Appendix B.
Data Quality Objectives and Quality Assurance/Quality Control Review

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This appendix addresses quality assurance and quality control (QA/QC) activities associated with PAH Transport Study (Project) and the relevant data quality objectives (DQOs). The QA/QC program included both field and laboratory procedures.

Amec Foster Wheeler Environment & Infrastructure, Inc.[1] (Amec Foster Wheeler) was responsible for monitoring activities. Eurofins Air Toxics (Air Toxics), located in Folsom, California was the analytical laboratory responsible for dry depositional air sample analyses. Physis Environmental Laboratories, located in Anaheim, California was the analytical laboratory responsible for wet depositional air sample analyses.

B.1 INSTRUMENT/EQUIPMENT TESTING, INSPECTION, AND MAINTENANCE

B.1.1 Monitoring Supplies

Sample containers were provided by the laboratories for dry and wet deposition analyses, respectively. Air Toxics supplied certified clean PUF/XAD cartridges and filter-quartz filters for dry deposition sampling. Because of the persistence of naphthalene, cartridges are considered clean if naphthalene is detected at less than five times the concentration of the lowest calibration standard. The sum of remaining PAH compounds must be detected at less than 200 ng total/cartridge. Batch IDs are recorded on field data sheets and chain-of-custody forms by the sampling team. Physis Environmental Laboratories supplied certified clean sample containers for wet weather deposition analyses.

Amec Foster Wheeler inspected consumables and monitoring supplies in accordance with the requirements and frequency established in the Quality Assurance Project Program (QAPP), and summarized in Table B-1. No supplies received fell outside of acceptance criteria.

[1] Amec Foster Wheeler Environment & Infrastructure, Inc. was formerly known as AMEC Environment & Infrastructure, Inc.

Table B-1. Inspection/Acceptance Testing Requirements for Consumables and Supplies

Program	Project-Related Supplies/ Consumables	Inspection/ Testing Specifications (Source)	Acceptance Criteria	Frequency (%)	Responsible Individual
Dry Deposition	Pre-Certified PUF/XAD-2® Cartridge	COC form of cartridge certification and visual inspection for tampering during shipment (Air Toxics)	Enclosed and un-tampered with in their shipping containers	100	Amec Foster Wheeler
Dry Deposition	Filter	Visual inspection for pinholes, tears, creases, or other flaws that may affect the collection efficiency of the filter (Air Toxics)	Enclosed and un-tampered with in their shipping containers; no visible damage to filter	100	Amec Foster Wheeler
Wet Deposition	Precleaned Sample Bottles	Closed bottle (Physis)	Lids screwed on bottles	100	Amec Foster Wheeler
Dry and Wet Deposition	Gloves	New box (McMaster Carr)	New box	As needed	Amec Foster Wheeler

B.1.2 Field Instrument/Equipment

A Tisch Environmental high volume air sampler was used for the collection of dry deposition samples. The HVAS was calibrated according to the manufacturer's specifications (provided in the Project QAPP) and EPA Method TO-13A at the following times:

- During the initial installation
- Before and after each sampling event
- After major repairs or maintenance

Calibration was conducted in the field using a calibrated orifice flow rate transfer standard. Calibration measurements were recorded on field data sheets or calibration logs, which are provided in Attachment B-1.

During equipment installation, Amec Foster Wheeler Technical Staff performed any necessary maintenance and troubleshooting on the Davis Instruments Vantage Vue which was used to record real-time meteorological data including wind speed, wind direction, temperature, barometric pressure and rainfall. Data were downloaded after each monitoring event, and field crews inspected the weather station to observe for any damage. During equipment installation, Amec Foster Wheeler Technical Staff performed any necessary maintenance and troubleshooting on the Davis Instruments Vantage Vue which was used to record real-time meteorological data including wind speed, wind direction, temperature, barometric pressure and rainfall. Data were downloaded after each monitoring event, and field crews inspected the

weather station to observe for any damage. During three Wet Weather events, data could not be downloaded from the weather station at FD11. In these instances, data collected from the site FD12 were used. During several collections for each site for Dry Weather sampling events (Table B-2), data could not be downloaded from each of the weather stations. In these instances data was gathered from the San Diego International Airport-Lindbergh Field weather station and averaged over the sampling event timeframe.

Table B-2. Inspection/Acceptance Testing Requirements for Consumables and Supplies

Site	Event	Collection	Sample Start Time	Sample End Time
CNM1	2	3	09/11/2013 11:17	09/12/2013 11:17
CNM1	4	4	04/16/2014 09:57	04/17/2014 09:57
CNM1	5	4	05/20/2014 11:24	05/21/2014 11:24
CNM1	6	2	12/18/2016 16:50	12/19/2016 16:50
FD07	2	3	09/11/2013 10:18	09/12/2013 10:18
FD07	4	4	04/16/2014 09:15	04/17/2014 09:15
FD07	5	4	05/20/2014 10:39	05/21/2014 10:39
FD07	6	2	12/18/2016 14:55	12/19/2016 14:55
FD11	2	3	09/11/2013 09:45	09/12/2013 09:45
FD11	4	4	04/16/2014 08:50	04/17/2014 08:50
FD11	5	4	05/20/2014 10:18	05/21/2014 10:18
FD11	6	2	12/18/2016 13:30	12/19/2016 13:30
FD11	6	4	01/17/2017 09:37	01/18/2017 09:37
FD12	2	3	09/11/2013 09:10	09/12/2013 09:10
FD12	3	4	02/15/2014 08:19	02/16/2014 08:19
FD12	4	4	04/16/2014 08:26	04/17/2014 08:26
FD12	5	4	05/20/2014 09:48	05/21/2014 09:48
FD12	6	2	12/18/2016 12:05	12/19/2016 12:05

B.1.3 Wet Deposition Equipment Testing

Wet deposition monitoring was conducted using an N-CON ADS/NTN Atmospheric Deposition Sampler. Wet deposition equipment was tested prior to the start of each event to verify proper functionality. Field crews tested the sampler's precipitation sensor to verify proper function of the cover, and visual inspections were performed to confirm the compression seal on the underside of the cover was in good condition.

Measurement probes were cleared of debris as-needed, but no significant issues were observed.

B.1.4 Laboratory Instrumentation

Laboratory equipment were calibrated on the basis of manufacturer recommendations and accepted laboratory protocols. Laboratories maintained calibration practices as part of their method Standard Operating Procedures maintained by their Laboratory Directors and QA Officers. Calibration records can be provided by the laboratories upon request.

B.2 Data Quality Objectives

DQOs are quantitative and qualitative statements that define project objectives and specify the acceptable ranges of field sampling and laboratory performance. Results that did not meet measurement quality objectives were qualified and may be considered estimates. Measurement quality objectives for this project included the following:

- Accuracy
- Precision
- Completeness

Accuracy describes how close the measurement is to its true value. Accuracy is the measurement of a sample of known concentration and the comparison of the known value with the measured value. The accuracy of chemical measurements was checked by performing tests on a standard, which is defined as a known concentration of a certain solution, prior to and/or during sample analysis. The concentrations of the standards should also be within the mid-range of the equipment. Recovery measurements are determined by spiking a replicate sample in the laboratory with a known concentration of the analyte. Accuracy of the project data was determined by comparing results from matrix spike (MS) and matrix spike duplicates (MSDs), laboratory control standards (LCSs), field blanks, method blanks, and equipment blanks with the accuracy objectives specified within each section.

Precision describes how well repeated measurements agree. The evaluation of precision described here relates to repeated measurements/samples collected in the field (field duplicates) or the laboratory (laboratory replicates and MS/MSDs). Relative percent differences (RPDs) were calculated to determine the precision between duplicate samples. This calculation is shown in Equation B-1.

Equation B-1. Relative Percent Difference

$$RPD = \frac{abs[x_1 - x_2]}{0.5 * (x_1 + x_2)} * 100$$

where: abs is the absolute value
x_1 is measurement 1 (e.g., MS)
x_2 is measurement 2 (e.g., MSD)

Completeness is the fraction of planned data that must be collected to fulfill the statistical criteria of the project. There are no statistical criteria that require a certain percentage of data. However, it is expected that 75 percent (%) of measurements will be taken when anticipated. This percentage accounts for adverse weather conditions, safety concerns, and equipment issues. The project team determines completeness by comparing the number of measurements planned to be collected with the number of measurements actually collected that are also deemed valid. Completeness is measured as a percentage of the number of samples collected that meet the respective DQOs, compared with the anticipated total number of samples. This calculation is shown in Equation B-2.

Equation B-2. Completeness

$$Completeness = \frac{\text{Actual number of samples collected}}{\text{Project planned total samples to be collected}} * 100$$

Table B-3 shows the data quality objectives for dry and wet depositional samples.

Table B-3. Data Quality Objectives for PAH Samples

Monitoring Component	RL	Units	Accuracy (% Recovery and Blank Results)	Precision (% RPD)	Completeness
Dry Depositional Monitoring	0.1	µg	LCS: 60-120% FB and MB: <RL	FD, LD, and MSD[(a)]: < 25	75%
Wet Depositional Monitoring	5	ng/L	MS[(a)]: 50-150% FB and MB: <RL	FD, LD, and MSD[(a)]: < 25	90%

Notes:
µg = micrograms; % = percent; FB = field blank; FD = field duplicate; LCS = laboratory control sample; LD = laboratory duplicate; MB = method blank; ng/L = nanograms per liter; RL = reporting limit

B.3 Field Quality Assurance/Quality Control (QA/QC) Samples

This section addresses QA/QC activities associated with field sampling. Field QA/QC samples are used to evaluate potential contamination and sampling errors that may be introduced prior to submittal of the samples to the analytical laboratory. Field QA/QC procedures utilize field blanks and field duplicates to assess for any potential field contamination:

- **Field Blanks** – Field blanks verify that field conditions and field sampling activities are non-contaminating. Field blanks are submitted blind to the laboratory.
- **Field Duplicates** – Field duplicates typically evaluate sampling error introduced by field activities.

