALYTICAL

320 Forbes Blvd, Mansfield, MA 02048
TEL: 508-822-9300 FAX: 508-822-3288

Serial_No:03133:06

Date Rec'd in Lab:

ALPHA Job #: L1203876

Project Information

Project Name: RI Airport Corporation

Project Location: Warwick, Rhode Island

Project #: L1202388

Project Manager: Tom Brauch

ALPHA Quote #:

Report/Data Deliverables Information

☐ FAX ☐ EMAIL

☐ ADEx ☐ Add'l Deliverables

Billing Information

☐ Same as Client info PO #:

Client Information

Client: Advanced Monitoring Methods

Address: 710 Golf Club Dr.

Castle Rock, CO

Phone: 720-581-1182

Fax:

Email: Tom@advm2.com

Turn-Around-Time

☐ Standard ☐ Rush (only confirmed if pre-approved)

Date Due: Time:

Regulatory Requirements/Report Limits

State/Fed	Program	Criteria

☒ These samples have been Previously analyzed by Alpha

Other Project Specific Requirements/Comments:

Analysis

All Columns Below Must Be Filled Out

Alpha Lab Use Only	Sample ID	Collection: Date	Start Time	End Time	Initial Vac	Final Vac	Sample Matrix*	Sampler Initials	Can Size	ID Can	ID Flow Controller	TO-14A by TO-15	TO-15	TO-15 SIM	APH	FIXED GASES	TO-13A	TO-4 / TO-10	Sample Specific Comments (i.e. PID)
038716-01	LD-P-20120304	03/04/12	00.00	00.00			AA	LE		28		☐	☐	☐	☐	☐	☒	☐	Lydick
02	PB-P-20120304	03/04/12	00.00	00.00			AA	LE		99		☐	☐	☐	☐	☐	☒	☐	Pembroke
03	FS-P-20120304	03/04/12	00.00	00.00			AA	LE		85		☐	☐	☐	☐	☐	☒	☐	Fire Station
04	FV-P-20120304	03/04/12	00.00	00.00			AA	LE		76		☐	☐	☐	☐	☐	☒	☐	Field View
												☐	☐	☐	☐	☐	☐	☐	
												☐	☐	☐	☐	☐	☐	☐	
											Container Type	-	-	-	-	-	-	-	

***SAMPLE MATRIX CODES:**

AA = Ambient Air (Indoor/Outdoor)
SV = Soil Vapor/Landfill Gas/SVE
Other = Please Specify

Relinquished By	Date/Time	Received By:	Date/Time
P. Gilbert	3/5 1605	P. Gilbert	3/7/12 1020
P. Gilbert 3/7/12			3/7/12 16:05

Please print clearly & legibly and completely. Samples can not be logged in and turn around time clock will not start until any ambiguities are resolved. All samples submitted are subject to Alpha's Payment Terms.

Form 101-02 (I)
Revised 29-Dec-09

ANALYTICAL REPORT

Lab Number:	L1204308
Client:	Advanced Monitoring Methods LLC 710 Golf Club Dr Castle Rock, CO 80108
ATTN:	Tom Brauch
Phone:	(720) 897-7792
Project Name:	RI AIRPORT CORPORATION
Project Number:	32-1-5
Report Date:	03/19/12

Certifications & Approvals: MA (M-MA086), NY (11148), CT (PH-0574), NH (2003), NJ NELAP (MA935), RI (LAO00065), ME (MA00086), PA (68-03671), USDA (Permit #P-330-11-00240), NC (666), TX (T104704476), DOD (L2217), US Army Corps of Engineers.

320 Forbes Boulevard, Mansfield, MA 02048-1806
508-822-9300 (Fax) 508-822-3288 800-624-9220 - www.alphalab.com

Project Name: RI AIRPORT CORPORATION
Project Number: 32-1-5

Lab Number: L1204308
Report Date: 03/19/12

Alpha Sample ID	Client ID	Sample Location	Collection Date/Time
L1204308-01	LD-P-20120310	WARWICK, RI	03/10/12 00:00
L1204308-02	PB-P-20120310	WARWICK, RI	03/10/12 00:00
L1204308-03	FS-P-20120310	WARWICK, RI	03/10/12 00:00
L1204308-04	FV-P-20120310	WARWICK, RI	03/10/12 00:00

Project Name: RI AIRPORT CORPORATION **Lab Number:** L1204308
Project Number: 32-1-5 **Report Date:** 03/19/12

Case Narrative

The samples were received in accordance with the Chain of Custody and no significant deviations were encountered during the preparation or analysis unless otherwise noted. Sample Receipt, Container Information, and the Chain of Custody are located at the back of the report.

Results contained within this report relate only to the samples submitted under this Alpha Lab Number and meet all of the requirements of NELAC, for all NELAC accredited parameters. The data presented in this report is organized by parameter (i.e. VOC, SVOC, etc.). Sample specific Quality Control data (i.e. Surrogate Spike Recovery) is reported at the end of the target analyte list for each individual sample, followed by the Laboratory Batch Quality Control at the end of each parameter. If a sample was re-analyzed or re-extracted due to a required quality control corrective action and if both sets of data are reported, the Laboratory ID of the re-analysis or re-extraction is designated with an "R" or "RE", respectively. When multiple Batch Quality Control elements are reported (e.g. more than one LCS), the associated samples for each element are noted in the grey shaded header line of each data table. Any Laboratory Batch, Sample Specific % recovery or RPD value that is outside the listed Acceptance Criteria is bolded in the report. Performance criteria for CAM and RCP methods allow for some LCS compound failures to occur and still be within method compliance. In these instances, the specific failures are not narrated but are noted in the associated QC table. This information is also incorporated in the Data Usability format for our Data Merger tool where it can be reviewed along with any associated usability implications. Soil/sediments, solids and tissues are reported on a dry weight basis unless otherwise noted. Definitions of all data qualifiers and acronyms used in this report are provided in the Glossary located at the back of the report.

Please see the associated ADEx data file for a comparison of laboratory reporting limits that were achieved with the regulatory Numerical Standards requested on the Chain of Custody.

Please contact Client Services at 800-624-9220 with any questions.

I, the undersigned, attest under the pains and penalties of perjury that, to the best of my knowledge and belief and based upon my personal inquiry of those responsible for providing the information contained in this analytical report, such information is accurate and complete. This certificate of analysis is not complete unless this page accompanies any and all pages of this report.

Authorized Signature:  Peter Henriksen

Title: Technical Director/Representative Date: 03/19/12

AIR

Project Name: RI AIRPORT CORPORATION **Lab Number:** L1204308

Project Number: 32-1-5 **Report Date:** 03/19/12

SAMPLE RESULTS

Lab ID:	L1204308-01	Date Collected:	03/10/12 00:00
Client ID:	LD-P-20120310	Date Received:	03/13/12
Sample Location:	WARWICK, RI	Field Prep:	Not Specified
Matrix:	Air Cartridge	Extraction Method:	EPA 3540C
Analytical Method:	1,8270C-SIM	Extraction Date:	03/15/12 09:43
Analytical Date:	03/16/12 16:04		
Analyst:	AW		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PAHs in Air - Mansfield Lab						
Naphthalene	11300		ng/cart	500	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Pyrene-d10	98		60-120
Benzo(b)fluoranthene-d12	114		60-120
Fluoranthene-d10	108		60-120
Benzo(a)pyrene-d12	104		60-120

Project Name: RI AIRPORT CORPORATION **Lab Number:** L1204308

Project Number: 32-1-5 **Report Date:** 03/19/12

SAMPLE RESULTS

Lab ID:	L1204308-02	Date Collected:	03/10/12 00:00
Client ID:	PB-P-20120310	Date Received:	03/13/12
Sample Location:	WARWICK, RI	Field Prep:	Not Specified
Matrix:	Air Cartridge	Extraction Method:	EPA 3540C
Analytical Method:	1,8270C-SIM	Extraction Date:	03/15/12 09:43
Analytical Date:	03/16/12 16:36		
Analyst:	AW		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PAHs in Air - Mansfield Lab						
Naphthalene	10900		ng/cart	500	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Pyrene-d10	100		60-120
Benzo(b)fluoranthene-d12	117		60-120
Fluoranthene-d10	106		60-120
Benzo(a)pyrene-d12	103		60-120

Project Name: RI AIRPORT CORPORATION **Lab Number:** L1204308

Project Number: 32-1-5 **Report Date:** 03/19/12

SAMPLE RESULTS

Lab ID:	L1204308-03	Date Collected:	03/10/12 00:00
Client ID:	FS-P-20120310	Date Received:	03/13/12
Sample Location:	WARWICK, RI	Field Prep:	Not Specified
Matrix:	Air Cartridge	Extraction Method:	EPA 3540C
Analytical Method:	1,8270C-SIM	Extraction Date:	03/15/12 09:43
Analytical Date:	03/16/12 17:08		
Analyst:	AW		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PAHs in Air - Mansfield Lab						
Naphthalene	11400		ng/cart	500	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Pyrene-d10	97		60-120
Benzo(b)fluoranthene-d12	113		60-120
Fluoranthene-d10	103		60-120
Benzo(a)pyrene-d12	102		60-120

Project Name: RI AIRPORT CORPORATION **Lab Number:** L1204308

Project Number: 32-1-5 **Report Date:** 03/19/12

SAMPLE RESULTS

Lab ID:	L1204308-04	Date Collected:	03/10/12 00:00
Client ID:	FV-P-20120310	Date Received:	03/13/12
Sample Location:	WARWICK, RI	Field Prep:	Not Specified
Matrix:	Air Cartridge	Extraction Method:	EPA 3540C
Analytical Method:	1,8270C-SIM	Extraction Date:	03/15/12 09:43
Analytical Date:	03/16/12 17:40		
Analyst:	AW		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PAHs in Air - Mansfield Lab						
Naphthalene	16300		ng/cart	500	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Pyrene-d10	96		60-120
Benzo(b)fluoranthene-d12	112		60-120
Fluoranthene-d10	105		60-120
Benzo(a)pyrene-d12	97		60-120

Project Name: RI AIRPORT CORPORATION
Project Number: 32-1-5

Lab Number: L1204308
Report Date: 03/19/12

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8270C-SIM
Analytical Date: 03/16/12 15:01
Analyst: AW

Extraction Method: EPA 3540C
Extraction Date: 03/15/12 09:43

Parameter	Result	Qualifier	Units	RL	MDL
PAHs in Air - Mansfield Lab for sample(s): 01-04 Batch: WG523196-1					
Naphthalene	ND		ng/cart	500	--

Surrogate	%Recovery	Qualifier	Acceptance Criteria
Pyrene-d10	96		60-120
Benzo(b)fluoranthene-d12	108		60-120
Fluoranthene-d10	101		60-120
Benzo(a)pyrene-d12	83		60-120

Lab Control Sample Analysis

Batch Quality Control

Project Name: RI AIRPORT CORPORATION

Project Number: 32-1-5

Lab Number: L1204308

Report Date: 03/19/12

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
PAHs in Air - Mansfield Lab Associated sample(s): 01-04 Batch: WG523196-2								
Naphthalene	100		-		60-120	-		

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
Pyrene-d10	97				60-120
Benzo(b)fluoranthene-d12	112				60-120
Fluoranthene-d10	102				60-120
Benzo(a)pyrene-d12	106				60-120

Project Name: RI AIRPORT CORPORATION
Project Number: 32-1-5

Lab Number: L1204308
Report Date: 03/19/12

Sample Receipt and Container Information

Were project specific reporting limits specified? YES

Reagent H2O Preserved Vials Frozen on: NA

Cooler Information **Custody Seal**

Cooler	
A	Absent

Container Information

Container ID	Container Type	Cooler	pH	Temp deg C	Pres	Seal	Analysis(*)
L1204308-01A	PUF Air Cartridge - High or Low	A	N/A	4.5	Y	Absent	A2-TO13(7),PUF-HI()
L1204308-02A	PUF Air Cartridge - High or Low	A	N/A	4.5	Y	Absent	A2-TO13(7),PUF-HI()
L1204308-03A	PUF Air Cartridge - High or Low	A	N/A	4.5	Y	Absent	A2-TO13(7),PUF-HI()
L1204308-04A	PUF Air Cartridge - High or Low	A	N/A	4.5	Y	Absent	A2-TO13(7),PUF-HI()

*Values in parentheses indicate holding time in days

Project Name:	RI AIRPORT CORPORATION	**Lab Number:**	L1204308
Project Number:	32-1-5	**Report Date:**	03/19/12

GLOSSARY

Acronyms

EPA	- Environmental Protection Agency.
LCS	- Laboratory Control Sample: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.
LCSD	- Laboratory Control Sample Duplicate: Refer to LCS.
LFB	- Laboratory Fortified Blank: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.
MDL	- Method Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The MDL includes any adjustments from dilutions, concentrations or moisture content, where applicable.
MS	- Matrix Spike Sample: A sample prepared by adding a known mass of target analyte to a specified amount of matrix sample for which an independent estimate of target analyte concentration is available.
MSD	- Matrix Spike Sample Duplicate: Refer to MS.
NA	- Not Applicable.
NC	- Not Calculated: Term is utilized when one or more of the results utilized in the calculation are non-detect at the parameter's reporting unit.
NI	- Not Ignitable.
RL	- Reporting Limit: The value at which an instrument can accurately measure an analyte at a specific concentration. The RL includes any adjustments from dilutions, concentrations or moisture content, where applicable.
RPD	- Relative Percent Difference: The results from matrix and/or matrix spike duplicates are primarily designed to assess the precision of analytical results in a given matrix and are expressed as relative percent difference (RPD). Values which are less than five times the reporting limit for any individual parameter are evaluated by utilizing the absolute difference between the values; although the RPD value will be provided in the report.
SRM	- Standard Reference Material: A reference sample of a known or certified value that is of the same or similar matrix as the associated field samples.

Footnotes

1	- The reference for this analyte should be considered modified since this analyte is absent from the target analyte list of the original method.

Terms

Analytical Method: Both the document from which the method originates and the analytical reference method. (Example: EPA 8260B is shown as 1,8260B.) The codes for the reference method documents are provided in the References section of the Addendum.