Table B-4 briefly summarizes the sample types, their frequencies, and their respective DQOs.

Table B-4. Field Quality Control Samples

Program	Data Quality Objectives		Frequency of Analysis
	Field Duplicate	Field Blank	
Dry Deposition	NA	<RL (0.1 µg)	1 FB per event (6 total)
Wet Deposition	RPD < 25%	<RL (5 ng/L)	10% of sample count

For dry deposition air samples, one field blank was planned per event (6 total). Field blanks were treated exactly as the primary samples except that air is not drawn through the filter/sorbent cartridge assembly. Field blanks were submitted to the analytical laboratory for analysis in conjunction with primary samples. To meet acceptance criteria, results must be less than or equal to the reporting limit (see Table B-4). Field duplicates were not collected because of the difficulty of obtaining dry deposition air samples. To obtain a duplicate an additional sampler and set of cartridges would need to be installed, adding to the Project cost.

For wet deposition water samples, QA/QC samples were planned at a frequency of 10% of the project sample count. For field blanks, sample bottles were filled with reagent-grade, analyte-free deionized water in the field during a sampling event and submitted to the laboratory for analysis in conjunction with primary samples. During wet deposition monitoring, twice as much of the minimum sample volume is needed to run a duplicate; so duplicates are dependent on the volume collected.

During wet and dry monitoring components of the Project, field quality control samples were collected at frequencies summarized above. As planned, one field blank was collected per dry weather event for a total of 6 QA/QC samples. A total of three QA/QC samples were collected under the wet deposition component of the program (one field blank and two field duplicates), for a frequency of 12.5% percent of wet deposition samples. Analytical results from the field dry and wet deposition QA/QC samples are summarized below.

Results of the dry deposition field blanks were below the reporting limits (RLs) and DQOs, except for pyrene, fluoranthene and benzo(g,h,i)perylene during Dry Event 6. Pyrene was detected at 0.33 ug, fluoranthene was detected at 0.12 ug, and benzo(g,h,i)perylene was detected at 0.15 ug which are above the RL of 0.1 ug. These results were "B" flagged, which means the compound present in the laboratory blank was greater than the reporting limit.

For the field blank collected during the wet deposition component of the Project, no compounds were detected above the reporting limit (i.e., all results were non-detects).

To assess precision, the RPD from the primary sample and the associated field duplicates were calculated to determine if the DQO was achieved (RPD less than 25 percent). Table B-5 provides the RPDs between the primary sample and the associated field duplicates collected at sites FD11 and FD07 during Wet Event 3.

Table B-5. Relative Percent Differences for Wet Deposition Field Duplicate Samples

Analyte	WW3-FD07 RPD	WW3-FD11 RPD
1-Methylnaphthalene	22%	23%
1-Methylphenanthrene	6%	ND
2,3,5-Trimethylnaphthalene	ND	ND
2,6-Dimethylnaphthalene	ND	3%
2-Methylnaphthalene	37%	11%
Acenaphthene	ND	ND
Acenaphthylene	48%	ND
Anthracene	ND	ND
Benz[a]anthracene	ND	ND
Benzo[a]pyrene	ND	ND
Benzo[b]fluoranthene	ND	90%
Benzo[e]pyrene	43%	76%
Benzo[g,h,i]perylene	60%	79%
Benzo[k]fluoranthene	ND	ND
Biphenyl	27%	13%
Chrysene	33%	67%
Dibenz[a,h]anthracene	ND	ND
Dibenzothiophene	ND	ND
Fluoranthene	19%	36%
Fluorene	42%	16%
Indeno[1,2,3-c,d]pyrene	ND	ND
Naphthalene	13%	2%
Perylene	ND	ND
Phenanthrene	15%	9%
Pyrene	3%	65%

Analyzed parameters met DQO for FD07 with the exception of 2-Methylnaphthalene, Acenaphthylene, Benzo[e]pyrene, Benzo[g,h,i]perylene, Biphenyl, Chrysene, and Fluorene. However, in each instance both results were reported less than the reporting limit and considered non-detects and estimated values.

Measured concentrations in the primary and duplicate samples for these PAHs are provided below:

- 2-Methylnaphthalene: 4.6 and 6.7 nanograms per liter (ng/L)
- Acenaphthylene: 1.1 and 1.8 ng/L
- Benzo[e]pyrene: 2.2 and 3.4 ng/L
- Benzo[g,h,i]perylene: 2.7 and 5 ng/L
- Biphenyl: 1.9 and 2.5 ng/L
- Chrysene: 3.3 and 4.6 ng/L
- Fluorene: 2.1 and 3.2 ng/L

For the duplicate collected at FD11, the calculated RPD exceed the DQO for benzo[b]fluoranthene, benzo[e]pyrene, benzo[g,h,i]perylene, chrysene, fluoranthene, and pyrene. For benzo[e]pyrene, benzo[g,h,i]perylene, and chrysene both results were reported less than the reporting limit and considered non-detects and estimated values.

Measured concentrations in the primary and duplicate samples for these PAHs are provided below:

- Benzo[b]fluoranthene: 2.3 and 6.1 nanograms per liter (ng/L)
- Benzo[e]pyrene: 2.2 and 4.9 ng/L
- Benzo[g,h,i]perylene: 2 and 4.6 ng/L
- Chrysene: 2.5 and 5.0 ng/L
- Fluoranthene: 4.5 and 6.5 ng/L
- Pyrene: 3.6 and 7.1 ng/L

B.4 Laboratory Quality Assurance/Quality Control (QA/QC)

This section addresses laboratory QA/QC activities. Laboratory QA/QC samples provide data to assess potential laboratory contamination, analytical precision, and accuracy. Analytical QA for this program included the following:

- Employment of analytical chemists trained in the procedures to be followed
- Adherence to documented procedures, EPA approved methods, and written SOPs
- Frequent and proper calibration and maintenance of analytical instruments
- Use of QC samples, internal standards, and surrogates
- Complete documentation of sample tracking and analysis
- Internal laboratory QC checks include the use of laboratory replicates, method blanks, MS/MSDs, and LCSs. A summary of each quality control type is provided below:

Internal laboratory QC checks include the use of laboratory replicates, method blanks, blank spikes, and MSs/MSDs, as follows:

- **Laboratory Duplicate (LD)** – A sample is split by the laboratory into two portions and each portion is analyzed. Once analyzed, the results are evaluated by calculating the RPD between the two sets of results. This serves as a measure of the reproducibility, or precision, of the sample analysis. Typically, replicate results should fall within an accepted RPD range, depending upon the analysis.
- **Laboratory Method Blanks (MB)** – A method blank is an analysis of a known clean sample matrix that has been subjected to the same complete analytical procedure as the field sample to determine whether potential contamination has been introduced during processing. The laboratory method blank is analyzed along with each batch of less than or equal to 20 samples through the entire extraction, concentration, and analysis process.

Blank analysis results are evaluated by checking against the RL for that analyte. Results obtained should be less than the RL for each analyte.

- **Laboratory Control Sample (LCS)** –The laboratory control sample procedure involves spiking known amounts of the analyte of interest into a known, clean, sample matrix to assess the possible matrix effects on spike recoveries. The recovery of the spike is a measure of the accuracy of the analysis. High or low recoveries of the analytes in the matrix spikes may be caused by interferences in the sample. Laboratory control samples assess these possible matrix effects since the LCS is known to be free from interferences. The spike recoveries are compared against accepted and known method dependent acceptance limits. Results outside these limits are subject to corrective action.
- **MSs/MSDs** – MSs/MSDs involve adding a known amount of the chemical(s) of interest to one of the actual samples being analyzed. One sample is split into three separate portions. One portion is analyzed to determine the concentration of the analyte in question in an unspiked state. The other two portions are spiked with a known concentration of the analytes of interest. The recovery of the spike, after accounting for the concentration of the analyte in the original sample, is a measure of the accuracy of the analysis. An additional precision measure is made by calculating the RPD of the duplicate spike recoveries. Both the RPD values and spike recoveries are compared against accepted and known method dependent acceptance limits. Results outside these limits are subject to corrective action.

The required frequency and DQOs for laboratory QC samples are presented in Table B-6.

Table B-6. Laboratory Quality Control Sample Frequency

QA/QC Sample Type	Required for Dry Deposition (Method TO13-A)	Required for Wet Deposition (EPA 625)	Minimum Sampling Frequency and DQOs
Method Blank (MB)	✓	✓	With each sample batch of up to 20 samples (5% collected throughout the duration of the project). Less than RL.
MS/MSD	—	✓	With each sample batch of up to 20 samples (5% collected throughout the duration of the project). 50-150% recovery (Wet deposition).
Laboratory Control Spike (LCS)	✓	✓	With each sample batch of up to 20 samples (5% collected throughout the duration of the project). 60–120% recovery (Dry deposition).
Laboratory Duplicate (LD)	✓	✓	With each sample batch of up to 20 samples.

Notes:
RL = Reporting Limit

Quality Control Sample frequencies established in Table B-7 for dry depositional analyses and wet depositional were met. The following sections discuss the accuracy, precision and completeness of laboratory QC samples

B.4.1 Laboratory Quality Control Samples - Accuracy and Precision

Tables B-7 and B-8 summarize the accuracy and precision of laboratory QC samples.