Data Qualifiers

A	- Spectra identified as "Aldol Condensation Product".
B	- The analyte was detected above the reporting limit in the associated method blank. Flag only applies to associated field samples that have detectable concentrations of the analyte at less than five times (5x) the concentration found in the blank. For MCP-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For DOD-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank AND the analyte was detected above one-half the reporting limit (or above the reporting limit for common lab contaminants) in the associated method blank. For NJ-Air-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte above the reporting limit.
C	- Co-elution: The target analyte co-elutes with a known lab standard (i.e. surrogate, internal standards, etc.) for co-extracted analyses.
D	- Concentration of analyte was quantified from diluted analysis. Flag only applies to field samples that have detectable concentrations of the analyte.
E	- Concentration of analyte exceeds the range of the calibration curve and/or linear range of the instrument.
G	- The concentration may be biased high due to matrix interferences (i.e, co-elution) with non-target compound(s). The result should be considered estimated.
H	- The analysis of pH was performed beyond the regulatory-required holding time of 15 minutes from the time of sample collection.
I	- The RPD between the results for the two columns exceeds the method-specified criteria; however, the lower value has been reported due to obvious interference.
M	- Reporting Limit (RL) exceeds the MCP CAM Reporting Limit for this analyte.
NJ	- Presumptive evidence of compound. This represents an estimated concentration for Tentatively Identified Compounds (TICs), where the identification is based on a mass spectral library search.

Report Format: Data Usability Report

Project Name:	RI AIRPORT CORPORATION	**Lab Number:**	L1204308
Project Number:	32-1-5	**Report Date:**	03/19/12

Data Qualifiers

P - The RPD between the results for the two columns exceeds the method-specified criteria.

Q - The quality control sample exceeds the associated acceptance criteria. For DOD-related projects, LCS and/or Continuing Calibration Standard exceedences are also qualified on all associated sample results. Note: This flag is not applicable for matrix spike recoveries when the sample concentration is greater than 4x the spike added or for batch duplicate RPD when the sample concentrations are less than 5x the RL. (Metals only.)

R - Analytical results are from sample re-analysis.

RE - Analytical results are from sample re-extraction.

J - Estimated value. This represents an estimated concentration for Tentatively Identified Compounds (TICs).

ND - Not detected at the reporting limit (RL) for the sample.

Report Format: Data Usability Report

REFERENCES

1 Test Methods for Evaluating Solid Waste: Physical/Chemical Methods. EPA SW-846. Third Edition. Updates I - IIIA, 1997.

LIMITATION OF LIABILITIES

Alpha Analytical performs services with reasonable care and diligence normal to the analytical testing laboratory industry. In the event of an error, the sole and exclusive responsibility of Alpha Analytical shall be to re-perform the work at it's own expense. In no event shall Alpha Analytical be held liable for any incidental, consequential or special damages, including but not limited to, damages in any way connected with the use of, interpretation of, information or analysis provided by Alpha Analytical.

We strongly urge our clients to comply with EPA protocol regarding sample volume, preservation, cooling, containers, sampling procedures, holding time and splitting of samples in the field.

Certificate/Approval Program Summary

Last revised January 30, 2012 – Mansfield Facility

The following list includes only those analytes/methods for which certification/approval is currently held.
For a complete listing of analytes for the referenced methods, please contact your Alpha Customer Service Representative.

Connecticut Department of Public Health Certificate/Lab ID: PH-0141.

Wastewater/Non-Potable Water (Inorganic Parameters: pH, Turbidity, Conductivity, Alkalinity, Aluminum, Antimony, Arsenic, Barium, Beryllium, Boron, Cadmium, Calcium, Chromium, Cobalt, Copper, Iron, Lead, Magnesium, Manganese, Mercury, Molybdenum, Nickel, Potassium, Selenium, Silver, Sodium, Strontium, Thallium, Tin, Vanadium, Zinc, Total Residue (Solids), Total Suspended Solids (non-filterable), Total Cyanide. Organic Parameters: PCBs, Organochlorine Pesticides, Technical Chlordane, Toxaphene, Acid Extractables, Benzidines, Phthalate Esters, Nitrosamines, Nitroaromatics & Isophorone, PAHs, Haloethers, Chlorinated Hydrocarbons, Volatile Organics.)

Solid Waste/Soil (Inorganic Parameters: pH, Aluminum, Antimony, Arsenic, Barium, Beryllium, Cadmium, Calcium, Chromium, Hexavalent Chromium, Cobalt, Copper, Iron, Lead, Magnesium, Manganese, Mercury, Molybdenum, Nickel, Potassium, Selenium, Silver, Sodium, Thallium, Vanadium, Zinc, Total Organic Carbon, Total Cyanide, Corrosivity, TCLP 1311. Organic Parameters: PCBs, Organochlorine Pesticides, Technical Chlordane, Toxaphene, Volatile Organics, Acid Extractables, Benzidines, Phthalates, Nitrosamines, Nitroaromatics & Cyclic Ketones, PAHs, Haloethers, Chlorinated Hydrocarbons.)

Florida Department of Health Certificate/Lab ID: E87814. ***NELAP Accredited.***

Non-Potable Water (Inorganic Parameters: SM2320B, SM2540D, SM2540G.)

Solid & Chemical Materials (Inorganic Parameters: 6020, 7470, 7471, 9045. Organic Parameters: EPA 8260, 8270, 8082, 8081.)

Air & Emissions (EPA TO-15.)

Louisiana Department of Environmental Quality Certificate/Lab ID: 03090. ***NELAP Accredited.***

Non-Potable Water (Inorganic Parameters: EPA 180.1, 245.7, 1631E, 3020, 6020A, 7470A, 9040, 9050A, SM2320B, 2540D, 2540G, 4500H-B, Organic Parameters: EPA 3510C, 3580A, 3630C, 3640A, 3660B, 3665A, 5030B, 8015D, 3570, 8081B, 8082A, 8260B, 8270C, 8270D.)

Solid & Chemical Materials (Inorganic Parameters: EPA 1311, 3050, 3051A, 3060A, 6020A, 7196A, 7470A, 7471B, 7474, 9040B, 9045C, 9060. Organic Parameters: EPA 3540C, 3570B, 3580A, 3630C, 3640A, 3660, 3665A, 5035, 8015D, 8081B, 8082A, 8260B, 8270C, 8270D.)

Biological Tissue (Inorganic Parameters: EPA 6020A. Organic Parameters: EPA 3570, 3510C, 3610B, 3630C, 3640A, 8270C, 8270D.)

Air & Emissions (EPA TO-15.)

New Hampshire Department of Environmental Services Certificate/Lab ID: 2206. ***NELAP Accredited.***

Non-Potable Water (Inorganic Parameters: EPA 245.7, 1631E, 6020A, 7470A, 9040B, 9050A, SM2540D, 2540G, 4500H+B, 2320B. Organic Parameters: EPA 8081B, 8082A, 8260B, 8270C, 8015D.)

Solid & Chemical Materials (Inorganic Parameters: SW-846 1311, 1312, 3050B, 3051A, 3060A, 6020A, 7471A, 9040B, 9045C, 7196A. Organic Parameters: SW-846 3540C, 3580A, 3630C, 3640A, 3660B, 3665A, 5035, 8260B, 8270C, 8015D, 8082A, 8081B.)

New Jersey Department of Environmental Protection Certificate/Lab ID: MA015. ***NELAP Accredited.***

Non-Potable Water (Inorganic Parameters: SW-846 1312, 3010, 3020A, SM2320B, SM2540D, 2540G, EPA 180.1, 1631E, SW-846 7470A, 9040B, 6020, 9050A. Organic Parameters: SW-846 3510C, 3580A, 5030B, 5035L, 5035H, 3630C, 3640A, 3660B, 3665A, 8015B 8081A, 8082, 8260B, 8270C)

Solid & Chemical Materials (Inorganic Parameters: SW-846 6020, 1311, 1312, 3050B, 3051, 3060A, 7196A, 7470A, 7471A, 7474, 9040B, 9045C, 9060. Organic Parameters: SW-846 3540C, 3570, 3580A, 5030B, 5035L, 5035H, 3630C, 3640A, 3660B, 3665A, 8081A, 8082, 8260B, 8270C, 8015B.)

Atmospheric Organic Parameters (EPA TO-15)

Biological Tissue (Inorganic Parameters: SW-846 6020 Organic Parameters: SW-846 8270C, 3510C, 3570, 3610C, 3630C, 3640A)

New York Department of Health Certificate/Lab ID: 11627. ***NELAP Accredited.***

Non-Potable Water (Inorganic Parameters: SM2320B, SM2540D, EPA 200.8, 6020, 1631E, 245.1, 245.7, 7470A, 9014, 9040B, 9050, 120.1, 4500CN-E, 4500H-B, EPA 376.2, 180.1, 3020A. Organic Parameters: EPA 8260B, 8270C, 8081A, 8082, 3510C, 5030B.)

Solid & Hazardous Waste (Inorganic Parameters: EPA 6020, 7196A, 3060A, 7471A, 7474, 9014, 9040B, 9045C, 9010B. Organic Parameters: EPA 8260B, 8270C, 8081A, DRO 8015B, 8082, 1311, 1312, 3050B, 3580, 3570, 3051, 5035, 5030B.)

Air & Emissions (EPA TO-15.)

Pennsylvania Certificate/Lab ID: 68-02089 ***NELAP Accredited***

Solid & Hazardous Waste (Inorganic Parameters: EPA 6020A,7471B, 7474. Organic Parameters: EPA3050B, 3540C, 3630C, 8270C, 8081B, 8082A.)

Rhode Island Department of Health Certificate/Lab ID: LAO00299. ***NELAP Accredited via LA-DEQ.***

Refer to LA-DEQ Certificate for Non-Potable Water.

Texas Commission of Environmental Quality Certificate/Lab ID: T104704419-08-TX. ***NELAP Accredited.***

Solid & Chemical Materials (Inorganic Parameters: EPA 6020, 7470, 7471, 1311, 7196, 9040, 9045, 9060. Organic Parameters: EPA 8015, 8270, 8260, 8081, 8082.)

Air (Organic Parameters: EPA TO-15)

Washington State Department of Ecology Certificate/Lab ID: C954. *Non-Potable Water* (Inorganic Parameters: SM2540D, 180.1, 1631E.)

Solid & Chemical Materials (Inorganic Parameters: EPA 6020, 7470, 7471, 7474, 9045C, 9050A, 9060. Organic Parameters: EPA 8081, 8082, 8015 Mod, 8270.)

Virginia Division of Consolidated Laboratory Services Certificate/Lab ID:460194. ***NELAP Accredited.***

Non-Potable Water (Inorganic Parameters:EPA 3020A,6020A,245.7,9040B,SM4500H-B. Organic Parameters: EPA 3510C,3640A,3660B,3665A,8270C,8270D,8082A,8081B.)

Solid & Chemical Materials (Inorganic Parameters: EPA 6020A,7470A,7471B,9040B,9045C,3050B,3051. Organic Parameters: EPA 3540C, 3580A, 3630C, 3640A, 3660B, 3665A, 3570, 8270C, 8270D, 8081B, 8082A, 8015D.)

U.S. Army Corps of Engineers

Department of Defense, L-A-B Certificate/Lab ID: L2217.01.

Non-Potable Water (Inorganic Parameters: EPA 6020A, SM4500H-B. Organic Parameters: 3020A, 3510C, 5030B, 8260B, 8270C, 8270C-ALK-PAH, 8082, 8081A, 8015D-SHC, 8015D.)

Solid & Hazardous Waste (Inorganic Parameters: EPA 1311, 1312, 3050B, 6020A, 7471A, 9045C, 9060, SM 2540G, ASTM D422-63. Organic Parameters: EPA 3580A, 3570, 3540C, 5035A, 8260B, 8270C, 8270-ALK-PAH, 8082, 8081A, 8015D-SHC, 8015D.

Air & Emissions (EPA TO-15.)

Analytes Not Accredited by NELAP

Certification is not available by NELAP for the following analytes: **8270C:** Biphenyl. **TO-15:** Halothane, 2,4,4-Trimethyl-2-pentene, 2,4,4-Trimethyl-1-pentene, Thiophene, 2-Methylthiophene, 3-Methylthiophene, 2-Ethylthiophene, 1,2,3-Trimethylbenzene, Indan, Indene, 1,2,4,5-Tetramethylbenzene, Benzothiophene, 2-Methylnaphthalene, 1-Methylnaphthalene.

AIR ANALYSIS

PAGE 1 OF 1

CHAIN OF CUSTODY

ALPHA ANALYTICAL

320 Forbes Blvd, Mansfield, MA 02048
TEL: 508-822-9300 FAX: 508-822-3288

Serial_No:03191 15:45

Client Information

Client: Advanced Monitoring Methods
Address: 710 Golf Club Dr.
Castle Rock, CO
Phone: 720-581-1182
Fax:
Email: Tom@advm2.com

Project Information

Project Name: RI Airport Corporation
Project Location: Warwick, Rhode Island
Project #: L1202388
Project Manager: Tom Brauch
ALPHA Quote #:

Turn-Around-Time

☐ Standard ☐ Rush (only confirmed if pre-approved)

Date Due: Time:

☒ These samples have been Previously analyzed by Alpha

Other Project Specific Requirements/Comments:

Date Rec'd in Lab:

ALPHA Job #: L1204308

Report/Data Deliverables Information

☐ FAX ☐ EMAIL
☐ ADEx ☐ Add'l Deliverables

Billing Information

☐ Same as Client info PO #:

Regulatory Requirements/Report Limits

State/Fed	Program	Criteria

Analysis

All Columns Below Must Be Filled Out

Alpha Lab Use Only	Sample ID	Collection: Date	Start Time	End Time	Initial Vac	Final Vac	Sample Matrix*	Sampler Initials	Can Size	ID Can	ID Flow Controller	TO-14A by TO-15	TO-15	TO-15 SIM	APH	FIXED GASES	TO-13A	TO-4 / TO-10	Sample Specific Comments (i.e. PID)
0430801	LD-P-20120310	03/10/12	00.00	00.00			AA	LE		08		☐	☐	☐	☐	☐	☒	☐	Lydick
02	PB-P-20120310	03/10/12	00.00	00.00			AA	LE		69		☐	☐	☐	☐	☐	☒	☐	Pembroke
03	FS-P-20120310	03/10/12	00.00	00.00			AA	LE		23		☐	☐	☐	☐	☐	☒	☐	Fire Station
04	FV-P-20120310	03/10/12	00.00	00.00			AA	LE		67		☐	☐	☐	☐	☐	☒	☐	Field View
												☐	☐	☐	☐	☐	☐	☐	
												☐	☐	☐	☐	☐	☐	☐	
										Container Type		-	-	-	-	-	-	-	

***SAMPLE MATRIX CODES:**

AA = Ambient Air (Indoor/Outdoor)
SV = Soil Vapor/Landfill Gas/SVE
Other = Please Specify

Relinquished By	Date/Time	Received By	Date/Time
	3/11 2:48		3/13/12 1105
	3/13/12 1730	Eileen Sullivan	3/13/12 17:30

Please print clearly & legibly and completely. Samples can not be logged in and turn around time clock will not start until any ambiguities are resolved. All samples submitted are subject to Alpha's Payment Terms.

Form 101-02 (I)
Revised 29-Dec-09

ANALYTICAL REPORT

Lab Number:	L1204832
Client:	Advanced Monitoring Methods LLC 710 Golf Club Dr Castle Rock, CO 80108
ATTN:	Tom Brauch
Phone:	(720) 897-7792
Project Name:	RI AIRPORT CORPORATION
Project Number:	32-1-5
Report Date:	03/27/12

Certifications & Approvals: NY (11627), CT (PH-0141), NH (2206), NJ NELAP (MA015), RI (LAO00299), PA (68-02089), LA NELAP (03090), FL (E87814), TX (T104704419), WA (C954), DOD (L2217.01), USDA (Permit #P330-11-00109), US Army Corps of Engineers.

320 Forbes Boulevard, Mansfield, MA 02048-1806
508-822-9300 (Fax) 508-822-3288 800-624-9220 - www.alphalab.com

Project Name: RI AIRPORT CORPORATION
Project Number: 32-1-5

Lab Number: L1204832
Report Date: 03/27/12

Alpha Sample ID	Client ID	Sample Location	Collection Date/Time
L1204832-01	LD-P-20120316	WARWICK, RI	03/16/12 00:00
L1204832-02	PB-P-20120316	WARWICK, RI	03/16/12 00:00
L1204832-03	FS-P-20120316	WARWICK, RI	03/16/12 00:00
L1204832-04	FV-P-20120316	WARWICK, RI	03/16/12 00:00

Project Name: RI AIRPORT CORPORATION **Lab Number:** L1204832
Project Number: 32-1-5 **Report Date:** 03/27/12

Case Narrative

The samples were received in accordance with the Chain of Custody and no significant deviations were encountered during the preparation or analysis unless otherwise noted. Sample Receipt, Container Information, and the Chain of Custody are located at the back of the report.

Results contained within this report relate only to the samples submitted under this Alpha Lab Number and meet all of the requirements of NELAC, for all NELAC accredited parameters. The data presented in this report is organized by parameter (i.e. VOC, SVOC, etc.). Sample specific Quality Control data (i.e. Surrogate Spike Recovery) is reported at the end of the target analyte list for each individual sample, followed by the Laboratory Batch Quality Control at the end of each parameter. If a sample was re-analyzed or re-extracted due to a required quality control corrective action and if both sets of data are reported, the Laboratory ID of the re-analysis or re-extraction is designated with an "R" or "RE", respectively. When multiple Batch Quality Control elements are reported (e.g. more than one LCS), the associated samples for each element are noted in the grey shaded header line of each data table. Any Laboratory Batch, Sample Specific % recovery or RPD value that is outside the listed Acceptance Criteria is bolded in the report. Performance criteria for CAM and RCP methods allow for some LCS compound failures to occur and still be within method compliance. In these instances, the specific failures are not narrated but are noted in the associated QC table. This information is also incorporated in the Data Usability format for our Data Merger tool where it can be reviewed along with any associated usability implications. Soil/sediments, solids and tissues are reported on a dry weight basis unless otherwise noted. Definitions of all data qualifiers and acronyms used in this report are provided in the Glossary located at the back of the report.

In reference to questions H (CAM) or 4 (RCP) when "NO" is checked, the performance criteria for CAM and RCP methods allow for some quality control failures to occur and still be within method compliance. In these instances the specific failure is not narrated but noted in the associated QC table. The information is also incorporated in the Data Usability format of our Data Merger tool where it can be reviewed along with any associated usability implications.

Please see the associated ADEx data file for a comparison of laboratory reporting limits that were achieved with the regulatory Numerical Standards requested on the Chain of Custody.

Please contact Client Services at 800-624-9220 with any questions.

PAHs In Air TO-13

The surrogate recovery for L1204832-01 is outside the individual acceptance criteria for Benzo(b)Fluoranthene-d12 (126%), but within the overall method allowances. The results of the original analysis are reported; however, all associated compounds are considered to have a potential bias.

Project Name: RI AIRPORT CORPORATION **Lab Number:** L1204832
Project Number: 32-1-5 **Report Date:** 03/27/12

Case Narrative (continued)

The surrogate recovery for L1204832-03 is outside the individual acceptance criteria for Benzo(b)Fluoranthene-d12 (122%), but within the overall method allowances. The results of the original analysis are reported; however, all associated compounds are considered to have a potential bias.

The surrogate recovery for L1204832-04 is outside the individual acceptance criteria for Benzo(b)Fluoranthene-d12 (128%), but within the overall method allowances. The results of the original analysis are reported; however, all associated compounds are considered to have a potential bias.

The surrogate recovery for WG524806-1 is outside the individual acceptance criteria for Benzo(b)Fluoranthene-d12 (122%), but within the overall method allowances. The results of the original analysis are reported; however, all associated compounds are considered to have a potential bias.

The surrogate recovery for WG524806-2 is outside the individual acceptance criteria for Benzo(a)Pyrene-d12 (121%), but within the overall method allowances. The results of the original analysis are reported; however, all associated compounds are considered to have a potential bias.

I, the undersigned, attest under the pains and penalties of perjury that, to the best of my knowledge and belief and based upon my personal inquiry of those responsible for providing the information contained in this analytical report, such information is accurate and complete. This certificate of analysis is not complete unless this page accompanies any and all pages of this report.

Authorized Signature: Peter Henriksen

Title: Technical Director/Representative Date: 03/27/12

AIR

Project Name: RI AIRPORT CORPORATION **Lab Number:** L1204832

Project Number: 32-1-5 **Report Date:** 03/27/12

SAMPLE RESULTS

Lab ID:	L1204832-01	Date Collected:	03/16/12 00:00
Client ID:	LD-P-20120316	Date Received:	03/21/12
Sample Location:	WARWICK, RI	Field Prep:	Not Specified
Matrix:	Air Cartridge	Extraction Method:	EPA 3540C
Analytical Method:	1,8270C-SIM	Extraction Date:	03/23/12 13:00
Analytical Date:	03/26/12 16:37		
Analyst:	CM		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PAHs in Air - Mansfield Lab						
Naphthalene	11800		ng/cart	500	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Pyrene-d10	106		60-120
Benzo(b)fluoranthene-d12	**126**	Q	60-120
Fluoranthene-d10	107		60-120
Benzo(a)pyrene-d12	105		60-120

Project Name: RI AIRPORT CORPORATION **Lab Number:** L1204832

Project Number: 32-1-5 **Report Date:** 03/27/12

SAMPLE RESULTS

Lab ID:	L1204832-02	Date Collected:	03/16/12 00:00
Client ID:	PB-P-20120316	Date Received:	03/21/12
Sample Location:	WARWICK, RI	Field Prep:	Not Specified
Matrix:	Air Cartridge	Extraction Method:	EPA 3540C
Analytical Method:	1,8270C-SIM	Extraction Date:	03/23/12 13:00
Analytical Date:	03/26/12 17:09		
Analyst:	CM		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PAHs in Air - Mansfield Lab						
Naphthalene	22600		ng/cart	500	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Pyrene-d10	101		60-120
Benzo(b)fluoranthene-d12	114		60-120
Fluoranthene-d10	100		60-120
Benzo(a)pyrene-d12	93		60-120

Project Name: RI AIRPORT CORPORATION **Lab Number:** L1204832

Project Number: 32-1-5 **Report Date:** 03/27/12

SAMPLE RESULTS

Lab ID:	L1204832-03	Date Collected:	03/16/12 00:00
Client ID:	FS-P-20120316	Date Received:	03/21/12
Sample Location:	WARWICK, RI	Field Prep:	Not Specified
Matrix:	Air Cartridge	Extraction Method:	EPA 3540C
Analytical Method:	1,8270C-SIM	Extraction Date:	03/23/12 13:00
Analytical Date:	03/26/12 17:41		
Analyst:	CM		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PAHs in Air - Mansfield Lab						
Naphthalene	12000		ng/cart	500	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Pyrene-d10	102		60-120
Benzo(b)fluoranthene-d12	**122**	Q	60-120
Fluoranthene-d10	107		60-120
Benzo(a)pyrene-d12	106		60-120

Project Name: RI AIRPORT CORPORATION **Lab Number:** L1204832

Project Number: 32-1-5 **Report Date:** 03/27/12

SAMPLE RESULTS

Lab ID:	L1204832-04	Date Collected:	03/16/12 00:00
Client ID:	FV-P-20120316	Date Received:	03/21/12
Sample Location:	WARWICK, RI	Field Prep:	Not Specified
Matrix:	Air Cartridge	Extraction Method:	EPA 3540C
Analytical Method:	1,8270C-SIM	Extraction Date:	03/23/12 13:00
Analytical Date:	03/26/12 18:13		
Analyst:	CM		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PAHs in Air - Mansfield Lab						
Naphthalene	12800		ng/cart	500	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Pyrene-d10	105		60-120
Benzo(b)fluoranthene-d12	**128**	Q	60-120
Fluoranthene-d10	107		60-120
Benzo(a)pyrene-d12	101		60-120

Project Name: RI AIRPORT CORPORATION
Project Number: 32-1-5

Lab Number: L1204832
Report Date: 03/27/12

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8270C-SIM
Analytical Date: 03/26/12 15:34
Analyst: CM

Extraction Method: EPA 3540C
Extraction Date: 03/23/12 13:00

Parameter	Result	Qualifier	Units	RL	MDL
PAHs in Air - Mansfield Lab for sample(s): 01-04 Batch: WG524806-1					
Naphthalene	ND		ng/cart	500	--

Surrogate	%Recovery	Qualifier	Acceptance Criteria
Pyrene-d10	108		60-120
Benzo(b)fluoranthene-d12	**122**	Q	60-120
Fluoranthene-d10	110		60-120
Benzo(a)pyrene-d12	101		60-120

Lab Control Sample Analysis

Batch Quality Control

Project Name: RI AIRPORT CORPORATION

Project Number: 32-1-5

Lab Number: L1204832

Report Date: 03/27/12

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
PAHs in Air - Mansfield Lab Associated sample(s): 01-04 Batch: WG524806-2								
Naphthalene	102		-		60-120	-		

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
Pyrene-d10	103				60-120
Benzo(b)fluoranthene-d12	116				60-120
Fluoranthene-d10	107				60-120
Benzo(a)pyrene-d12	121	Q			60-120

Project Name: RI AIRPORT CORPORATION
Project Number: 32-1-5

Lab Number: L1204832
Report Date: 03/27/12

Sample Receipt and Container Information

Were project specific reporting limits specified? YES

Reagent H2O Preserved Vials Frozen on: NA

Cooler Information Custody Seal

Cooler	
A	Absent

Container Information

Container ID	Container Type	Cooler	pH	Temp deg C	Pres	Seal	Analysis(*)
L1204832-01A	PUF Air Cartridge - High or Low	A	N/A	4.4	Y	Absent	A2-TO13(7),PUF-HI()
L1204832-02A	PUF Air Cartridge - High or Low	A	N/A	4.4	Y	Absent	A2-TO13(7),PUF-HI()
L1204832-03A	PUF Air Cartridge - High or Low	A	N/A	4.4	Y	Absent	A2-TO13(7),PUF-HI()
L1204832-04A	PUF Air Cartridge - High or Low	A	N/A	4.4	Y	Absent	A2-TO13(7),PUF-HI()

*Values in parentheses indicate holding time in days

Project Name:	RI AIRPORT CORPORATION	**Lab Number:**	L1204832
Project Number:	32-1-5	**Report Date:**	03/27/12

GLOSSARY

Acronyms

EPA	- Environmental Protection Agency.
LCS	- Laboratory Control Sample: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.
LCSD	- Laboratory Control Sample Duplicate: Refer to LCS.
LFB	- Laboratory Fortified Blank: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.
MDL	- Method Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The MDL includes any adjustments from dilutions, concentrations or moisture content, where applicable.
MS	- Matrix Spike Sample: A sample prepared by adding a known mass of target analyte to a specified amount of matrix sample for which an independent estimate of target analyte concentration is available.
MSD	- Matrix Spike Sample Duplicate: Refer to MS.
NA	- Not Applicable.
NC	- Not Calculated: Term is utilized when one or more of the results utilized in the calculation are non-detect at the parameter's reporting unit.
NI	- Not Ignitable.
RL	- Reporting Limit: The value at which an instrument can accurately measure an analyte at a specific concentration. The RL includes any adjustments from dilutions, concentrations or moisture content, where applicable.
RPD	- Relative Percent Difference: The results from matrix and/or matrix spike duplicates are primarily designed to assess the precision of analytical results in a given matrix and are expressed as relative percent difference (RPD). Values which are less than five times the reporting limit for any individual parameter are evaluated by utilizing the absolute difference between the values; although the RPD value will be provided in the report.
SRM	- Standard Reference Material: A reference sample of a known or certified value that is of the same or similar matrix as the associated field samples.

Footnotes

1	- The reference for this analyte should be considered modified since this analyte is absent from the target analyte list of the original method.

Terms

Analytical Method: Both the document from which the method originates and the analytical reference method. (Example: EPA 8260B is shown as 1,8260B.) The codes for the reference method documents are provided in the References section of the Addendum.