Table B-7. Laboratory Quality Control Sample Results – Dry Deposition

Analyte	Accuracy		Precision
	Method Blank (% achieved)	MS and LCS (% achieved)	MS/MSDs and LCS/LCSDs (% achieved)
Naphthalene	92%	100%	100%
2-Methylnaphthalene	100%	100%	100%
2-Chloronaphthalene	100%	100%	100%
Acenaphthylene	100%	100%	100%
Acenaphthene	100%	100%	100%
Anthracene	100%	100%	100%
Fluorene	100%	100%	96%
Phenanthrene	100%	100%	100%
Pyrene	96%	100%	100%
Fluoranthene	96%	100%	96%
Benzo(a)anthracene	100%	100%	100%
Chrysene	100%	100%	100%
Benzo(a)pyrene	100%	100%	100%
Perylene	100%	NA	NA
Benzo(b)fluoranthene	100%	100%	100%
Benzo(e)pyrene	100%	NA	NA
Benzo(k)fluoranthene	100%	100%	100%
Dibenz(a,h)anthracene	96%	100%	100%
Indeno(1,2,3-c,d)pyrene	100%	100%	76%
Benzo(g,h,i)perylene	92%	100%	100%
Coronene	100%	NA	NA

Notes: Notes: percentage represents how many samples met the data quality objective
% = percent; LCS/LCSD = laboratory control sample/ laboratory control sample duplicate; MS/MSD = matrix spike/matrix spike duplicate; NA = not applicable

Table B-8. Laboratory Quality Control Sample Results – Wet Deposition

Analyte	Accuracy		Precision
	Method Blank (% achieved)	MS and LCS (% achieved)	MS/MSDs and LCS/LCSDs (% achieved)
Naphthalene	100%	100%	100%
1-Methylnaphthalene	100%	100%	100%
2-Methylnaphthalene	100%	100%	100%
Biphenyl	100%	100%	100%
2,6-Dimethylnaphthalene	100%	100%	100%
2,3,5-Trimethylnaphthalene	100%	100%	100%
Acenaphthylene	100%	100%	100%
Acenaphthene	100%	100%	100%
Anthracene	100%	100%	100%
Dibenzothiophene	100%	100%	100%
Fluorene	100%	100%	100%
Phenanthrene	100%	100%	100%
1-Methylphenanthrene	100%	100%	100%
Pyrene	100%	100%	100%
Fluoranthene	100%	100%	100%
Benzo(a)anthracene	100%	100%	100%
Chrysene	100%	100%	100%
Benzo(a)pyrene	100%	100%	100%
Perylene	100%	100%	83%
Benzo(b)fluoranthene	100%	100%	100%
Benzo(e)pyrene	100%	100%	100%
Benzo(k)fluoranthene	100%	100%	100%
Dibenz(a,h)anthracene	100%	100%	100%
Indeno(1,2,3-c,d)pyrene	100%	100%	100%
Benzo(g,h,i)perylene	100%	100%	100%

Notes: percentage represents how many samples met the data quality objective
% = percent; LCS/LCSD = laboratory control sample/ laboratory control sample duplicate; MS/MSD = matrix spike/matrix spike duplicate; NA = not applicable);

B.4.2 Laboratory Quality Control Samples - Completeness

Project completeness goals of 75% for dry deposition and 90% for wet deposition field and laboratory measurements were assessed against the number of actual measurements collected. Results are as follows:

- Dry depositional analytical parameters were analyzed as required. Analytical completeness was 100%.
- Wet depositional analytical parameters were analyzed as required. Analytical completeness was 100%.

B.5 Laboratory Analyses and Reporting Summary

Dry weather samples were analyzed by EPA Modified TO-13A. Wet depositional samples were analyzed by EPA 625. Both analytical methods allow for a 7 day extraction holding time (date collected to the date processed) and 40 day analysis holding time (date processed to the date analyzed).

There were no holding time exceedances with Project samples. The samples were received and the preparation, preservation, or extraction were initiated within 7 days. The samples were then analyzed within the 40 days.

All dry depositional samples were received by Air Toxics in good condition and analyzed by EPA Modified TO-13A with the exceptions of the following:

- For five out of the 24 sampling days, a temperature blank was included with each shipment. Temperature was measured and was not within 4±2 °C. The analyses proceeded as the laboratory deemed them acceptable.
- During Dry Event 3, on sample date 2/16/2014, the cartridge for sample DD-FD11-1402160849-01 was broken while still encased in bubble wrap and foil. The sample preparation and analysis proceeded. Sample analysis was not impacted.
- During Dry Event 6, on sample date 12/19/2016, naphthalene was detected in the laboratory blank at low background level 0.1ug). The contribution of naphthalene due to laboratory background level was determined to be insignificant to the concentration reported in the field samples.
- Benzo(g,h,i)perylene, dibenz(a,h)anthracene, fluoranthene, naphthalene and pyrene were also detected above the reporting limit in the laboratory blank on sample date 01/08/2017 and 01/18/2017.The field blank collected on 01/18/2017 had reportable levels of the target compounds present. Due to the nature of PUF/XAD2 extraction it is not possible to re-extract the associated samples. These results were "B" flagged, which means the compound present in the laboratory blank was greater than the reporting limit.

All wet depositional samples were received by Physis in good condition and analyzed by EPA Method 625. Many samples which were “J” flagged, because the analytes were detected at concentrations below the reporting limit and above the method detection limit. Reported values are considered estimated values.

Laboratory reports and EDDs for the PAH Aerial Deposition Study are provided in Appendix C.

B.6 References

Amec Foster Wheeler. 2016. Polycyclic Aromatic Hydrocarbon (PAH) Transport Study Quality Assurance Project Plan. June. Prepared for the City of San Diego.

Attachment B-1. High Volume Air Sampler Calibration Records

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Field Data Sheets

Attachment B

PAH Dry Deposition Field Data Log Sheet

Site ID FD12 **Field Crew:** KG, BS, DK, EM, KS

Deposition Event: (Dry 1) Dry 2 Dry 3 Dry 4 Dry 5

Type: (Weekday (W/Th)) Weekend (Sat/Sun) **Collection:** 1 /4 (per DD event)

Start Date: 07/31/2013 **End Date:** 08/01/2013

ATMOSPHERIC CONDITIONS

Day 1 **Sky** Sunny Partly Cloudy (Overcast) Fog Day 2 overcast

PUF SAMPLER

Sampler I.D. No.: FA00692

Certification Date/No.: PUF: P130423, 07/09/2013 XAD: X130313, 07/17/2013, Filter: F130523

Elapsed Timer	Black	White
Start:	00	96
Stop:	24	96
Diff.	24 hours	

Sample Time	
Start:	09:46 07/31/2013
Stop:	0946 08/01/13
Duration:	24 hr

Calibrations

MULTI-POINT CALIBRATION TIME: 9:10 DATE: 07/31/2013			
Magn.	(+)	(-)	SUM
70	3.5	3.4	6.9
60	3.1	2.9	6
50	2.7	2.4	5.1
40	2.1	1.9	4
30	1.6	1.5	3.1

M= 30.9438
B= -0.4907
R^2= 0.9982

Magnehelic Set-point: 42.7

Audit flow check within ±10 of set point?			
Date	7/31/13	8/1/13	
Time	09:15	10:00	
Magn. Read.	40	42	
△H	3.5	3.8	
Yes/ No?	Y	Y	
Min (-10%)	38.4	Max (+10%)	47.0

FIELD MEASUREMENTS

Date	Time	Magn. Reading	Wind Speed	Barometric Pressure (in. Hg)	Temp (°F)	Notes (calc flow rate, etc.)
07/31/2013	09:47	42	0	30.07	66	
08/01/2013	0939	44	2	29.99	69	

TOTAL VOLUME: 331 std. m^3

NOTES Sample ID Format: DD-Site-YYMMDDHHMM-Sample Type; Sample Type: -01=Primary, FB=Field Blank

Steve (619) 655 46062
$81/month

PAH Dry Deposition Field Data Log Sheet

Site ID FD11 **Field Crew:** KG, BS, EM, DK

Deposition Event: (Dry 1) Dry 2 Dry 3 Dry 4 Dry 5

Type: (Weekday (W/Th)) Weekend (Sat/Sun) **Collection:** 1 /4 (per DD event)

Start Date: 07/31/2013 **End Date:** 08/01/2013

ATMOSPHERIC CONDITIONS

Sky Sunny Partly Cloudy (Overcast) Fog

PUF SAMPLER

Sampler I.D. No.: FA00580

Certification Date/No.: PUF: P130423, 07/09/2013 XAD: X130313, 07/17/2013, Filter: F130523

Elapsed Timer	Black	White
Start:	74	15.5
Stop:	98	15.5
Diff.	24 hours	

Sample Time	
Start:	1105 07/31/2013
Stop:	1105 08/1/2013
Duration:	24 hr

Calibrations

MULTI-POINT CALIBRATION TIME: 10:30 DATE: 07/31/2013			
Magn.	(+)	(-)	SUM
70	3.2	3.1	6.3
60	2.9	2.8	5.7
50	2.5	2.4	4.9
40	2	2	4
30	1.5	1.4	2.9

M= 33.3411
B= -0.8598
R^2= 0.9948

Magnehelic Set-point: 45.0

Audit flow check within ±10 of set point?				
Date	7/31	8/1		
Time	1045	11:13		
Magn. Read.	42.2	42		
△H	3.8	3.6		
Yes/ No?	Y	Y		
Min (-10%)	40.5	Max (+10%)	49.5	

1
1.8
1.8
6

FIELD MEASUREMENTS

Date	Time	Magn. Reading	Wind Speed	Barometric Pressure (in. Hg)	Temp (°F)	Notes (calc flow rate, etc.)
7/31/2013	1105	45	5	30.09	67	NNW
8/1/2013	1100	44	4	30.00	69	

TOTAL VOLUME: 328 **std. m^3**

NOTES Sample ID Format: DD-Site-YYMMDDHHMM-Sample Type; Sample Type: -01=Primary, FB=Field Blank

PAH Dry Deposition Field Data Log Sheet

Site ID FD07 **Field Crew:** KG, BS

Deposition Event: (Dry 1) Dry 2 Dry 3 Dry 4 Dry 5

Type: (Weekday (W/Th)) Weekend (Sat/Sun) **Collection:** 1 /4 (per DD event)

Start Date: 07/31/2013 **End Date:** 08/01/2013

ATMOSPHERIC CONDITIONS

Sky Sunny Partly Cloudy (Overcast) Fog

PUF SAMPLER

Sampler I.D. No.: FA00691

Certification Date/No.: PUF: P130423, 07/09/2013 XAD: X130313, 07/17/2013, Filter: F130523

Elapsed Timer	Black	White
Start:	00	81
Stop:	24	87
Diff.	24 hour	

Sample Time	
Start:	12:06 07/31/2013
Stop:	12:06 08/31/2013
Duration:	24 hr

Calibrations

MULTI-POINT CALIBRATION TIME: 11:45 DATE: 07/31/2013			
Magn.	(+)	(-)	SUM
70	3.5	3.5	7
60	3	3	6
50	2.6	2.5	5.1
40	2.1	2.1	4.2
30	1.6	1.6	3.2

M= 32.0916
B= -0.8226
R^2= 0.9998

Audit flow check within ±10 of set point?				
Date	07/31/13	8/1/13		
Time	11:30	12:15		
Magn. Read.	40	39		
△H	3.6	3.8		
Yes/ No?	Yes	Y		
Min (-10%)	37.5	Max (+10%)	45.9	

Magnehelic Set-point: 41.7

FIELD MEASUREMENTS

Date	Time	Magn. Reading	Wind Speed	Barometric Pressure (in. Hg)	Temp (°F)	Notes (calc flow rate, etc.)
7/31/2013	12:06	41.5	4	30.049	71	
8/1/2013	12:00	44	5	29.960	72	West dir.

TOTAL VOLUME: 332 **std. m³**

NOTES Sample ID Format: DD-Site-YYMMDDHHMM-Sample Type; Sample Type: -01=Primary, FB=Field Blank

PAH Dry Deposition Field Data Log Sheet

Site ID CNM1 **Field Crew:** KG, BS, EM

Deposition Event: (Dry 1) Dry 2 Dry 3 Dry 4 Dry 5

Type: (Weekday (W/Th)) Weekend (Sat/Sun) **Collection:** 1 /4 (per DD event)

Start Date: ~~07/31/2013~~ BS 08/01/2013 **End Date:** ~~08/01/2013~~ BS 08/02/2013

ATMOSPHERIC CONDITIONS

Sky (Sunny) Partly Cloudy (Overcast) Fog

PUF SAMPLER

Sampler I.D. No.: FA00579 In progress

Certification Date/No.: PUF: P~~130423~~ 130724, ~~07/09/2013~~ XAD: X130313, 07/17/2013, Filter: F130523 DG

Elapsed Timer	Black	White
Start:	74	65.5
Stop:	98	68.5
Diff.	24 hour	

Btw. 65/66

Sample Time	
Start:	11:04 08/01/13
Stop:	1104 08/02/2013
Duration:	

Calibrations

MULTI-POINT CALIBRATION TIME: 9:10 DATE: 07/31/2013			
Magn.	(+)	(-)	SUM
70	3.2	3.2	6.4
60	2.8	2.8	5.6
50	2.5	2.5	5
40	2	2	4
30	1.5	1.5	3
M=	34.1618		
B=	-1.092		
R^2=	0.9961		

Audit flow check within ±10 of set point?			
Date	7/31/2013	8-2-13	
Time	13:15	1117	
Magn. Read.	40.5	40	
△H	3.6	3.6	
Yes/ No?	Y	Y	
Min (-10%)	39.9	Max (+10%)	48.8

Magnehelic Set-point: 44.3

FIELD MEASUREMENTS

Date	Time	Magn. Reading	Wind Speed	Barometric Pressure (in. Hg)	Temp (°F)	Notes (calc flow rate, etc.)
8/1/13	11:00	44.3	8mph	29.87	68°F	
8/2/13	11:00	42	2-mph	29.82	71	

TOTAL VOLUME: 326 **std. m³**

NOTES Sample ID Format: DD-Site-YYMMDDHHMM-Sample Type; Sample Type: -01=Primary, FB=Field Blank

Humidity 67%. was @ 50 → adjusted down to 44.3

PAH Dry Deposition Field Data Log Sheet

Site ID FD12 **Field Crew:** KG, BS

Deposition Event: (Dry 1) Dry 2 Dry 3 Dry 4 Dry 5

Type: Weekday (W/Th) (Weekend (Sat/Sun)) **Collection:** 2 /4 (per DD event)

Start Date: ~~07/31/2013~~ 08/03/2013 **End Date:** ~~08/01/2013~~ 08/04/2013

ATMOSPHERIC CONDITIONS

Sky (Sunny) (Partly Cloudy) Overcast Fog overcast

PUF SAMPLER

Sampler I.D. No.: FA 00692

Certification Date/No.: P130724, X130313, F130523

Elapsed Timer	Black	White
Start:	25	22
Stop:	49	22
Diff.	24 hour	

Sample Time		
Start:	0803	08/03/13
Stop:	0803	08/04/13
Duration:		

Calibrations

MULTI-POINT CALIBRATION TIME: 9:10 DATE: 07/31/2013			
Magn.	(+)	(-)	SUM
70	3.5	3.4	6.9
60	3.1	2.9	6
50	2.7	2.4	5.1
40	2.1	1.9	4
30	1.6	1.5	3.1

M= 30.9438
B= -0.4907
R^2= 0.9982

Audit flow check within ±10 of set point?			
Date	08/03	08/04	
Time	0745	0805	
Magn. Read.	40	39	
△H	1.75+1.75	3.5	
Yes/ No?	Y	Y	
Min (-10%)	37.7	Max (+10%)	46.1

Magnehelic Set-point: 41.9 = 42

FIELD MEASUREMENTS

Date	Time	Magn. Reading	Wind Speed	Barometric Pressure (in. Hg)	Temp (°F)	Notes (calc flow rate, etc.)
		CAL	0	29.96	66	
08/03/13	0803	42	0	29.95	65	
08/04/13	0759	42	2	29.97	62	

TOTAL VOLUME: 329 **std. m^3**

NOTES Sample ID Format: DD-Site-YYMMDDHHMM-Sample Type; Sample Type: -01=Primary, FB=Field Blank

DD-FD12-1308040803-01

PAH Dry Deposition Field Data Log Sheet

Site ID FD11 **Field Crew:** KG, BS

Deposition Event: (Dry 1) Dry 2 Dry 3 Dry 4 Dry 5

Type: Weekday (W/Th) (Weekend (Sat/Sun))

Collection: 2/4 (per DD event)

Start Date: ~~07/31/2013~~ 08/03/2013 **End Date:** ~~08/01/2013~~ 08/04/2013

ATMOSPHERIC CONDITIONS

Sky (Sunny) (Partly Cloudy) Overcast Fog

PUF SAMPLER

Sampler I.D. No.: FA00580

Certification Date/No.: P130724(1P), X130313(7-17-13), F138523

Elapsed Timer

	Black	White
Start:	98	43
Stop:	122	43
Diff.	24 hr	

Sample Time

Start:	0858 08/03/13
Stop:	0858 08/04/13
Duration:	24 hr

Calibrations

MULTI-POINT CALIBRATION TIME: 10:30 DATE: 07/31/2013

Magn.	(+)	(-)	SUM
70	3.2	3.1	6.3
60	2.9	2.8	5.7
50	2.5	2.4	4.9
40	2	2	4
30	1.5	1.4	2.9

M= 33.3411
B= -0.8598
R^2= 0.9948

Audit flow check within ±10 of set point?

Date	8/03/13	08/04	
Time	0851	0900	
Magn. Read.	43	42	
ΔH	3.8	3.9	
Yes/ No?	Y	Y	
Min (-10%)	39.7	Max (+10%)	48.5

Magnehelic Set-point: 44.1 = 44

FIELD MEASUREMENTS

Date	Time	Magn. Reading	Wind Speed	Barometric Pressure (in. Hg)	Temp (°F)	Notes (calc flow rate, etc.)
0835	08/03	44	0	29.98	67	
0851	08/03	44	0	29.98	67	
0858	08/03	44	0	29.98	67	
0855	08/04	44	2	29.99	63	

TOTAL VOLUME: 327 std. m^3

NOTES Sample ID Format: DD-Site-YYMMDDHHMM-Sample Type; Sample Type: -01=Primary, FB=Field Blank

DD-FD11-1308030858-01

LOW BATTERY TRANSMITTER/WEATHER STATION

PAH Dry Deposition Field Data Log Sheet

Site ID FD07 **Field Crew:** KG, BS

Deposition Event: (Dry 1) Dry 2 Dry 3 Dry 4 Dry 5

Type: Weekday (W/Th) (Weekend (Sat/Sun)) **Collection:** 2 /4 (per DD event)

Start Date: 08/03/2013 **End Date:** 08/04/2013

ATMOSPHERIC CONDITIONS

Sky (Sunny) Partly Cloudy Overcast Fog

PUF SAMPLER

Sampler I.D. No.: FA00091

Certification Date/No.: P130724, X130313, F130523

Elapsed Timer	Black	White
Start:	25	81
Stop:	49	01
Diff.		