Data Qualifiers

A	- Spectra identified as "Aldol Condensation Product".
B	- The analyte was detected above the reporting limit in the associated method blank. Flag only applies to associated field samples that have detectable concentrations of the analyte at less than five times (5x) the concentration found in the blank. For MCP-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For DOD-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank AND the analyte was detected above one-half the reporting limit (or above the reporting limit for common lab contaminants) in the associated method blank. For NJ-Air-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte above the reporting limit.
C	- Co-elution: The target analyte co-elutes with a known lab standard (i.e. surrogate, internal standards, etc.) for co-extracted analyses.
D	- Concentration of analyte was quantified from diluted analysis. Flag only applies to field samples that have detectable concentrations of the analyte.
E	- Concentration of analyte exceeds the range of the calibration curve and/or linear range of the instrument.
G	- The concentration may be biased high due to matrix interferences (i.e, co-elution) with non-target compound(s). The result should be considered estimated.
H	- The analysis of pH was performed beyond the regulatory-required holding time of 15 minutes from the time of sample collection.
I	- The RPD between the results for the two columns exceeds the method-specified criteria; however, the lower value has been reported due to obvious interference.
M	- Reporting Limit (RL) exceeds the MCP CAM Reporting Limit for this analyte.
NJ	- Presumptive evidence of compound. This represents an estimated concentration for Tentatively Identified Compounds (TICs), where the identification is based on a mass spectral library search.

Report Format: Data Usability Report

Project Name:	RI AIRPORT CORPORATION	**Lab Number:**	L1204832
Project Number:	32-1-5	**Report Date:**	03/27/12

Data Qualifiers

P - The RPD between the results for the two columns exceeds the method-specified criteria.

Q - The quality control sample exceeds the associated acceptance criteria. For DOD-related projects, LCS and/or Continuing Calibration Standard exceedences are also qualified on all associated sample results. Note: This flag is not applicable for matrix spike recoveries when the sample concentration is greater than 4x the spike added or for batch duplicate RPD when the sample concentrations are less than 5x the RL. (Metals only.)

R - Analytical results are from sample re-analysis.

RE - Analytical results are from sample re-extraction.

J - Estimated value. This represents an estimated concentration for Tentatively Identified Compounds (TICs).

ND - Not detected at the reporting limit (RL) for the sample.

Report Format: Data Usability Report

REFERENCES

1 Test Methods for Evaluating Solid Waste: Physical/Chemical Methods. EPA SW-846. Third Edition. Updates I - IIIA, 1997.

LIMITATION OF LIABILITIES

Alpha Analytical performs services with reasonable care and diligence normal to the analytical testing laboratory industry. In the event of an error, the sole and exclusive responsibility of Alpha Analytical shall be to re-perform the work at it's own expense. In no event shall Alpha Analytical be held liable for any incidental, consequential or special damages, including but not limited to, damages in any way connected with the use of, interpretation of, information or analysis provided by Alpha Analytical.

We strongly urge our clients to comply with EPA protocol regarding sample volume, preservation, cooling, containers, sampling procedures, holding time and splitting of samples in the field.

Certificate/Approval Program Summary

Last revised January 30, 2012 – Mansfield Facility

The following list includes only those analytes/methods for which certification/approval is currently held.
For a complete listing of analytes for the referenced methods, please contact your Alpha Customer Service Representative.

Connecticut Department of Public Health Certificate/Lab ID: PH-0141.

Wastewater/Non-Potable Water (Inorganic Parameters: pH, Turbidity, Conductivity, Alkalinity, Aluminum, Antimony, Arsenic, Barium, Beryllium, Boron, Cadmium, Calcium, Chromium, Cobalt, Copper, Iron, Lead, Magnesium, Manganese, Mercury, Molybdenum, Nickel, Potassium, Selenium, Silver, Sodium, Strontium, Thallium, Tin, Vanadium, Zinc, Total Residue (Solids), Total Suspended Solids (non-filterable), Total Cyanide. Organic Parameters: PCBs, Organochlorine Pesticides, Technical Chlordane, Toxaphene, Acid Extractables, Benzidines, Phthalate Esters, Nitrosamines, Nitroaromatics & Isophorone, PAHs, Haloethers, Chlorinated Hydrocarbons, Volatile Organics.)

Solid Waste/Soil (Inorganic Parameters: pH, Aluminum, Antimony, Arsenic, Barium, Beryllium, Cadmium, Calcium, Chromium, Hexavalent Chromium, Cobalt, Copper, Iron, Lead, Magnesium, Manganese, Mercury, Molybdenum, Nickel, Potassium, Selenium, Silver, Sodium, Thallium, Vanadium, Zinc, Total Organic Carbon, Total Cyanide, Corrosivity, TCLP 1311. Organic Parameters: PCBs, Organochlorine Pesticides, Technical Chlordane, Toxaphene, Volatile Organics, Acid Extractables, Benzidines, Phthalates, Nitrosamines, Nitroaromatics & Cyclic Ketones, PAHs, Haloethers, Chlorinated Hydrocarbons.)

Florida Department of Health Certificate/Lab ID: E87814. ***NELAP Accredited.***

Non-Potable Water (Inorganic Parameters: SM2320B, SM2540D, SM2540G.)

Solid & Chemical Materials (Inorganic Parameters: 6020, 7470, 7471, 9045. Organic Parameters: EPA 8260, 8270, 8082, 8081.)

Air & Emissions (EPA TO-15.)

Louisiana Department of Environmental Quality Certificate/Lab ID: 03090. ***NELAP Accredited.***

Non-Potable Water (Inorganic Parameters: EPA 180.1, 245.7, 1631E, 3020, 6020A, 7470A, 9040, 9050A, SM2320B, 2540D, 2540G, 4500H-B, Organic Parameters: EPA 3510C, 3580A, 3630C, 3640A, 3660B, 3665A, 5030B, 8015D, 3570, 8081B, 8082A, 8260B, 8270C, 8270D.)

Solid & Chemical Materials (Inorganic Parameters: EPA 1311, 3050, 3051A, 3060A, 6020A, 7196A, 7470A, 7471B, 7474, 9040B, 9045C, 9060. Organic Parameters: EPA 3540C, 3570B, 3580A, 3630C, 3640A, 3660, 3665A, 5035, 8015D, 8081B, 8082A, 8260B, 8270C, 8270D.)

Biological Tissue (Inorganic Parameters: EPA 6020A. Organic Parameters: EPA 3570, 3510C, 3610B, 3630C, 3640A, 8270C, 8270D.)

Air & Emissions (EPA TO-15.)

New Hampshire Department of Environmental Services Certificate/Lab ID: 2206. ***NELAP Accredited.***

Non-Potable Water (Inorganic Parameters: EPA 245.7, 1631E, 6020A, 7470A, 9040B, 9050A, SM2540D, 2540G, 4500H+B, 2320B. Organic Parameters: EPA 8081B, 8082A, 8260B, 8270C, 8015D.)

Solid & Chemical Materials (Inorganic Parameters: SW-846 1311, 1312, 3050B, 3051A, 3060A, 6020A, 7471A, 9040B, 9045C, 7196A. Organic Parameters: SW-846 3540C, 3580A, 3630C, 3640A, 3660B, 3665A, 5035, 8260B, 8270C, 8015D, 8082A, 8081B.)

New Jersey Department of Environmental Protection Certificate/Lab ID: MA015. ***NELAP Accredited.***

Non-Potable Water (Inorganic Parameters: SW-846 1312, 3010, 3020A, SM2320B, SM2540D, 2540G, EPA 180.1, 1631E, SW-846 7470A, 9040B, 6020, 9050A. Organic Parameters: SW-846 3510C, 3580A, 5030B, 5035L, 5035H, 3630C, 3640A, 3660B, 3665A, 8015B 8081A, 8082, 8260B, 8270C)

Solid & Chemical Materials (Inorganic Parameters: SW-846 6020, 1311, 1312, 3050B, 3051, 3060A, 7196A, 7470A, 7471A, 7474, 9040B, 9045C, 9060. Organic Parameters: SW-846 3540C, 3570, 3580A, 5030B, 5035L, 5035H, 3630C, 3640A, 3660B, 3665A, 8081A, 8082, 8260B, 8270C, 8015B.)

Atmospheric Organic Parameters (EPA TO-15)

Biological Tissue (Inorganic Parameters: SW-846 6020 Organic Parameters: SW-846 8270C, 3510C, 3570, 3610C, 3630C, 3640A)

New York Department of Health Certificate/Lab ID: 11627. ***NELAP Accredited.***

Non-Potable Water (Inorganic Parameters: SM2320B, SM2540D, EPA 200.8, 6020, 1631E, 245.1, 245.7, 7470A, 9014, 9040B, 9050, 120.1, 4500CN-E, 4500H-B, EPA 376.2, 180.1, 3020A. Organic Parameters: EPA 8260B, 8270C, 8081A, 8082, 3510C, 5030B.)

Solid & Hazardous Waste (Inorganic Parameters: EPA 6020, 7196A, 3060A, 7471A, 7474, 9014, 9040B, 9045C, 9010B. Organic Parameters: EPA 8260B, 8270C, 8081A, DRO 8015B, 8082, 1311, 1312, 3050B, 3580, 3570, 3051, 5035, 5030B.)

Air & Emissions (EPA TO-15.)

Pennsylvania Certificate/Lab ID: 68-02089 ***NELAP Accredited***

Solid & Hazardous Waste (Inorganic Parameters: EPA 6020A,7471B, 7474. Organic Parameters: EPA3050B, 3540C, 3630C, 8270C, 8081B, 8082A.)

Rhode Island Department of Health Certificate/Lab ID: LAO00299. ***NELAP Accredited via LA-DEQ.***

Refer to LA-DEQ Certificate for Non-Potable Water.

Texas Commission of Environmental Quality Certificate/Lab ID: T104704419-08-TX. ***NELAP Accredited.***

Solid & Chemical Materials (Inorganic Parameters: EPA 6020, 7470, 7471, 1311, 7196, 9040, 9045, 9060. Organic Parameters: EPA 8015, 8270, 8260, 8081, 8082.)

Air (Organic Parameters: EPA TO-15)

Washington State Department of Ecology Certificate/Lab ID: C954. *Non-Potable Water* (Inorganic Parameters: SM2540D, 180.1, 1631E.)

Solid & Chemical Materials (Inorganic Parameters: EPA 6020, 7470, 7471, 7474, 9045C, 9050A, 9060. Organic Parameters: EPA 8081, 8082, 8015 Mod, 8270.)

Virginia Division of Consolidated Laboratory Services Certificate/Lab ID:460194. ***NELAP Accredited.***

Non-Potable Water (Inorganic Parameters:EPA 3020A,6020A,245.7,9040B,SM4500H-B. Organic Parameters: EPA 3510C,3640A,3660B,3665A,8270C,8270D,8082A,8081B.)

Solid & Chemical Materials (Inorganic Parameters: EPA 6020A,7470A,7471B,9040B,9045C,3050B,3051. Organic Parameters: EPA 3540C, 3580A, 3630C, 3640A, 3660B, 3665A, 3570, 8270C, 8270D, 8081B, 8082A, 8015D.)

U.S. Army Corps of Engineers

Department of Defense, L-A-B Certificate/Lab ID: L2217.01.

Non-Potable Water (Inorganic Parameters: EPA 6020A, SM4500H-B. Organic Parameters: 3020A, 3510C, 5030B, 8260B, 8270C, 8270C-ALK-PAH, 8082, 8081A, 8015D-SHC, 8015D.)

Solid & Hazardous Waste (Inorganic Parameters: EPA 1311, 1312, 3050B, 6020A, 7471A, 9045C, 9060, SM 2540G, ASTM D422-63. Organic Parameters: EPA 3580A, 3570, 3540C, 5035A, 8260B, 8270C, 8270-ALK-PAH, 8082, 8081A, 8015D-SHC, 8015D.

Air & Emissions (EPA TO-15.)

Analytes Not Accredited by NELAP

Certification is not available by NELAP for the following analytes: **8270C:** Biphenyl. **TO-15:** Halothane, 2,4,4-Trimethyl-2-pentene, 2,4,4-Trimethyl-1-pentene, Thiophene, 2-Methylthiophene, 3-Methylthiophene, 2-Ethylthiophene, 1,2,3-Trimethylbenzene, Indan, Indene, 1,2,4,5-Tetramethylbenzene, Benzothiophene, 2-Methylnaphthalene, 1-Methylnaphthalene.

AIR ANALYSIS

PAGE 1 OF 1

CHAIN OF CUSTODY

ALPHA ANALYTICAL

320 Forbes Blvd, Mansfield, MA 02048
TEL: 508-822-9300 FAX: 508-822-3288

Serial_No:03217:39

Date Rec'd in Lab:

ALPHA Job #: L1204832

Client Information

Client: Advanced Monitoring Methods
Address: 710 Golf Club Dr.
Castle Rock, CO
Phone: 720-581-1182
Fax:
Email: Tom@advm2.com

Project Information

Project Name: RI Airport Corporation
Project Location: Warwick, Rhode Island
Project #: L1202388
Project Manager: Tom Brauch
ALPHA Quote #:

Turn-Around-Time

☐ Standard ☐ Rush (only confirmed if pre-approved)

Date Due: Time:

Report/Data Deliverables Information

☐ FAX ☐ EMAIL
☐ ADEx ☐ Add'l Deliverables

Billing Information

☐ Same as Client info PO #:

Regulatory Requirements/Report Limits

State/Fed	Program	Criteria

☒ These samples have been Previously analyzed by Alpha

Other Project Specific Requirements/Comments:

Analysis

All Columns Below Must Be Filled Out

Alpha Lab Use Only	Sample ID	Collection Date	Start Time	End Time	Initial Vac	Final Vac	Sample Matrix*	Sampler Initials	Can Size	ID Can	ID Flow Controller	TO-14A by TO-15	TO-15	TO-15 SIM	APH	FIXED GASES	TO-13A	TO-4 / TO-10	Sample Specific Comments (i.e. PID)
04832 01	LD-P-20120316	03/16/12	00.00	00.00			AA	LE		83		☐	☐	☐	☐	☐	☒	☐	Lydick
02	PB-P-20120316	03/16/12	00.00	00.00			AA	LE		79		☐	☐	☐	☐	☐	☒	☐	Pembroke Ran 24hrs but time said clock 00:03:07 upon arrival
03	FS-P-20120316	03/16/12	00.00	00.00			AA	LE		18		☐	☐	☐	☐	☐	☒	☐	Fire Station
04	FV-P-20120316	03/16/12	00.00	00.00			AA	LE		74		☐	☐	☐	☐	☐	☒	☐	Field View
05												☐	☐	☐	☐	☐	☐	☐	
												☐	☐	☐	☐	☐	☐	☐	
											Container Type	-	-	-	-	-	-	-	

***SAMPLE MATRIX CODES:**

AA = Ambient Air (Indoor/Outdoor)
SV = Soil Vapor/Landfill Gas/SVE
Other = Please Specify

Relinquished By	Date/Time	Received By:	Date/Time
Lara Sicot	3/17/12	P. Gilbert	3/21/12 0915
P. Gilbert	3/21/12 1655		3/21/12 1655

Please print clearly & legibly and completely. Samples can not be logged in and turn around time clock will not start until any ambiguities are resolved. All samples submitted are subject to Alpha's Payment Terms.