Sample Time		
Start:	0939	08/03/13
Stop:	0939	08/04/13
Duration:		

Calibrations

MULTI-POINT CALIBRATION TIME: 11:45 DATE: 07/31/2013			
Magn.	(+)	(-)	SUM
70	3.5	3.5	7
60	3	3	6
50	2.6	2.5	5.1
40	2.1	2.1	4.2
30	1.6	1.6	3.2
M=	32.0916		
B=	-0.8226		
R^2=	0.9998		

Audit flow check within ±10 of set point?			
Date	08/03	08/04	
Time	0935	0945	
Magn. Read.	42	39.5	
△H	3.91	~~3.93~~	
Yes/ No?	Y	Y	
Min (-10%)	36.8	Max (+10%)	45.0

Magnehelic Set-point: 40.9 ≈ 41

FIELD MEASUREMENTS

Date	Time	Magn. Reading	Wind Speed	Barometric Pressure (in. Hg)	Temp (°F)	Notes (calc flow rate, etc.)
08/03	0935	WARM UP	0	29.95	69	
08/03	0939	41	2	29.95	69	
		43	1	29.97	106	

TOTAL VOLUME: 327 std. m^3

NOTES Sample ID Format: DD-Site-YYMMDDHHMM-Sample Type; Sample Type: -01=Primary, FB=Field Blank

DD-FD07-1308040939-01

PAH Dry Deposition Field Data Log Sheet

Site ID CNM1 **Field Crew:** KG, BS

Deposition Event: (Dry 1) Dry 2 Dry 3 Dry 4 Dry 5

Type: Weekday (W/Th) (Weekend (Sat/Sun)) **Collection:** 2/4 (per DD event)

Start Date: ~~07/31/2013~~ 08/03/2013 **End Date:** ~~08/01/2013~~ 08/04/2013

ATMOSPHERIC CONDITIONS

Sky ~~Sunny~~ (Partly Cloudy) Overcast Fog

PUF SAMPLER

Sampler I.D. No.: ~~FA00579~~

Certification Date/No.: P130724, X130313, F130523

Elapsed Timer	Black	White
Start:	98	98
Stop:	122	98
Diff.	24	hour

Sample Time	
Start:	1048 8/3/2013
Stop:	1048 8/4/2013
Duration:	24 hr

Calibrations

MULTI-POINT CALIBRATION TIME: 9:10 DATE: 07/31/2013			
Magn.	(+)	(-)	SUM
70	3.2	3.2	6.4
60	2.8	2.8	5.6
50	2.5	2.5	5
40	2	2	4
30	1.5	1.5	3

M= 34.1618
B= -1.092
R^2= 0.9961

Audit flow check within ±10 of set point?			
Date	08/03	08/04	
Time	1040	1050	
Magn. Read.	40	40	
△H	3.5	3.6	
Yes/ No?	Y	Y	
Min (-10%)	39.2	Max (+10%)	47.9

Magnehelic Set-point: 43.5 = 44

FIELD MEASUREMENTS

Date	Time	Magn. Reading	Wind Speed	Barometric Pressure (in. Hg)	Temp (°F)	Notes (calc flow rate, etc.)
08/03	1022	INAVTMP	1	29.85	70	
08/03	1040	cal	1	29.86	68	
08/03	1048	44	3	29.85	69	
08/04	1035	44	8	29.87	68	

TOTAL VOLUME: 331 std. m^3

NOTES Sample ID Format: DD-Site-YYMMDDHHMM-Sample Type; Sample Type: -01=Primary, FB=Field Blank

DD-CNM1-1308041048-01

PAH Dry Deposition Field Data Log Sheet

Site ID FD12 (4964 Imperial Avenue) **Field Crew:** KG, DK

Deposition Event: (Dry 1) Dry 2 Dry 3 Dry 4 Dry 5

Type: (Weekday (W/Th)) Weekend (Sat/Sun) **Collection:** 3 /4 (per DD event)

Start Date: 8-7-13 **End Date:** 8-8-13

ATMOSPHERIC CONDITIONS

Sky (Start): Sunny Partly Cloudy (Overcast) Fog **Sky (End):** Sunny Partly Cloudy (Overcast) Fog

PUF SAMPLER

Sampler I.D. No.: FA00692

Certification Date/No.: PUF: P130724 XAD: X130426 Filter: F130523

Elapsed Timer	Black	White
Start:	49	47
Stop:	73	48
Diff.	24	1

Sample Time	
Start:	0830
Stop:	0830
Duration:	24 hrs

Calibrations

MULTI-POINT CALIBRATION TIME: 9:10 DATE: 07/31/2013			
Magn.	(+)	(-)	SUM
70	3.5	3.4	6.9
60	3.1	2.9	6
50	2.7	2.4	5.1
40	2.1	1.9	4
30	1.6	1.5	3.1

M= 30.9438
B= -0.4907
R^2= 0.9982

Audit flow check within ±10 of set point?			
Date	8/7/13	8/8/13	
Time	0819	~~0820~~ 0848	
Magn. Read.	39	~~42~~	38
△H	3.6	3.3	3.4 ~ 3.35
Yes/ No?	YES	NO	
Min (-10%)	37.5	Max (+10%)	46.2

Magnehelic Set-point: 41.7 ~42

3.35

FIELD MEASUREMENTS

Date	Time	Magn. Reading	Wind Speed	Barometric Pressure (in. Hg)	Temp (°F)	Notes (calc flow rate, etc.)
8-7-13	0830	42	0	30.04	65	
8-8-13	0820	42	1	29.97	67°	

TOTAL VOLUME: 327 **std. m³**

NOTES Sample ID Format: DD-Site-YYMMDDHHMM-Sample Type; Sample Type: -01=Primary, FB=Field Blank

PAH Dry Deposition Field Data Log Sheet

Site ID FD11 (945 25th St.) **Field Crew:** KG, DK

Deposition Event: (Dry 1) Dry 2 Dry 3 Dry 4 Dry 5

Type: Weekday (W/Th) Weekend (Sat/Sun) **Collection:** 3 /4 (per DD event)

Start Date: 8/7/13 **End Date:** 08/8/13

ATMOSPHERIC CONDITIONS

Sky (Start): Sunny (Partly Cloudy) Overcast Fog **Sky (End):** Sunny (Partly Cloudy) Overcast Fog

PUF SAMPLER

Sampler I.D. No.: FA00580

Certification Date/No.: PUF: 130724 XAD: X130426, Filter: F130523

Elapsed Timer	Black	White
Start:	122	63
Stop:	146	68
Diff.	24	5

Sample Time	
Start:	0918
Stop:	0922
Duration:	24 hr 4 min

Calibrations

MULTI-POINT CALIBRATION
TIME: 10:30 DATE: 07/31/2013

Magn.	(+)	(-)	SUM
70	3.2	3.1	6.3
60	2.9	2.8	5.7
50	2.5	2.4	4.9
40	2	2	4
30	1.5	1.4	2.9

M= 33.3411
B= -0.8598
R^2= 0.9948

Magnehelic Set-point: 44

Audit flow check within ±10 of set point?

Date	8/7/13	8/8/13	
Time	0911	0934	
Magn. Read.	40	41	
△H	3.6	3.6	
Yes/ No?	YES	YES	
Min (-10%)	39.6	Max (+10%)	48.4

+1.85
−1.75
3.60

FIELD MEASUREMENTS

Date	Time	Magn. Reading	Wind Speed	Barometric Pressure (in. Hg)	Temp (°F)	Notes (calc flow rate, etc.)
8/7/13	0918	44.5	3	30.06	68	
8/8/13	0921	46	4	29.99	68	

TOTAL VOLUME: 331 std. m^3

NOTES Sample ID Format: DD-Site-YYMMDDHHMM-Sample Type; Sample Type: -01=Primary, FB=Field Blank

PAH Dry Deposition Field Data Log Sheet

Site ID FD07 (944 Cesar E. Chavez Pkwy) **Field Crew:** KG, DK

Deposition Event: (Dry 1) Dry 2 Dry 3 Dry 4 Dry 5

Type: (Weekday (W/Th)) Weekend (Sat/Sun) **Collection:** 3 /4 (per DD event)

Start Date: 8/7/2013 **End Date:** 8/8/2013

ATMOSPHERIC CONDITIONS

Sky (Start): Sunny Partly Cloudy Overcast Fog **Sky (End)** (Sunny) Partly Cloudy Overcast Fog

PUF SAMPLER

Sampler I.D. No.: FA00691

Certification Date/No.: PUF: P130724 XAD: X130426 , Filter: F130523

Elapsed Timer	Black	White
Start:	49	25
Stop:	73	24
Diff.	24	1

Sample Time	
Start:	1000
Stop:	1001
Duration:	24hrs 1min

Calibrations

MULTI-POINT CALIBRATION TIME: 11:45 DATE: 07/31/2013			
Magn.	**(+)**	**(-)**	**SUM**
70	3.5	3.5	.7
60	3	3	6
50	2.6	2.5	5.1
40	2.1	2.1	4.2
30	1.6	1.6	3.2

M= 32.0916
B= -0.8226
R^2= 0.9998

Magnehelic Set-point: 40.8 = 41

Audit flow check within ±10 of set point?			
Date	8/7/13	08/8/13	08
Time	0955	1015	12:18
Magn. Read.	38	46	40
△H	3.7	4.6	4
Yes/ No?	Y	NO	YES
Min (-10%) 36.72		Max (+10%) 44.8	

41.3
41.6
41.6

FIELD MEASUREMENTS

Date	Time	Magn. Reading	Wind Speed	Barometric Pressure (in. Hg)	Temp (°F)	Notes (calc flow rate, etc.)
8/7/13	1000	41	4	30.04	69	
8/8/13	0958	43	5	29.96	70	