Form 101-02 (I)
Revised 29-Dec-09

ANALYTICAL REPORT

Lab Number:	L1205099
Client:	Advanced Monitoring Methods LLC 710 Golf Club Dr Castle Rock, CO 80108
ATTN:	Tom Brauch
Phone:	(720) 897-7792
Project Name:	RIAC
Project Number:	32-1-5
Report Date:	04/02/12

Certifications & Approvals: NY (11627), CT (PH-0141), NH (2206), NJ NELAP (MA015), RI (LAO00299), PA (68-02089), LA NELAP (03090), FL (E87814), TX (T104704419), WA (C954), DOD (L2217.01), USDA (Permit #P330-11-00109), US Army Corps of Engineers.

320 Forbes Boulevard, Mansfield, MA 02048-1806
508-822-9300 (Fax) 508-822-3288 800-624-9220 - www.alphalab.com

Project Name: RIAC
Project Number: 32-1-5

Lab Number: L1205099
Report Date: 04/02/12

Alpha Sample ID	Client ID	Sample Location	Collection Date/Time
L1205099-01	FS-P-20120322	WARWICK, RI	03/22/12 00:00
L1205099-02	PB-P-20120322	WARWICK, RI	03/22/12 00:00
L1205099-03	LD-P-20120322	WARWICK, RI	03/22/12 00:00
L1205099-04	FV-P-20120322	WARWICK, RI	03/22/12 00:00

Project Name: RIAC
Project Number: 32-1-5

Lab Number: L1205099
Report Date: 04/02/12

Case Narrative

The samples were received in accordance with the Chain of Custody and no significant deviations were encountered during the preparation or analysis unless otherwise noted. Sample Receipt, Container Information, and the Chain of Custody are located at the back of the report.

Results contained within this report relate only to the samples submitted under this Alpha Lab Number and meet all of the requirements of NELAC, for all NELAC accredited parameters. The data presented in this report is organized by parameter (i.e. VOC, SVOC, etc.). Sample specific Quality Control data (i.e. Surrogate Spike Recovery) is reported at the end of the target analyte list for each individual sample, followed by the Laboratory Batch Quality Control at the end of each parameter. If a sample was re-analyzed or re-extracted due to a required quality control corrective action and if both sets of data are reported, the Laboratory ID of the re-analysis or re-extraction is designated with an "R" or "RE", respectively. When multiple Batch Quality Control elements are reported (e.g. more than one LCS), the associated samples for each element are noted in the grey shaded header line of each data table. Any Laboratory Batch, Sample Specific % recovery or RPD value that is outside the listed Acceptance Criteria is bolded in the report. Performance criteria for CAM and RCP methods allow for some LCS compound failures to occur and still be within method compliance. In these instances, the specific failures are not narrated but are noted in the associated QC table. This information is also incorporated in the Data Usability format for our Data Merger tool where it can be reviewed along with any associated usability implications. Soil/sediments, solids and tissues are reported on a dry weight basis unless otherwise noted. Definitions of all data qualifiers and acronyms used in this report are provided in the Glossary located at the back of the report.

In reference to questions H (CAM) or 4 (RCP) when "NO" is checked, the performance criteria for CAM and RCP methods allow for some quality control failures to occur and still be within method compliance. In these instances the specific failure is not narrated but noted in the associated QC table. The information is also incorporated in the Data Usability format of our Data Merger tool where it can be reviewed along with any associated usability implications.

Please see the associated ADEx data file for a comparison of laboratory reporting limits that were achieved with the regulatory Numerical Standards requested on the Chain of Custody.

Please contact Client Services at 800-624-9220 with any questions.

PAHs in Air

The surrogate recovery for L1205099-03 is outside the individual acceptance criteria for Benzo(b)fluoranthene-d12 (123%), but within the overall method allowances. The results of the original analysis are reported; however, all associated compounds are considered to have a potential bias.

Project Name: RIAC
Project Number: 32-1-5

Lab Number: L1205099
Report Date: 04/02/12

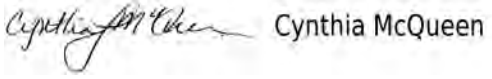
Case Narrative (continued)

The surrogate recovery for L1205099-04 is outside the individual acceptance criteria for Benzo(b)fluoranthene-d12 (129%), but within the overall method allowances. The results of the original analysis are reported; however, all associated compounds are considered to have a potential bias.

The surrogate recovery for method blank, WG525521-1 is outside the individual acceptance criteria for Benzo(a)pyrene-d12 (124%), but within the overall method allowances. The results of the original analysis are reported; however, all associated compounds are considered to have a potential bias.

The surrogate recovery for the Laboratory Control Sample, WG525521-2 is outside the individual acceptance criteria for Pyrene-d10 (58%), but within the overall method allowances. The results of the original analysis are reported; however, all associated compounds are considered to have a potential bias.

I, the undersigned, attest under the pains and penalties of perjury that, to the best of my knowledge and belief and based upon my personal inquiry of those responsible for providing the information contained in this analytical report, such information is accurate and complete. This certificate of analysis is not complete unless this page accompanies any and all pages of this report.

Authorized Signature:  Cynthia McQueen

Title: Technical Director/Representative Date: 04/02/12

AIR

Project Name: RIAC
Project Number: 32-1-5
Lab Number: L1205099
Report Date: 04/02/12

SAMPLE RESULTS

Lab ID:	L1205099-01	Date Collected:	03/22/12 00:00
Client ID:	FS-P-20120322	Date Received:	03/26/12
Sample Location:	WARWICK, RI	Field Prep:	Not Specified
Matrix:	Air Cartridge	Extraction Method:	EPA 3540C
Analytical Method:	1,8270C-SIM	Extraction Date:	03/28/12 14:05
Analytical Date:	04/01/12 14:34		
Analyst:	CM		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PAHs in Air - Mansfield Lab						
Naphthalene	11100		ng/cart	500	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Pyrene-d10	97		60-120
Benzo(b)fluoranthene-d12	119		60-120
Fluoranthene-d10	99		60-120
Benzo(a)pyrene-d12	99		60-120

Project Name: RIAC
Lab Number: L1205099
Project Number: 32-1-5
Report Date: 04/02/12

SAMPLE RESULTS

Lab ID:	L1205099-02	Date Collected:	03/22/12 00:00
Client ID:	PB-P-20120322	Date Received:	03/26/12
Sample Location:	WARWICK, RI	Field Prep:	Not Specified
Matrix:	Air Cartridge	Extraction Method:	EPA 3540C
Analytical Method:	1,8270C-SIM	Extraction Date:	03/28/12 14:05
Analytical Date:	04/01/12 15:06		
Analyst:	CM		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PAHs in Air - Mansfield Lab						
Naphthalene	8150		ng/cart	500	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Pyrene-d10	92		60-120
Benzo(b)fluoranthene-d12	115		60-120
Fluoranthene-d10	82		60-120
Benzo(a)pyrene-d12	69		60-120

Project Name: RIAC **Lab Number:** L1205099

Project Number: 32-1-5 **Report Date:** 04/02/12

SAMPLE RESULTS

Lab ID:	L1205099-03	Date Collected:	03/22/12 00:00
Client ID:	LD-P-20120322	Date Received:	03/26/12
Sample Location:	WARWICK, RI	Field Prep:	Not Specified
Matrix:	Air Cartridge	Extraction Method:	EPA 3540C
Analytical Method:	1,8270C-SIM	Extraction Date:	03/28/12 14:05
Analytical Date:	04/01/12 15:38		
Analyst:	CM		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PAHs in Air - Mansfield Lab						
Naphthalene	8930		ng/cart	500	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Pyrene-d10	98		60-120
Benzo(b)fluoranthene-d12	**123**	Q	60-120
Fluoranthene-d10	94		60-120
Benzo(a)pyrene-d12	89		60-120

Project Name: RIAC
Project Number: 32-1-5
Lab Number: L1205099
Report Date: 04/02/12

SAMPLE RESULTS

Lab ID:	L1205099-04	Date Collected:	03/22/12 00:00
Client ID:	FV-P-20120322	Date Received:	03/26/12
Sample Location:	WARWICK, RI	Field Prep:	Not Specified
Matrix:	Air Cartridge	Extraction Method:	EPA 3540C
Analytical Method:	1,8270C-SIM	Extraction Date:	03/28/12 14:05
Analytical Date:	04/01/12 16:10		
Analyst:	CM		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PAHs in Air - Mansfield Lab						
Naphthalene	9020		ng/cart	500	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Pyrene-d10	99		60-120
Benzo(b)fluoranthene-d12	**129**	Q	60-120
Fluoranthene-d10	100		60-120
Benzo(a)pyrene-d12	94		60-120

Project Name: RIAC
Project Number: 32-1-5

Lab Number: L1205099
Report Date: 04/02/12

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8270C-SIM
Analytical Date: 04/01/12 13:29
Analyst: CM

Extraction Method: EPA 3540C
Extraction Date: 03/28/12 14:05

Parameter	Result	Qualifier	Units	RL	MDL
PAHs in Air - Mansfield Lab for sample(s): 01-04 Batch: WG525521-1					
Naphthalene	ND		ng/cart	500	--

Surrogate	%Recovery	Qualifier	Acceptance Criteria
Pyrene-d10	103		60-120
Benzo(b)fluoranthene-d12	114		60-120
Fluoranthene-d10	111		60-120
Benzo(a)pyrene-d12	**124**	Q	60-120

Lab Control Sample Analysis

Batch Quality Control

Project Name: RIAC

Project Number: 32-1-5

Lab Number: L1205099

Report Date: 04/02/12

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
PAHs in Air - Mansfield Lab Associated sample(s): 01-04 Batch: WG525521-2								
Naphthalene	61		-		60-120	-		

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
Pyrene-d10	58	Q			60-120
Benzo(b)fluoranthene-d12	60				60-120
Fluoranthene-d10	62				60-120
Benzo(a)pyrene-d12	71				60-120

Project Name: RIAC
Project Number: 32-1-5

Lab Number: L1205099
Report Date: 04/02/12

Sample Receipt and Container Information

Were project specific reporting limits specified? YES

Reagent H2O Preserved Vials Frozen on: NA

Cooler Information Custody Seal

Cooler	
A	Absent

Container Information

Container ID	Container Type	Cooler	pH	Temp deg C	Pres	Seal	Analysis(*)
L1205099-01A	PUF Air Cartridge - High or Low	A	N/A	4.3	Y	Absent	A2-TO13(7),PUF-HI()
L1205099-02A	PUF Air Cartridge - High or Low	A	N/A	4.3	Y	Absent	A2-TO13(7),PUF-HI()
L1205099-03A	PUF Air Cartridge - High or Low	A	N/A	4.3	Y	Absent	A2-TO13(7),PUF-HI()
L1205099-04A	PUF Air Cartridge - High or Low	A	N/A	4.3	Y	Absent	A2-TO13(7),PUF-HI()

*Values in parentheses indicate holding time in days

Project Name:	RIAC	**Lab Number:**	L1205099
Project Number:	32-1-5	**Report Date:**	04/02/12

GLOSSARY

Acronyms

EPA	- Environmental Protection Agency.
LCS	- Laboratory Control Sample: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.
LCSD	- Laboratory Control Sample Duplicate: Refer to LCS.
LFB	- Laboratory Fortified Blank: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.
MDL	- Method Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The MDL includes any adjustments from dilutions, concentrations or moisture content, where applicable.
MS	- Matrix Spike Sample: A sample prepared by adding a known mass of target analyte to a specified amount of matrix sample for which an independent estimate of target analyte concentration is available.
MSD	- Matrix Spike Sample Duplicate: Refer to MS.
NA	- Not Applicable.
NC	- Not Calculated: Term is utilized when one or more of the results utilized in the calculation are non-detect at the parameter's reporting unit.
NI	- Not Ignitable.
RL	- Reporting Limit: The value at which an instrument can accurately measure an analyte at a specific concentration. The RL includes any adjustments from dilutions, concentrations or moisture content, where applicable.
RPD	- Relative Percent Difference: The results from matrix and/or matrix spike duplicates are primarily designed to assess the precision of analytical results in a given matrix and are expressed as relative percent difference (RPD). Values which are less than five times the reporting limit for any individual parameter are evaluated by utilizing the absolute difference between the values; although the RPD value will be provided in the report.
SRM	- Standard Reference Material: A reference sample of a known or certified value that is of the same or similar matrix as the associated field samples.

Footnotes

1	- The reference for this analyte should be considered modified since this analyte is absent from the target analyte list of the original method.

Terms

Analytical Method: Both the document from which the method originates and the analytical reference method. (Example: EPA 8260B is shown as 1,8260B.) The codes for the reference method documents are provided in the References section of the Addendum.

Data Qualifiers

A	- Spectra identified as "Aldol Condensation Product".
B	- The analyte was detected above the reporting limit in the associated method blank. Flag only applies to associated field samples that have detectable concentrations of the analyte at less than five times (5x) the concentration found in the blank. For MCP-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For DOD-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank AND the analyte was detected above one-half the reporting limit (or above the reporting limit for common lab contaminants) in the associated method blank. For NJ-Air-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte above the reporting limit.
C	- Co-elution: The target analyte co-elutes with a known lab standard (i.e. surrogate, internal standards, etc.) for co-extracted analyses.
D	- Concentration of analyte was quantified from diluted analysis. Flag only applies to field samples that have detectable concentrations of the analyte.
E	- Concentration of analyte exceeds the range of the calibration curve and/or linear range of the instrument.
G	- The concentration may be biased high due to matrix interferences (i.e, co-elution) with non-target compound(s). The result should be considered estimated.
H	- The analysis of pH was performed beyond the regulatory-required holding time of 15 minutes from the time of sample collection.
I	- The RPD between the results for the two columns exceeds the method-specified criteria; however, the lower value has been reported due to obvious interference.
M	- Reporting Limit (RL) exceeds the MCP CAM Reporting Limit for this analyte.
NJ	- Presumptive evidence of compound. This represents an estimated concentration for Tentatively Identified Compounds (TICs), where the identification is based on a mass spectral library search.

Report Format: Data Usability Report

Project Name:	RIAC	**Lab Number:**	L1205099
Project Number:	32-1-5	**Report Date:**	04/02/12

Data Qualifiers

P - The RPD between the results for the two columns exceeds the method-specified criteria.

Q - The quality control sample exceeds the associated acceptance criteria. For DOD-related projects, LCS and/or Continuing Calibration Standard exceedences are also qualified on all associated sample results. Note: This flag is not applicable for matrix spike recoveries when the sample concentration is greater than 4x the spike added or for batch duplicate RPD when the sample concentrations are less than 5x the RL. (Metals only.)

R - Analytical results are from sample re-analysis.

RE - Analytical results are from sample re-extraction.

J - Estimated value. This represents an estimated concentration for Tentatively Identified Compounds (TICs).

ND - Not detected at the reporting limit (RL) for the sample.

Report Format: Data Usability Report

Project Name: RIAC
Project Number: 32-1-5
Lab Number: L1205099
Report Date: 04/02/12

REFERENCES

1 Test Methods for Evaluating Solid Waste: Physical/Chemical Methods. EPA SW-846. Third Edition. Updates I - IIIA, 1997.

LIMITATION OF LIABILITIES

Alpha Analytical performs services with reasonable care and diligence normal to the analytical testing laboratory industry. In the event of an error, the sole and exclusive responsibility of Alpha Analytical shall be to re-perform the work at it's own expense. In no event shall Alpha Analytical be held liable for any incidental, consequential or special damages, including but not limited to, damages in any way connected with the use of, interpretation of, information or analysis provided by Alpha Analytical.

We strongly urge our clients to comply with EPA protocol regarding sample volume, preservation, cooling, containers, sampling procedures, holding time and splitting of samples in the field.

Certificate/Approval Program Summary

Last revised January 30, 2012 – Mansfield Facility

The following list includes only those analytes/methods for which certification/approval is currently held.
For a complete listing of analytes for the referenced methods, please contact your Alpha Customer Service Representative.

Connecticut Department of Public Health Certificate/Lab ID: PH-0141.

Wastewater/Non-Potable Water (Inorganic Parameters: pH, Turbidity, Conductivity, Alkalinity, Aluminum, Antimony, Arsenic, Barium, Beryllium, Boron, Cadmium, Calcium, Chromium, Cobalt, Copper, Iron, Lead, Magnesium, Manganese, Mercury, Molybdenum, Nickel, Potassium, Selenium, Silver, Sodium, Strontium, Thallium, Tin, Vanadium, Zinc, Total Residue (Solids), Total Suspended Solids (non-filterable), Total Cyanide. Organic Parameters: PCBs, Organochlorine Pesticides, Technical Chlordane, Toxaphene, Acid Extractables, Benzidines, Phthalate Esters, Nitrosamines, Nitroaromatics & Isophorone, PAHs, Haloethers, Chlorinated Hydrocarbons, Volatile Organics.)

Solid Waste/Soil (Inorganic Parameters: pH, Aluminum, Antimony, Arsenic, Barium, Beryllium, Cadmium, Calcium, Chromium, Hexavalent Chromium, Cobalt, Copper, Iron, Lead, Magnesium, Manganese, Mercury, Molybdenum, Nickel, Potassium, Selenium, Silver, Sodium, Thallium, Vanadium, Zinc, Total Organic Carbon, Total Cyanide, Corrosivity, TCLP 1311. Organic Parameters: PCBs, Organochlorine Pesticides, Technical Chlordane, Toxaphene, Volatile Organics, Acid Extractables, Benzidines, Phthalates, Nitrosamines, Nitroaromatics & Cyclic Ketones, PAHs, Haloethers, Chlorinated Hydrocarbons.)

Florida Department of Health Certificate/Lab ID: E87814. ***NELAP Accredited.***

Non-Potable Water (Inorganic Parameters: SM2320B, SM2540D, SM2540G.)

Solid & Chemical Materials (Inorganic Parameters: 6020, 7470, 7471, 9045. Organic Parameters: EPA 8260, 8270, 8082, 8081.)

Air & Emissions (EPA TO-15.)

Louisiana Department of Environmental Quality Certificate/Lab ID: 03090. ***NELAP Accredited.***

Non-Potable Water (Inorganic Parameters: EPA 180.1, 245.7, 1631E, 3020, 6020A, 7470A, 9040, 9050A, SM2320B, 2540D, 2540G, 4500H-B, Organic Parameters: EPA 3510C, 3580A, 3630C, 3640A, 3660B, 3665A, 5030B, 8015D, 3570, 8081B, 8082A, 8260B, 8270C, 8270D.)

Solid & Chemical Materials (Inorganic Parameters: EPA 1311, 3050, 3051A, 3060A, 6020A, 7196A, 7470A, 7471B, 7474, 9040B, 9045C, 9060. Organic Parameters: EPA 3540C, 3570B, 3580A, 3630C, 3640A, 3660, 3665A, 5035, 8015D, 8081B, 8082A, 8260B, 8270C, 8270D.)

Biological Tissue (Inorganic Parameters: EPA 6020A. Organic Parameters: EPA 3570, 3510C, 3610B, 3630C, 3640A, 8270C, 8270D.)

Air & Emissions (EPA TO-15.)

New Hampshire Department of Environmental Services Certificate/Lab ID: 2206. ***NELAP Accredited.***

Non-Potable Water (Inorganic Parameters: EPA 245.7, 1631E, 6020A, 7470A, 9040B, 9050A, SM2540D, 2540G, 4500H+B, 2320B. Organic Parameters: EPA 8081B, 8082A, 8260B, 8270C, 8015D.)

Solid & Chemical Materials (Inorganic Parameters: SW-846 1311, 1312, 3050B, 3051A, 3060A, 6020A, 7471A, 9040B, 9045C, 7196A. Organic Parameters: SW-846 3540C, 3580A, 3630C, 3640A, 3660B, 3665A, 5035, 8260B, 8270C, 8015D, 8082A, 8081B.)

New Jersey Department of Environmental Protection Certificate/Lab ID: MA015. ***NELAP Accredited.***

Non-Potable Water (Inorganic Parameters: SW-846 1312, 3010, 3020A, SM2320B, SM2540D, 2540G, EPA 180.1, 1631E, SW-846 7470A, 9040B, 6020, 9050A. Organic Parameters: SW-846 3510C, 3580A, 5030B, 5035L, 5035H, 3630C, 3640A, 3660B, 3665A, 8015B 8081A, 8082, 8260B, 8270C)

Solid & Chemical Materials (Inorganic Parameters: SW-846 6020, 1311, 1312, 3050B, 3051, 3060A, 7196A, 7470A, 7471A, 7474, 9040B, 9045C, 9060. Organic Parameters: SW-846 3540C, 3570, 3580A, 5030B, 5035L, 5035H, 3630C, 3640A, 3660B, 3665A, 8081A, 8082, 8260B, 8270C, 8015B.)

Atmospheric Organic Parameters (EPA TO-15)

Biological Tissue (Inorganic Parameters: SW-846 6020 Organic Parameters: SW-846 8270C, 3510C, 3570, 3610C, 3630C, 3640A)

New York Department of Health Certificate/Lab ID: 11627. ***NELAP Accredited.***

Non-Potable Water (Inorganic Parameters: SM2320B, SM2540D, EPA 200.8, 6020, 1631E, 245.1, 245.7, 7470A, 9014, 9040B, 9050, 120.1, 4500CN-E, 4500H-B, EPA 376.2, 180.1, 3020A. Organic Parameters: EPA 8260B, 8270C, 8081A, 8082, 3510C, 5030B.)

Solid & Hazardous Waste (Inorganic Parameters: EPA 6020, 7196A, 3060A, 7471A, 7474, 9014, 9040B, 9045C, 9010B. Organic Parameters: EPA 8260B, 8270C, 8081A, DRO 8015B, 8082, 1311, 1312, 3050B, 3580, 3570, 3051, 5035, 5030B.)

Air & Emissions (EPA TO-15.)

Pennsylvania Certificate/Lab ID: 68-02089 ***NELAP Accredited***

Solid & Hazardous Waste (Inorganic Parameters: EPA 6020A,7471B, 7474. Organic Parameters: EPA3050B, 3540C, 3630C, 8270C, 8081B, 8082A.)

Rhode Island Department of Health Certificate/Lab ID: LAO00299. ***NELAP Accredited via LA-DEQ.***

Refer to LA-DEQ Certificate for Non-Potable Water.

Texas Commission of Environmental Quality Certificate/Lab ID: T104704419-08-TX. ***NELAP Accredited.***

Solid & Chemical Materials (Inorganic Parameters: EPA 6020, 7470, 7471, 1311, 7196, 9040, 9045, 9060. Organic Parameters: EPA 8015, 8270, 8260, 8081, 8082.)

Air (Organic Parameters: EPA TO-15)

Washington State Department of Ecology Certificate/Lab ID: C954. *Non-Potable Water* (Inorganic Parameters: SM2540D, 180.1, 1631E.)

Solid & Chemical Materials (Inorganic Parameters: EPA 6020, 7470, 7471, 7474, 9045C, 9050A, 9060. Organic Parameters: EPA 8081, 8082, 8015 Mod, 8270.)

Virginia Division of Consolidated Laboratory Services Certificate/Lab ID:460194. ***NELAP Accredited.***

Non-Potable Water (Inorganic Parameters:EPA 3020A,6020A,245.7,9040B,SM4500H-B. Organic Parameters: EPA 3510C,3640A,3660B,3665A,8270C,8270D,8082A,8081B.)

Solid & Chemical Materials (Inorganic Parameters: EPA 6020A,7470A,7471B,9040B,9045C,3050B,3051. Organic Parameters: EPA 3540C, 3580A, 3630C, 3640A, 3660B, 3665A, 3570, 8270C, 8270D, 8081B, 8082A, 8015D.)

U.S. Army Corps of Engineers

Department of Defense, L-A-B Certificate/Lab ID: L2217.01.

Non-Potable Water (Inorganic Parameters: EPA 6020A, SM4500H-B. Organic Parameters: 3020A, 3510C, 5030B, 8260B, 8270C, 8270C-ALK-PAH, 8082, 8081A, 8015D-SHC, 8015D.)

Solid & Hazardous Waste (Inorganic Parameters: EPA 1311, 1312, 3050B, 6020A, 7471A, 9045C, 9060, SM 2540G, ASTM D422-63. Organic Parameters: EPA 3580A, 3570, 3540C, 5035A, 8260B, 8270C, 8270-ALK-PAH, 8082, 8081A, 8015D-SHC, 8015D.

Air & Emissions (EPA TO-15.)

Analytes Not Accredited by NELAP

Certification is not available by NELAP for the following analytes: **8270C:** Biphenyl. **TO-15:** Halothane, 2,4,4-Trimethyl-2-pentene, 2,4,4-Trimethyl-1-pentene, Thiophene, 2-Methylthiophene, 3-Methylthiophene, 2-Ethylthiophene, 1,2,3-Trimethylbenzene, Indan, Indene, 1,2,4,5-Tetramethylbenzene, Benzothiophene, 2-Methylnaphthalene, 1-Methylnaphthalene.

AIR ANALYSIS

PAGE _____ OF _____

CHAIN OF CUSTODY

320 Forbes Blvd, Mansfield, MA 02048
TEL: 508-822-9300 FAX: 508-822-3288

Serial_No:04151

Date Rec'd in Lab:

ALPHA Job #: L1205099

Client Information

Client: Advanced Monitoring Methods

Address:

Phone: 720-581-1182

Fax:

Email: tom@advm2.com

☐ These samples have been previously analyzed by Alpha

Project Information

Project Name: RIAC

Project Location: Warwick, RI

Project #:

Project Manager: Tom Brauch

ALPHA Quote #:

Turn-Around Time

☐ Standard ☐ RUSH *(only confirmed if pre-approved!)*

Date Due: **Time:**

Report Information - Data Deliverables

☐ FAX
☐ ADEx
Criteria Checker: _____
(Default based on Regulatory Criteria Indicated)
Other Formats: _____
☐ EMAIL (standard pdf report)
☐ Additional Deliverables: _____

Report to: *(if different than Project Manager)*

Billing Information

☐ Same as Client info PO #:

Regulatory Requirements/Report Limits

State/Fed	Program	Criteria

Other Project Specific Requirements/Comments:

All Columns Below Must Be Filled Out

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection Date	Start Time	End Time	Initial Vacuum	Final Vacuum	Sample Matrix*	Sampler's Initials	Can Size	I D Can	I D - Flow Controller	TO-14A by TO-15	TO-15 SIM	APH	FIXED GASES	TO-13A	TO-4 / TO-10	Sample Comments (i.e. PID)
L1205099-1	FS-P-20120322	3/22/12	00:00	00:00				AE	71			X				X		
-2	PB-P-20120322	3/22/12	↓	↓				↓	91			X				X		
-3	LD-P-20120322	3/22/12	↓	↓				↓	106			X				X		
-4	FV-P-20120322	3/22/12	↓	↓				↓	047			X				X		

*SAMPLE MATRIX CODES

AA = Ambient Air (Indoor/Outdoor)
SV = Soil Vapor/Landfill Gas/SVE
Other = Please Specify

Container Type

Please print clearly, legibly and completely. Samples can not be logged in and turnaround time clock will not start until any ambiguities are resolved. All samples submitted are subject to Alpha's Terms and Conditions. See reverse side.