TOTAL VOLUME: 330.7 **std. m³**

NOTES Sample ID Format: DD-Site-YYMMDDHHMM-Sample Type; Sample Type: -01=Primary, FB=Field Blank

PAH Dry Deposition Field Data Log Sheet

Site ID CNM1 (Cabrillo) **Field Crew:** KG, DK

Deposition Event: (Dry 1) Dry 2 Dry 3 Dry 4 Dry 5

Type: (Weekday (W/Th)) Weekend (Sat/Sun) **Collection:** 3 /4 (per DD event)

Start Date: 8/7/13 **End Date:** 08/8/13

ATMOSPHERIC CONDITIONS

Sky (Start): (Sunny) Partly Cloudy Overcast Fog **Sky (End):** (Sunny) Partly Cloudy Overcast Fog

PUF SAMPLER

Sampler I.D. No.: FA00579

Certification Date/No.: PUF: P130724 XAD: X130426 Filter: F130523

Elapsed Timer	Black	White
Start:	123	16
Stop:	147	17
Diff.	24	1

Sample Time	
Start:	1106
Stop:	1108
Duration:	24 hrs 2 min

Calibrations

MULTI-POINT CALIBRATION TIME: 9:10 DATE: 07/31/2013			
Magn.	(+)	(-)	SUM
70	3.2	3.2	6.4
60	2.8	2.8	5.6
50	2.5	2.5	5
40	2	2	4
30	1.5	1.5	3

M= 34.1618
B= -1.092
R^2= 0.9961

Audit flow check within ±10 of set point?			
Date	8/7/13	08/8/13	
Time	1059	11:18	
Magn. Read.	40	41	
△H	3.7	3.65	
Yes/ No?			
Min (-10%) 39.6		Max (+10%) 48.4	

+1.85
-1.8
3.65

Magnehelic Set-point: 43.3 = 44

FIELD MEASUREMENTS

Date	Time	Magn. Reading	Wind Speed	Barometric Pressure (in. Hg)	Temp (°F)	Notes (calc flow rate, etc.)
8/7/13	1107	44	8	29.93	68	
8/7/13	1101	46.5	7	29.85	67	

TOTAL VOLUME: 332 std. m^3

NOTES Sample ID Format: DD-Site-YYMMDDHHMM-Sample Type; Sample Type: -01=Primary, FB=Field Blank

PAH Dry Deposition Field Data Log Sheet

Site ID FD11 (945 25th St.) **Field Crew:** EM / DK

Deposition Event: (Dry 1) Dry 2 Dry 3 Dry 4 Dry 5

Type: Weekday (W/Th) Weekend (Sat/Sun) **Collection:** 4 /4 (per DD event)

Start Date: 8/10/13 **End Date:** 8/11/13

ATMOSPHERIC CONDITIONS

Sky (Start): Sunny Partly Cloudy (Overcast) Fog **Sky (End):** Sunny Partly Cloudy (Overcast) Fog

PUF SAMPLER

Sampler I.D. No.: FA00580

Certification Date/No.: PUF: P130726 XAD: X130426, Filter:

Elapsed Timer	Black	White
Start:	146	98
Stop:	170	98
Diff.	24	00

Sample Time	
Start:	0840
Stop:	0840
Duration:	24 hr

Calibrations

MULTI-POINT CALIBRATION TIME: 10:30 DATE: 07/31/2013			
Magn.	(+)	(-)	SUM
70	3.2	3.1	6.3
60	2.9	2.8	5.7
50	2.5	2.4	4.9
40	2	2	4
30	1.5	1.4	2.9

M= 33.3411
B= -0.8598
R^2= 0.9948

Audit flow check within ±10 of set point?			
Date	08/10/13	8/11/13	
Time	0830	0845	
Magn. Read.	42	40.5	
△H	3.7	3.7	
Yes/ No?	YES	YES	
Min (-10%) 40.5		Max (+10%) 49.5	

1.8
1.9
3.7

Magnehelic Set-point: 45

FIELD MEASUREMENTS

Date	Time	Magn. Reading	Wind Speed	Barometric Pressure (in. Hg)	Temp (°F)	Notes (calc flow rate, etc.)
8/10/13	0840	45	2	30.03	63°	
8/11/13	0840	46	3	29.98	64	

TOTAL VOLUME: 332 std. m^3

NOTES Sample ID Format: DD-Site-YYMMDDHHMM-Sample Type; Sample Type: -01=Primary, FB=Field Blank

DD-FD11-1308110840-01

PAH Dry Deposition Field Data Log Sheet

Site ID FD12 (4964 Imperial Avenue) **Field Crew:** EM / DK

Deposition Event: (Dry 1) Dry 2 Dry 3 Dry 4 Dry 5

Type: Weekday (W/Th) Weekend (Sat/Sun) **Collection:** 4 /4 (per DD event)

Start Date: 8/10/13 **End Date:** 8/11/13

ATMOSPHERIC CONDITIONS

Sky (Start): Sunny Partly Cloudy (Overcast) Fog **Sky (End):** Sunny Partly Cloudy (Overcast) Fog

PUF SAMPLER

Sampler I.D. No.: FA00692

Certification Date/No.: PUF: P130726 XAD: X130426 Filter: _____

Elapsed Timer	Black	White
Start:	73	91
Stop:	98	00
Diff.	24	09

Sample Time	
Start:	0744
Stop:	0744
Duration:	24 hr

Calibrations

MULTI-POINT CALIBRATION TIME: 9:10 DATE: 07/31/2013

Magn.	(+)	(-)	SUM
70	3.5	3.4	6.9
60	3.1	2.9	6
50	2.7	2.4	5.1
40	2.1	1.9	4
30	1.6	1.5	3.1

M= 30.9438
B= -0.4907
R^2= 0.9982

Audit flow check within ±10 of set point?

Date	8/10/13	8/11/13	
Time	0936	0759	
Magn. Read.	39.5	40	
△H	3.6	3.3	
Yes/ No?	YES	YES	
Min (-10%) 38.7		Max (+10%) 47.3	

1.8
1.8
3.6

Magnehelic Set-point: 43

FIELD MEASUREMENTS

Date	Time	Magn. Reading	Wind Speed	Barometric Pressure (in. Hg)	Temp (°F)	Notes (calc flow rate, etc.)
08/10	7:44	44	2	30.01	62	
8/11	7:44	40	1	29.96	62	

TOTAL VOLUME: 328 std. m^3

NOTES Sample ID Format: DD-Site-YYMMDDHHMM-Sample Type; Sample Type: -01=Primary, FB=Field Blank

DD- FD12-1308110744-01

Field Blank Taken

PAH Dry Deposition Field Data Log Sheet

Site ID FD07 (944 Cesar E. Chavez Pkwy) **Field Crew:** EM, DK

Deposition Event: (Dry 1) Dry 2 Dry 3 Dry 4 Dry 5

Type: Weekday (W/Th) Weekend (Sat/Sun) **Collection:** 4 /4 (per DD event)

Start Date: 08/10/13 **End Date:** 08/12/13

ATMOSPHERIC CONDITIONS

Sky (Start): Sunny Partly Cloudy Overcast Fog **Sky (End):** Sunny Partly Cloudy Overcast Fog

PUF SAMPLER

Sampler I.D. No.: FA00691

Certification Date/No.: PUF: P130726 XAD: X130426 , Filter:

Elapsed Timer	Black	White	Sample Time	
Start:	73	~~56~~ 83est*	Start:	09:34 / 0930
Stop:	97	85	Stop:	09:36
Diff.			Duration:	

Calibrations

MULTI-POINT CALIBRATION TIME: 11:45 DATE: 07/31/2013

Magn.	(+)	(-)	SUM
70	3.5	3.5	7
60	3	3	6
50	2.6	2.5	5.1
40	2.1	2.1	4.2
30	1.6	1.6	3.2

M= 32.0916
B= -0.8226
R^2= 0.9998

Magnehelic Set-point: 42

Audit flow check within ±10 of set point?

Date	08/10	08/12	
Time	0922	0942	
Magn. Read.	40	38	
△H	3.8	3.7	
Yes/ No?	YES	YES	
Min (-10%) 37.8		Max (+10%) 46.2	

1.7 1.8
2.1 1.9
3.8 3.7

FIELD MEASUREMENTS

Date	Time	Magn. Reading	Wind Speed	Barometric Pressure (in. Hg)	Temp (°F)	Notes (calc flow rate, etc.)
08/10	0934	45	2	30.00	64	
08/12	0936	45	1	29.93	68	

TOTAL VOLUME: _____ std. m^3

NOTES Sample ID Format: DD-Site-YYMMDDHHMM-Sample Type; Sample Type: -01=Primary, FB=Field Blank

Sample started @ 8/10/13, was stopped at 9:40. power cord was unplugged by staff at firestation.
New sample collection started at 09:30, 08/11/2013 and ran through 8/12/2013 @ 0930

DD-FD07-1308120930-01
DD-FD07-130812-0945-FB

PAH Dry Deposition Field Data Log Sheet

Site ID CNM1 (Cabrillo) **Field Crew:** EM, DK

Deposition Event: (Dry 1) Dry 2 Dry 3 Dry 4 Dry 5

Type: Weekday (W/Th) Weekend (Sat/Sun) **Collection:** 4 /4 (per DD event)

Start Date: 08/10/13 **End Date:** 08/11/13

ATMOSPHERIC CONDITIONS

Sky (Start): (Sunny) Partly Cloudy Overcast Fog **Sky (End):** (Sunny) Partly Cloudy Overcast Fog