Relinquished By:	Date/Time	Received By:	Date/Time:
Lara Smart 12:33	3/23	T. Handelle	3/26/12 1530
T. Handelle	3/26/12 1635		3/26/12 1635

Form No: 101-02 (19-Jun-09)

ANALYTICAL REPORT

Lab Number:	L1205368
Client:	Advanced Monitoring Methods LLC 710 Golf Club Dr Castle Rock, CO 80108
ATTN:	Tom Brauch
Phone:	(720) 897-7792
Project Name:	RIAC
Project Number:	32-1-5
Report Date:	04/09/12

Certifications & Approvals: NY (11627), CT (PH-0141), NH (2206), NJ NELAP (MA015), RI (LAO00299), PA (68-02089), LA NELAP (03090), FL (E87814), TX (T104704419), WA (C954), DOD (L2217.01), USDA (Permit #P330-11-00109), US Army Corps of Engineers.

320 Forbes Boulevard, Mansfield, MA 02048-1806
508-822-9300 (Fax) 508-822-3288 800-624-9220 - www.alphalab.com

Project Name: RIAC
Project Number: 32-1-5

Lab Number: L1205368
Report Date: 04/09/12

Alpha Sample ID	Client ID	Sample Location	Collection Date/Time
L1205368-01	PB-P-21020328	WARWICK, RI	03/28/12 00:00
L1205368-02	LD-P-21020328	WARWICK, RI	03/28/12 00:00
L1205368-03	FV-P-21020328	WARWICK, RI	03/28/12 00:00
L1205368-04	FS-P-21020328	WARWICK, RI	03/28/12 00:00

Project Name: RIAC
Project Number: 32-1-5

Lab Number: L1205368
Report Date: 04/09/12

Case Narrative

The samples were received in accordance with the Chain of Custody and no significant deviations were encountered during the preparation or analysis unless otherwise noted. Sample Receipt, Container Information, and the Chain of Custody are located at the back of the report.

Results contained within this report relate only to the samples submitted under this Alpha Lab Number and meet all of the requirements of NELAC, for all NELAC accredited parameters. The data presented in this report is organized by parameter (i.e. VOC, SVOC, etc.). Sample specific Quality Control data (i.e. Surrogate Spike Recovery) is reported at the end of the target analyte list for each individual sample, followed by the Laboratory Batch Quality Control at the end of each parameter. If a sample was re-analyzed or re-extracted due to a required quality control corrective action and if both sets of data are reported, the Laboratory ID of the re-analysis or re-extraction is designated with an "R" or "RE", respectively. When multiple Batch Quality Control elements are reported (e.g. more than one LCS), the associated samples for each element are noted in the grey shaded header line of each data table. Any Laboratory Batch, Sample Specific % recovery or RPD value that is outside the listed Acceptance Criteria is bolded in the report. Performance criteria for CAM and RCP methods allow for some LCS compound failures to occur and still be within method compliance. In these instances, the specific failures are not narrated but are noted in the associated QC table. This information is also incorporated in the Data Usability format for our Data Merger tool where it can be reviewed along with any associated usability implications. Soil/sediments, solids and tissues are reported on a dry weight basis unless otherwise noted. Definitions of all data qualifiers and acronyms used in this report are provided in the Glossary located at the back of the report.

In reference to questions H (CAM) or 4 (RCP) when "NO" is checked, the performance criteria for CAM and RCP methods allow for some quality control failures to occur and still be within method compliance. In these instances the specific failure is not narrated but noted in the associated QC table. The information is also incorporated in the Data Usability format of our Data Merger tool where it can be reviewed along with any associated usability implications.

Please see the associated ADEx data file for a comparison of laboratory reporting limits that were achieved with the regulatory Numerical Standards requested on the Chain of Custody.

Please contact Client Services at 800-624-9220 with any questions.

PAHs in Air

The surrogate recoveries for L1205368-01 were outside the acceptance criteria for Pyrene-d10 (36%), Benzo(b)fluoranthene-d12 (39%), Fluoranthene-d10 (34%) and Benzo(a)pyrene-d12 (39%); however, re-extraction could not be performed due to sample matrix. The laboratory noted that a portion of the sample was

Project Name: RIAC
Project Number: 32-1-5

Lab Number: L1205368
Report Date: 04/09/12

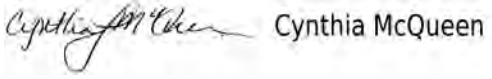
Case Narrative (continued)

lost during transfer. The sample was rerun for confirmation. The results of the original analysis are reported; however, all associated compounds are considered to have a potential bias.

The surrogate recovery for L1205368-03 is outside the individual acceptance criteria for Benzo(a)pyrene-d12 (122%), but within the overall method allowances. The results of the original analysis are reported; however, all associated compounds are considered to have a potential bias.

The surrogate recovery for The Lbaoratory Control Sample, WG526830-2 is outside the individual acceptance criteria for Benzo(a)pyrene-d12 (121%), but within the overall method allowances. The results of the original analysis are reported; however, all associated compounds are considered to have a potential bias.

I, the undersigned, attest under the pains and penalties of perjury that, to the best of my knowledge and belief and based upon my personal inquiry of those responsible for providing the information contained in this analytical report, such information is accurate and complete. This certificate of analysis is not complete unless this page accompanies any and all pages of this report.

Authorized Signature:  Cynthia McQueen

Title: Technical Director/Representative Date: 04/09/12

AIR

Project Name: RIAC
Lab Number: L1205368
Project Number: 32-1-5
Report Date: 04/09/12

SAMPLE RESULTS

Lab ID:	L1205368-01	Date Collected:	03/28/12 00:00
Client ID:	PB-P-21020328	Date Received:	03/30/12
Sample Location:	WARWICK, RI	Field Prep:	Not Specified
Matrix:	Air Cartridge	Extraction Method:	EPA 3540C
Analytical Method:	1,8270C-SIM	Extraction Date:	04/03/12 14:19
Analytical Date:	04/05/12 19:47		
Analyst:	CM		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PAHs in Air - Mansfield Lab						
Naphthalene	6050		ng/cart	500	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Pyrene-d10	**36**	Q	60-120
Benzo(b)fluoranthene-d12	**39**	Q	60-120
Fluoranthene-d10	**34**	Q	60-120
Benzo(a)pyrene-d12	**39**	Q	60-120

Project Name: RIAC
Project Number: 32-1-5
Lab Number: L1205368
Report Date: 04/09/12

SAMPLE RESULTS

Lab ID:	L1205368-02	Date Collected:	03/28/12 00:00
Client ID:	LD-P-21020328	Date Received:	03/30/12
Sample Location:	WARWICK, RI	Field Prep:	Not Specified
Matrix:	Air Cartridge	Extraction Method:	EPA 3540C
Analytical Method:	1,8270C-SIM	Extraction Date:	04/03/12 14:19
Analytical Date:	04/05/12 20:18		
Analyst:	CM		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PAHs in Air - Mansfield Lab						
Naphthalene	22000		ng/cart	500	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Pyrene-d10	98		60-120
Benzo(b)fluoranthene-d12	111		60-120
Fluoranthene-d10	98		60-120
Benzo(a)pyrene-d12	119		60-120

Project Name: RIAC **Lab Number:** L1205368

Project Number: 32-1-5 **Report Date:** 04/09/12

SAMPLE RESULTS

Lab ID:	L1205368-03	Date Collected:	03/28/12 00:00
Client ID:	FV-P-21020328	Date Received:	03/30/12
Sample Location:	WARWICK, RI	Field Prep:	Not Specified
Matrix:	Air Cartridge	Extraction Method:	EPA 3540C
Analytical Method:	1,8270C-SIM	Extraction Date:	04/03/12 14:19
Analytical Date:	04/05/12 20:48		
Analyst:	CM		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PAHs in Air - Mansfield Lab						
Naphthalene	21800		ng/cart	500	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Pyrene-d10	100		60-120
Benzo(b)fluoranthene-d12	113		60-120
Fluoranthene-d10	99		60-120
Benzo(a)pyrene-d12	**122**	Q	60-120

Project Name: RIAC **Lab Number:** L1205368

Project Number: 32-1-5 **Report Date:** 04/09/12

SAMPLE RESULTS

Lab ID:	L1205368-04	Date Collected:	03/28/12 00:00
Client ID:	FS-P-21020328	Date Received:	03/30/12
Sample Location:	WARWICK, RI	Field Prep:	Not Specified
Matrix:	Air Cartridge	Extraction Method:	EPA 3540C
Analytical Method:	1,8270C-SIM	Extraction Date:	04/03/12 14:19
Analytical Date:	04/05/12 21:19		
Analyst:	CM		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PAHs in Air - Mansfield Lab						
Naphthalene	21800		ng/cart	500	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Pyrene-d10	90		60-120
Benzo(b)fluoranthene-d12	98		60-120
Fluoranthene-d10	93		60-120
Benzo(a)pyrene-d12	108		60-120

Project Name: RIAC
Project Number: 32-1-5

Lab Number: L1205368
Report Date: 04/09/12

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8270C-SIM
Analytical Date: 04/05/12 18:46
Analyst: CM

Extraction Method: EPA 3540C
Extraction Date: 04/03/12 14:19

Parameter	Result	Qualifier	Units	RL	MDL
PAHs in Air - Mansfield Lab for sample(s): 01-04 Batch: WG526830-1					
Naphthalene	ND		ng/cart	500	--

Surrogate	%Recovery	Qualifier	Acceptance Criteria
Pyrene-d10	97		60-120
Benzo(b)fluoranthene-d12	107		60-120
Fluoranthene-d10	106		60-120
Benzo(a)pyrene-d12	118		60-120

Lab Control Sample Analysis

Batch Quality Control

Project Name: RIAC

Project Number: 32-1-5

Lab Number: L1205368

Report Date: 04/09/12

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
PAHs in Air - Mansfield Lab Associated sample(s): 01-04 Batch: WG526830-2								
Naphthalene	92		-		60-120	-		

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
Pyrene-d10	94				60-120
Benzo(b)fluoranthene-d12	104				60-120
Fluoranthene-d10	101				60-120
Benzo(a)pyrene-d12	121	Q			60-120

Project Name: RIAC
Project Number: 32-1-5

Lab Number: L1205368
Report Date: 04/09/12

Sample Receipt and Container Information

Were project specific reporting limits specified? YES

Reagent H2O Preserved Vials Frozen on: NA

Cooler Information Custody Seal

Cooler	
A	Present/Intact

Container Information

Container ID	Container Type	Cooler	pH	Temp deg C	Pres	Seal	Analysis(*)
L1205368-01A	PUF Air Cartridge - High or Low	A	N/A	3.9	Y	Present/Intact	A2-TO13(7),PUF-HI()
L1205368-02A	PUF Air Cartridge - High or Low	A	N/A	3.9	Y	Present/Intact	A2-TO13(7),PUF-HI()
L1205368-03A	PUF Air Cartridge - High or Low	A	N/A	3.9	Y	Present/Intact	A2-TO13(7),PUF-HI()
L1205368-04A	PUF Air Cartridge - High or Low	A	N/A	3.9	Y	Present/Intact	A2-TO13(7),PUF-HI()

*Values in parentheses indicate holding time in days

Project Name:	RIAC	**Lab Number:**	L1205368
Project Number:	32-1-5	**Report Date:**	04/09/12

GLOSSARY

Acronyms

EPA	- Environmental Protection Agency.
LCS	- Laboratory Control Sample: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.
LCSD	- Laboratory Control Sample Duplicate: Refer to LCS.
LFB	- Laboratory Fortified Blank: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.
MDL	- Method Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The MDL includes any adjustments from dilutions, concentrations or moisture content, where applicable.
MS	- Matrix Spike Sample: A sample prepared by adding a known mass of target analyte to a specified amount of matrix sample for which an independent estimate of target analyte concentration is available.
MSD	- Matrix Spike Sample Duplicate: Refer to MS.
NA	- Not Applicable.
NC	- Not Calculated: Term is utilized when one or more of the results utilized in the calculation are non-detect at the parameter's reporting unit.
NI	- Not Ignitable.
RL	- Reporting Limit: The value at which an instrument can accurately measure an analyte at a specific concentration. The RL includes any adjustments from dilutions, concentrations or moisture content, where applicable.
RPD	- Relative Percent Difference: The results from matrix and/or matrix spike duplicates are primarily designed to assess the precision of analytical results in a given matrix and are expressed as relative percent difference (RPD). Values which are less than five times the reporting limit for any individual parameter are evaluated by utilizing the absolute difference between the values; although the RPD value will be provided in the report.
SRM	- Standard Reference Material: A reference sample of a known or certified value that is of the same or similar matrix as the associated field samples.

Footnotes

1	- The reference for this analyte should be considered modified since this analyte is absent from the target analyte list of the original method.

Terms

Analytical Method: Both the document from which the method originates and the analytical reference method. (Example: EPA 8260B is shown as 1,8260B.) The codes for the reference method documents are provided in the References section of the Addendum.

Data Qualifiers

A	- Spectra identified as "Aldol Condensation Product".
B	- The analyte was detected above the reporting limit in the associated method blank. Flag only applies to associated field samples that have detectable concentrations of the analyte at less than five times (5x) the concentration found in the blank. For MCP-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For DOD-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank AND the analyte was detected above one-half the reporting limit (or above the reporting limit for common lab contaminants) in the associated method blank. For NJ-Air-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte above the reporting limit.
C	- Co-elution: The target analyte co-elutes with a known lab standard (i.e. surrogate, internal standards, etc.) for co-extracted analyses.
D	- Concentration of analyte was quantified from diluted analysis. Flag only applies to field samples that have detectable concentrations of the analyte.
E	- Concentration of analyte exceeds the range of the calibration curve and/or linear range of the instrument.
G	- The concentration may be biased high due to matrix interferences (i.e, co-elution) with non-target compound(s). The result should be considered estimated.
H	- The analysis of pH was performed beyond the regulatory-required holding time of 15 minutes from the time of sample collection.
I	- The RPD between the results for the two columns exceeds the method-specified criteria; however, the lower value has been reported due to obvious interference.
M	- Reporting Limit (RL) exceeds the MCP CAM Reporting Limit for this analyte.
NJ	- Presumptive evidence of compound. This represents an estimated concentration for Tentatively Identified Compounds (TICs), where the identification is based on a mass spectral library search.