PUF SAMPLER

Sampler I.D. No.: FA00579

Certification Date/No.: PUF: P130726 XAD: X130426 Filter: _____

Elapsed Timer	Black	White
Start:	147	45/46
Stop:	171	45
Diff.	24	00

Sample Time	
Start:	10:46
Stop:	10:46
Duration:	24 hrs

Calibrations

MULTI-POINT CALIBRATION TIME: 9:10 DATE: 07/31/2013			
Magn.	(+)	(-)	SUM
70	3.2	3.2	6.4
60	2.8	2.8	5.6
50	2.5	2.5	5
40	2	2	4
30	1.5	1.5	3
M=	34.1618		
B=	-1.092		
R^2=	0.9961		

Audit flow check within ±10 of set point?			
Date	08/10	8/11/13	
Time	1035	1055	
Magn. Read.	41	40	
△H	3.6	3.6	
Yes/ No?	YES	YES	
Min (-10%) 39.6		Max (+10%) 48.4	

1.8
1.8

Magnehelic Set-point: 44

FIELD MEASUREMENTS

Date	Time	Magn. Reading	Wind Speed	Barometric Pressure (in. Hg)	Temp (°F)	Notes (calc flow rate, etc.)
08/10/13	1046	45	0	29.89	66	
08/11/13	1046	45	6	29.84	67	

TOTAL VOLUME: 332 **std. m^3**

NOTES Sample ID Format: DD-Site-YYMMDDHHMM-Sample Type; Sample Type: -01=Primary, FB=Field Blank

DD-CNM1-1308111046-01

PAH Dry Deposition Field Data Log Sheet

Site ID FD12 (4964 Imperial Avenue) **Field Crew:** KG, BS, EM

Deposition Event: ~~Dry 1 BS~~ Dry 2 Dry 3 Dry 4 Dry 5

Type: Weekday (W/Th) Weekend (Sat/Sun) **Collection:** 1 /4 (per DD event)

Start Date: 09/04/2013 **End Date:** 09/05/2013

ATMOSPHERIC CONDITIONS

Sky (Start): Sunny Partly Cloudy Overcast Fog **Sky (End):** Sunny Partly Cloudy Overcast Fog

PUF SAMPLER

Sampler I.D. No.: FA00692

Certification Date/No.: PUF: P130801 XAD: X130426 Filter: F130523

Elapsed Timer	Black	White
Start:	98	~~515~~
Stop:	122	52
Diff.	24	hr

Sample Time	
Start:	9/4/2013 08:33
Stop:	9/5/2013 0833
Duration:	24 hr

Calibrations

MULTI-POINT CALIBRATION TIME: 9:10 DATE: 07/31/2013

Magn.	(+)	(-)	SUM
70	~~3.5~~	~~3.4~~	~~6.9~~
60	~~3.1~~	~~2.9~~	~~6~~
50	~~2.7~~	~~2.4~~	~~5.1~~
40	~~2.1~~	~~1.9~~	~~4~~
30	~~1.6~~	~~1.5~~	~~3.1~~
M=	30.9438		
B=	-0.4907		
R^2=	0.9982		

Audit flow check within ±10 of set point?

Date	9/4	~~9/9~~	9/5
Time	0810	~~0833~~	0840
Magn. Read.	37	~~41~~	~~42~~
△H	3.4	~~3.9~~	3.8
Yes/ No?	Y	~~Y~~ BS	Y
Min (-10%)	~~35.7~~ 36	Max (+10%)	~~47.3~~ 45

warm up 0750

Magnehelic Set-point: ~~43~~ 42 BS

FIELD MEASUREMENTS

Date	Time	Magn. Reading	Wind Speed	Barometric Pressure (in. Hg)	Temp (°F)	Notes (calc flow rate, etc.)
9/4	0833	~~42~~	1	29.86	79	
9/5	0833	44	1	29.84	80	

TOTAL VOLUME: 324 std. m^3

NOTES Sample ID Format: DD-Site-YYMMDDHHMM-Sample Type; Sample Type: -01=Primary, FB=Field Blank

Forecast 77.1 °F

Avg Temp 81.3211 Avg Pressure 29.8261

PAH Dry Deposition Field Data Log Sheet

Site ID FD11 (945 25th St.) **Field Crew:** KG, BS, EM

Deposition Event: ~~Dry 1~~ BS Dry 2 Dry 3 Dry 4 Dry 5

Type: Weekday (W/Th) Weekend (Sat/Sun) **Collection:** 1 /4 (per DD event)

Start Date: 09/04/2013 **End Date:** 09/05/2013

ATMOSPHERIC CONDITIONS

Sky (Start): Sunny Partly Cloudy Overcast Fog **Sky (End):** Sunny Partly Cloudy Overcast Fog

PUF SAMPLER

Sampler I.D. No.: FA00580

Certification Date/No.: PUF: P130801 XAD: X130426 Filter: F130523

Elapsed Timer	Black	White
Start:	171	31
Stop:	195	31
Diff.	24	hr

Sample Time	
Start:	9/4/2013 09:32
Stop:	09/05/2013 0932
Duration:	24 hr

Calibrations

MULTI-POINT CALIBRATION TIME: 10:30 DATE: 07/31/2013			
Magn.	(+)	(-)	SUM
70	3.2	3.1	6.3
60	2.9	2.8	5.7
50	2.5	2.4	4.9
40	2	2	4
30	1.5	1.4	2.9
M=	33.3411		
B=	-0.8598		
R^2=	0.9948		

Audit flow check within ±10 of set point?

Date	9/4	~~9/5~~	9/5
Time	0926	~~0839~~	0940
Magn. Read.	45	~~42~~	40.5 → 41
△H	3.6	~~3.4~~	3.7
Yes/ No?	Y	~~Y~~	Y
Min (-10%) ~~40.5~~ 39 BS		Max (+10%) ~~48.5~~ BS	48

Magnehelic Set-point: ~~45~~ BS 44

FIELD MEASUREMENTS

Date	Time	Magn. Reading	Wind Speed	Barometric Pressure (in. Hg)	Temp (°F)	Notes (calc flow rate, etc.)
9/4	0932	44	2	29.88	82	
9/5	0916	43	2	29.84	81	

TOTAL VOLUME: 324 std. m^3

NOTES Sample ID Format: DD-Site-YYMMDDHHMM-Sample Type; Sample Type: -01=Primary, FB=Field Blank

Forecast 77

PAH Dry Deposition Field Data Log Sheet

Site ID FD07 (944 Cesar E. Chavez Pkwy) **Field Crew:** KG, BS, EM

Deposition Event: ~~Dry 1~~ (BS) Dry 2 Dry 3 Dry 4 Dry 5

Type: Weekday (W/Th) Weekend (Sat/Sun) **Collection:** 1 /4 (per DD event)

Start Date: 09/04/2013 **End Date:** 09/05/2013

ATMOSPHERIC CONDITIONS

Sky (Start): Sunny Partly Cloudy Overcast Fog **Sky (End):** Sunny Partly Cloudy Overcast Fog

PUF SAMPLER

Sampler I.D. No.: FA00691

Certification Date/No.: PUF: P130801 XAD: X130426 Filter: P130523

Elapsed Timer	Black	White
Start:	98	08
Stop:	122	08
Diff.	24	hr

Sample Time	
Start:	09/04/2013 1017
Stop:	09/05/13 1017
Duration:	24 hr

Calibrations

MULTI-POINT CALIBRATION TIME: 11:45 DATE: 07/31/2013			
Magn.	(+)	(-)	SUM
70	3.5	3.5	7
60	3	3	6
50	2.6	2.5	5.1
40	2.1	2.1	4.2
30	1.6	1.6	3.2
M=	32.0916		
B=	-0.8226		
R^2=	0.9998		

Audit flow check within ±10 of set point?			
Date	9/4	9/5	
Time	1015	10:25	
Magn. Read.	38	30	
△H	3.5	3.4	
Yes/ No?	Y	Y	
Min (-10%) ~~33~~ 36 (BS)		Max (+10%) ~~44~~ 45 (BS)	

Magnehelic Set-point: ~~42~~ (BS) 41

FIELD MEASUREMENTS

Date	Time	Magn. Reading	Wind Speed	Barometric Pressure (in. Hg)	Temp (°F)	Notes (calc flow rate, etc.)
9/4/13	1017	40.5	~~3~~ (BS) 4	29.85	83	
09/05	10:24	41.5	4	29.83	83	

TOTAL VOLUME: 322.5 std. m^3

NOTES Sample ID Format: DD-Site-YYMMDDHHMM-Sample Type; Sample Type: -01=Primary, FB=Field Blank

PAH Dry Deposition Field Data Log Sheet

Site ID CNM1 (Cabrillo) **Field Crew:** KG, BS, EM

Deposition Event: ~~Dry 1~~ BS Dry 2 Dry 3 Dry 4 Dry 5

Type: Weekday (W/Th) Weekend (Sat/Sun) **Collection:** 1 /4 (per DD event)

Start Date: 9/4/2013 **End Date:** 09/05/2013

ATMOSPHERIC CONDITIONS

Sky (Start): Sunny Partly Cloudy Overcast Fog **Sky (End):** Sunny Partly Cloudy Overcast Fog

PUF SAMPLER

Sampler I.D. No.: FA00579

Certification Date/No.: PUF: 8130801 XAD: X130426 Filter: F130523

Elapsed Timer	Black	White
Start:	171	64
Stop:	195	64
Diff.	24	hr

Sample Time		
Start:	09/04/2013	1117
Stop:	9/5/2013	1117
Duration:	24 hr	

Calibrations

MULTI-POINT CALIBRATION TIME: 9:10 DATE: 07/31/2013			
Magn.	(+)	(-)	SUM
70	3.2	3.2	6.4
60	2.8	2.8	5.6
50	2.5	2.5	5
40	2	2	4
30	1.5	1.5	3
M=	34.1618		
B=	-1.092		
R^2=	0.9961		