Report Format: Data Usability Report

Project Name:	RIAC	**Lab Number:**	L1205368
Project Number:	32-1-5	**Report Date:**	04/09/12

Data Qualifiers

P - The RPD between the results for the two columns exceeds the method-specified criteria.

Q - The quality control sample exceeds the associated acceptance criteria. For DOD-related projects, LCS and/or Continuing Calibration Standard exceedences are also qualified on all associated sample results. Note: This flag is not applicable for matrix spike recoveries when the sample concentration is greater than 4x the spike added or for batch duplicate RPD when the sample concentrations are less than 5x the RL. (Metals only.)

R - Analytical results are from sample re-analysis.

RE - Analytical results are from sample re-extraction.

J - Estimated value. This represents an estimated concentration for Tentatively Identified Compounds (TICs).

ND - Not detected at the reporting limit (RL) for the sample.

Report Format: Data Usability Report

Project Name:	RIAC	**Lab Number:**	L1205368
Project Number:	32-1-5	**Report Date:**	04/09/12

REFERENCES

1 Test Methods for Evaluating Solid Waste: Physical/Chemical Methods. EPA SW-846. Third Edition. Updates I - IIIA, 1997.

LIMITATION OF LIABILITIES

Alpha Analytical performs services with reasonable care and diligence normal to the analytical testing laboratory industry. In the event of an error, the sole and exclusive responsibility of Alpha Analytical shall be to re-perform the work at it's own expense. In no event shall Alpha Analytical be held liable for any incidental, consequential or special damages, including but not limited to, damages in any way connected with the use of, interpretation of, information or analysis provided by Alpha Analytical.

We strongly urge our clients to comply with EPA protocol regarding sample volume, preservation, cooling, containers, sampling procedures, holding time and splitting of samples in the field.

Certificate/Approval Program Summary

Last revised January 30, 2012 – Mansfield Facility

The following list includes only those analytes/methods for which certification/approval is currently held.
For a complete listing of analytes for the referenced methods, please contact your Alpha Customer Service Representative.

Connecticut Department of Public Health Certificate/Lab ID: PH-0141.

Wastewater/Non-Potable Water (Inorganic Parameters: pH, Turbidity, Conductivity, Alkalinity, Aluminum, Antimony, Arsenic, Barium, Beryllium, Boron, Cadmium, Calcium, Chromium, Cobalt, Copper, Iron, Lead, Magnesium, Manganese, Mercury, Molybdenum, Nickel, Potassium, Selenium, Silver, Sodium, Strontium, Thallium, Tin, Vanadium, Zinc, Total Residue (Solids), Total Suspended Solids (non-filterable), Total Cyanide. Organic Parameters: PCBs, Organochlorine Pesticides, Technical Chlordane, Toxaphene, Acid Extractables, Benzidines, Phthalate Esters, Nitrosamines, Nitroaromatics & Isophorone, PAHs, Haloethers, Chlorinated Hydrocarbons, Volatile Organics.)

Solid Waste/Soil (Inorganic Parameters: pH, Aluminum, Antimony, Arsenic, Barium, Beryllium, Cadmium, Calcium, Chromium, Hexavalent Chromium, Cobalt, Copper, Iron, Lead, Magnesium, Manganese, Mercury, Molybdenum, Nickel, Potassium, Selenium, Silver, Sodium, Thallium, Vanadium, Zinc, Total Organic Carbon, Total Cyanide, Corrosivity, TCLP 1311. Organic Parameters: PCBs, Organochlorine Pesticides, Technical Chlordane, Toxaphene, Volatile Organics, Acid Extractables, Benzidines, Phthalates, Nitrosamines, Nitroaromatics & Cyclic Ketones, PAHs, Haloethers, Chlorinated Hydrocarbons.)

Florida Department of Health Certificate/Lab ID: E87814. ***NELAP Accredited.***

Non-Potable Water (Inorganic Parameters: SM2320B, SM2540D, SM2540G.)

Solid & Chemical Materials (Inorganic Parameters: 6020, 7470, 7471, 9045. Organic Parameters: EPA 8260, 8270, 8082, 8081.)

Air & Emissions (EPA TO-15.)

Louisiana Department of Environmental Quality Certificate/Lab ID: 03090. ***NELAP Accredited.***

Non-Potable Water (Inorganic Parameters: EPA 180.1, 245.7, 1631E, 3020, 6020A, 7470A, 9040, 9050A, SM2320B, 2540D, 2540G, 4500H-B, Organic Parameters: EPA 3510C, 3580A, 3630C, 3640A, 3660B, 3665A, 5030B, 8015D, 3570, 8081B, 8082A, 8260B, 8270C, 8270D.)

Solid & Chemical Materials (Inorganic Parameters: EPA 1311, 3050, 3051A, 3060A, 6020A, 7196A, 7470A, 7471B, 7474, 9040B, 9045C, 9060. Organic Parameters: EPA 3540C, 3570B, 3580A, 3630C, 3640A, 3660, 3665A, 5035, 8015D, 8081B, 8082A, 8260B, 8270C, 8270D.)

Biological Tissue (Inorganic Parameters: EPA 6020A. Organic Parameters: EPA 3570, 3510C, 3610B, 3630C, 3640A, 8270C, 8270D.)

Air & Emissions (EPA TO-15.)

New Hampshire Department of Environmental Services Certificate/Lab ID: 2206. ***NELAP Accredited.***

Non-Potable Water (Inorganic Parameters: EPA 245.7, 1631E, 6020A, 7470A, 9040B, 9050A, SM2540D, 2540G, 4500H+B, 2320B. Organic Parameters: EPA 8081B, 8082A, 8260B, 8270C, 8015D.)

Solid & Chemical Materials (Inorganic Parameters: SW-846 1311, 1312, 3050B, 3051A, 3060A, 6020A, 7471A, 9040B, 9045C, 7196A. Organic Parameters: SW-846 3540C, 3580A, 3630C, 3640A, 3660B, 3665A, 5035, 8260B, 8270C, 8015D, 8082A, 8081B.)

New Jersey Department of Environmental Protection Certificate/Lab ID: MA015. ***NELAP Accredited.***

Non-Potable Water (Inorganic Parameters: SW-846 1312, 3010, 3020A, SM2320B, SM2540D, 2540G, EPA 180.1, 1631E, SW-846 7470A, 9040B, 6020, 9050A. Organic Parameters: SW-846 3510C, 3580A, 5030B, 5035L, 5035H, 3630C, 3640A, 3660B, 3665A, 8015B 8081A, 8082, 8260B, 8270C)

Solid & Chemical Materials (Inorganic Parameters: SW-846 6020, 1311, 1312, 3050B, 3051, 3060A, 7196A, 7470A, 7471A, 7474, 9040B, 9045C, 9060. Organic Parameters: SW-846 3540C, 3570, 3580A, 5030B, 5035L, 5035H, 3630C, 3640A, 3660B, 3665A, 8081A, 8082, 8260B, 8270C, 8015B.)

Atmospheric Organic Parameters (EPA TO-15)

Biological Tissue (Inorganic Parameters: SW-846 6020 Organic Parameters: SW-846 8270C, 3510C, 3570, 3610C, 3630C, 3640A)

New York Department of Health Certificate/Lab ID: 11627. ***NELAP Accredited.***

Non-Potable Water (Inorganic Parameters: SM2320B, SM2540D, EPA 200.8, 6020, 1631E, 245.1, 245.7, 7470A, 9014, 9040B, 9050, 120.1, 4500CN-E, 4500H-B, EPA 376.2, 180.1, 3020A. Organic Parameters: EPA 8260B, 8270C, 8081A, 8082, 3510C, 5030B.)

Solid & Hazardous Waste (Inorganic Parameters: EPA 6020, 7196A, 3060A, 7471A, 7474, 9014, 9040B, 9045C, 9010B. Organic Parameters: EPA 8260B, 8270C, 8081A, DRO 8015B, 8082, 1311, 1312, 3050B, 3580, 3570, 3051, 5035, 5030B.)

Air & Emissions (EPA TO-15.)

Pennsylvania Certificate/Lab ID: 68-02089 ***NELAP Accredited***

Solid & Hazardous Waste (Inorganic Parameters: EPA 6020A,7471B, 7474. Organic Parameters: EPA3050B, 3540C, 3630C, 8270C, 8081B, 8082A.)

Rhode Island Department of Health Certificate/Lab ID: LAO00299. ***NELAP Accredited via LA-DEQ.***

Refer to LA-DEQ Certificate for Non-Potable Water.

Texas Commission of Environmental Quality Certificate/Lab ID: T104704419-08-TX. ***NELAP Accredited.***

Solid & Chemical Materials (Inorganic Parameters: EPA 6020, 7470, 7471, 1311, 7196, 9040, 9045, 9060. Organic Parameters: EPA 8015, 8270, 8260, 8081, 8082.)

Air (Organic Parameters: EPA TO-15)

Washington State Department of Ecology Certificate/Lab ID: C954. *Non-Potable Water* (Inorganic Parameters: SM2540D, 180.1, 1631E.)

Solid & Chemical Materials (Inorganic Parameters: EPA 6020, 7470, 7471, 7474, 9045C, 9050A, 9060. Organic Parameters: EPA 8081, 8082, 8015 Mod, 8270.)

Virginia Division of Consolidated Laboratory Services Certificate/Lab ID:460194. ***NELAP Accredited.***

Non-Potable Water (Inorganic Parameters:EPA 3020A,6020A,245.7,9040B,SM4500H-B. Organic Parameters: EPA 3510C,3640A,3660B,3665A,8270C,8270D,8082A,8081B.)

Solid & Chemical Materials (Inorganic Parameters: EPA 6020A,7470A,7471B,9040B,9045C,3050B,3051. Organic Parameters: EPA 3540C, 3580A, 3630C, 3640A, 3660B, 3665A, 3570, 8270C, 8270D, 8081B, 8082A, 8015D.)

U.S. Army Corps of Engineers

Department of Defense, L-A-B Certificate/Lab ID: L2217.01.

Non-Potable Water (Inorganic Parameters: EPA 6020A, SM4500H-B. Organic Parameters: 3020A, 3510C, 5030B, 8260B, 8270C, 8270C-ALK-PAH, 8082, 8081A, 8015D-SHC, 8015D.)

Solid & Hazardous Waste (Inorganic Parameters: EPA 1311, 1312, 3050B, 6020A, 7471A, 9045C, 9060, SM 2540G, ASTM D422-63. Organic Parameters: EPA 3580A, 3570, 3540C, 5035A, 8260B, 8270C, 8270-ALK-PAH, 8082, 8081A, 8015D-SHC, 8015D.

Air & Emissions (EPA TO-15.)

Analytes Not Accredited by NELAP

Certification is not available by NELAP for the following analytes: **8270C:** Biphenyl. **TO-15:** Halothane, 2,4,4-Trimethyl-2-pentene, 2,4,4-Trimethyl-1-pentene, Thiophene, 2-Methylthiophene, 3-Methylthiophene, 2-Ethylthiophene, 1,2,3-Trimethylbenzene, Indan, Indene, 1,2,4,5-Tetramethylbenzene, Benzothiophene, 2-Methylnaphthalene, 1-Methylnaphthalene.

AIR ANALYSIS

PAGE 1 OF 1

CHAIN OF CUSTODY

320 Forbes Blvd, Mansfield, MA 02048
TEL: 508-822-9300 FAX: 508-822-3288

Date Rec'd in Lab:

ALPHA Job #: L1205368

Client Information

Client: AMM
Address: 710 Golf Club Dr, Castle Rock, CO 80108
Phone: 720-897-7792 (10) X
Fax: Cell 720-581-1182
Email: Tom@AdvM2.com

☐ These samples have been previously analyzed by Alpha

Project Information

Project Name: RIAC
Project Location: Warwick, RI
Project #:
Project Manager: Tom Brauch
ALPHA Quote #:

Turn-Around Time

☐ Standard ☐ RUSH *(only confirmed if pre-approved!)*

Date Due: **Time:**

Report Information - Data Deliverables

☐ FAX
☐ ADEx
Criteria Checker:
(Default based on Regulatory Criteria Indicated)
Other Formats:
☐ EMAIL (standard pdf report)
☐ Additional Deliverables:
Report to: (if different than Project Manager)

Billing Information

☐ Same as Client info PO #:

Regulatory Requirements/Report Limits

State/Fed	Program	Criteria

Other Project Specific Requirements/Comments:

All Columns Below Must Be Filled Out

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection Date	Start Time	End Time	Initial Vacuum	Final Vacuum	Sample Matrix*	Sampler's Initials	Can Size	ID Can	ID - Flow Controller	TO-14A by TO-15	TO-15	TO-15 SIM	APH	FIXED GASES	TO-13A	TO-4 / TO-10	Sample Comments (i.e. PID)
1	PB-P-20120328	3/28/12	00:00	00:00			AA	DE		24							X		
2	LD-P-20120328	3/28/12	00:00	00:00						82									
3	FV-P-20120328	3/28/12	00:00	00:00						080									
4	FS-P-20120328	3/28/12	00:00	00:00						16									

*SAMPLE MATRIX CODES

AA = Ambient Air (Indoor/Outdoor)
SV = Soil Vapor/Landfill Gas/SVE
Other = Please Specify

Container Type

Please print clearly, legibly and completely. Samples can not be logged in and turnaround time clock will not start until any ambiguities are resolved. All samples submitted are subject to Alpha's Terms and Conditions. See reverse side.

Relinquished By:	Date/Time	Received By:	Date/Time:
Dana Sioli	3/29/12 12:51	MCM	3/30/12 0951
MCM	3/30/12 1655		3/30/12 1655