Magnehelic Set-point: ~~44~~ BS 44

Audit flow check within ±10 of set point?			
Date	09/04	9/5	
Time	1114	11:25	
Magn. Read.	41	40.5	
△H	3.5	3.6	
Yes/ No?	Y	Y	
Min (-10%)	~~39~~ 38 BS	Max (+10%)	~~48.4~~ 48 BS

FIELD MEASUREMENTS

Date	Time	Magn. Reading	Wind Speed	Barometric Pressure (in. Hg)	Temp (°F)	Notes (calc flow rate, etc.)
9/4	1114	44	15	29.74	82	
9/5	1110	45	18 BS	29.73	73	

TOTAL VOLUME: 326 std. m^3

NOTES Sample ID Format: DD-Site-YYMMDDHHMM-Sample Type; Sample Type: -01=Primary, FB=Field Blank

Avg Temp 78.12443

Avg Pressure 29.80655

PAH Dry Deposition Field Data Log Sheet

Site ID FD12 (4964 Imperial Avenue) **Field Crew:** KG, DK

Deposition Event: ~~Dry 1~~ Dry 2 Dry 3 Dry 4 Dry 5

Type: Weekday (W/Th) Weekend (Sat/Sun) **Collection:** 2 /4 (per DD event)

Start Date: 9-7-13 **End Date:** 9-8-13

ATMOSPHERIC CONDITIONS

Sky (Start): Sunny Partly Cloudy Overcast Fog **Sky (End):** Sunny Partly Cloudy Overcast Fog

PUF SAMPLER

Sampler I.D. No.: FA00692

Certification Date/No.: PUF: 130801 XAD: X130426 Filter: F130523

Elapsed Timer	Black	White
Start:	122	72
Stop:	146	72
Diff.	24	

Sample Time	
Start:	0805
Stop:	0805
Duration:	

Calibrations

MULTI-POINT CALIBRATION TIME: 9:10 DATE: 07/31/2013			
Magn.	(+)	(-)	SUM
70	3.5	3.4	6.9
60	3.1	2.9	6
50	2.7	2.4	5.1
40	2.1	1.9	4
30	1.6	1.5	3.1

M= 30.9438
B= -0.4907
R^2= 0.9982

Audit flow check within ±10 of set point?			
Date	9-7	9-8	
Time	0800	0808	
Magn. Read.	41	40	
△H	3.7	3.4	
Yes/ No?	✓	✓	
Min (-10%) 37		Max (+10%) 46	

Magnehelic Set-point: 42

FIELD MEASUREMENTS

Date	Time	Magn. Reading	Wind Speed	Barometric Pressure (in. Hg)	Temp (°F)	Notes (calc flow rate, etc.)
9-7-13	0805	42	1	29.81	79	
9-8-13	0805	42	1	29.82	72	

TOTAL VOLUME: 327 **std. m^3**

NOTES Sample ID Format: DD-Site-YYMMDDHHMM-Sample Type; Sample Type: -01=Primary, FB=Field Blank

Forecast Average = 24.86 °C

PAH Dry Deposition Field Data Log Sheet

Site ID FD11 (945 25th St.) **Field Crew:** KG, DK

Deposition Event: ~~Dry 1~~ as Dry 2 Dry 3 Dry 4 Dry 5

Type: Weekday (W/Th) Weekend (Sat/Sun) **Collection:** 2 /4 (per DD event)

Start Date: 9-7-13 **End Date:** 9-8-13

ATMOSPHERIC CONDITIONS

Sky (Start): (Sunny) Partly Cloudy Overcast Fog **Sky (End):** (Sunny) Partly Cloudy Overcast Fog

PUF SAMPLER

Sampler I.D. No.: FA00580

Certification Date/No.: PUF: P130801 XAD: X130426 , Filter: F130523

Elapsed Timer	Black	White
Start:	195	41
Stop:	219	41
Diff.	24	

Sample Time	
Start:	0849
Stop:	0849
Duration:	

Calibrations

MULTI-POINT CALIBRATION
TIME: 10:30 DATE: 07/31/2013

Magn.	(+)	(-)	SUM
70	3.2	3.1	6.3
60	2.9	2.8	5.7
50	2.5	2.4	4.9
40	2	2	4
30	1.5	1.4	2.9

M= 33.3411
B= -0.8598
R^2= 0.9948

Audit flow check within ±10 of set point?

Date	9.7.13	9.8.13	
Time	0843	0853	
Magn. Read.	42	42	
△H	3.6	3.6	
Yes/ No?	✓	✓	

Min (-10%) 39 Max (+10%) 48

Magnehelic Set-point: 44

FIELD MEASUREMENTS

Date	Time	Magn. Reading	Wind Speed	Barometric Pressure (in. Hg)	Temp (°F)	Notes (calc flow rate, etc.)
9-7-13	0849	44	0	29.84	81	
9-8-13	0849	44	0	29.83	74	

TOTAL VOLUME: 326 std. m^3

NOTES Sample ID Format: DD-Site-YYMMDDHHMM-Sample Type; Sample Type: -01=Primary, FB=Field Blank

PAH Dry Deposition Field Data Log Sheet

Site ID FD07 (944 Cesar E. Chavez Pkwy) **Field Crew:** KG, DK

Deposition Event: ~~Dry 1~~ BS Dry 2 Dry 3 Dry 4 Dry 5

Type: Weekday (W/Th) Weekend (Sat/Sun) **Collection:** 2 /4 (per DD event)

Start Date: 9.7.13 **End Date:** 9.8.13

ATMOSPHERIC CONDITIONS

Sky (Start): Sunny Partly Cloudy Overcast Fog **Sky (End):** Sunny Partly Cloudy Overcast Fog

PUF SAMPLER

Sampler I.D. No.: FA00691

Certification Date/No.: PUF: P130801 XAD: X130426 Filter: F130523

Elapsed Timer	Black	White
Start:	122	25
Stop:	146	25
Diff.	24	

Sample Time	
Start:	0929
Stop:	0929
Duration:	

Calibrations

MULTI-POINT CALIBRATION TIME: 11:45 DATE: 07/31/2013			
Magn.	(+)	(-)	SUM
70	3.5	3.5	7
60	3	3	6
50	2.6	2.5	5.1
40	2.1	2.1	4.2
30	1.6	1.6	3.2
M=	32.0916		
B=	-0.8226		
R^2=	0.9998		

Magnehelic Set-point: 41

Audit flow check within ±10 of set point?			
Date	9.7	9.8	
Time	0923	0932	
Magn. Read.	38	38	
△H	3.7	3.7	
Yes/ No?	✓	✓	
Min (-10%) 36.4		Max (+10%) 45	

FIELD MEASUREMENTS

Date	Time	Magn. Reading	Wind Speed	Barometric Pressure (in. Hg)	Temp (°F)	Notes (calc flow rate, etc.)
9.7.13	0929	41	0	29.81	82	
9.8.13	0929	41	2	29.8	76	

TOTAL VOLUME: 323.9 std. m^3

NOTES Sample ID Format: DD-Site-YYMMDDHHMM-Sample Type; Sample Type: -01=Primary, FB=Field Blank

PAH Dry Deposition Field Data Log Sheet

Site ID CNM1 (Cabrillo) **Field Crew:** KG

Deposition Event: ~~Dry 1~~ BS Dry 2 Dry 3 Dry 4 Dry 5

Type: Weekday (W/Th) Weekend (Sat/Sun) **Collection:** 2 /4 (per DD event)

Start Date: 9.7.13 **End Date:** 9.8.13

ATMOSPHERIC CONDITIONS

Sky (Start): (Sunny) Partly Cloudy Overcast Fog **Sky (End):** (Sunny) Partly Cloudy Overcast Fog

PUF SAMPLER

Sampler I.D. No.: FA00579

Certification Date/No.: PUF: P130801 XAD: X130426 Filter: F130523

Elapsed Timer	Black	White
Start:	195	81
Stop:	219	81
Diff.		

Sample Time	
Start:	1031
Stop:	1031
Duration:	

Calibrations

MULTI-POINT CALIBRATION
TIME: 9:10 DATE: 07/31/2013

Magn.	(+)	(-)	SUM
70	3.2	3.2	6.4
60	2.8	2.8	5.6
50	2.5	2.5	5
40	2	2	4
30	1.5	1.5	3

M= 34.1618
B= -1.092
R^2= 0.9961

Audit flow check within ±10 of set point?

Date	9.7.13	9.7.13	
Time	1024	1035	
Magn. Read.	40	41	
△H	3.5	3.6	
Yes/ No?	✓	✓	
Min (-10%)	38	Max (+10%)	48

Magnehelic Set-point: 43

FIELD MEASUREMENTS

Date	Time	Magn. Reading	Wind Speed	Barometric Pressure (in. Hg)	Temp (°F)	Notes (calc flow rate, etc.)
9.7.13	1031	43	6	29.72	76	
9.8.13	1031	43	15	29.70	71	

TOTAL VOLUME: 323 std. m^3

NOTES Sample ID Format: DD-Site-YYMMDDHHMM-Sample Type; Sample Type: -01=Primary, FB=Field Blank

PAH Dry Deposition Field Data Log Sheet

Site ID FD12 (4964 Imperial Avenue) **Field Crew:** KG, DK

Deposition Event: ~~Dry 1~~ Dry 2 Dry 3 Dry 4 Dry 5

Type: ~~Weekday~~ (W/Th) Weekend (Sat/Sun) **Collection:** 3 /4 (per DD event)

Start Date: 9-11-13 **End Date:** 9.12.13

ATMOSPHERIC CONDITIONS

Sky (Start): Sunny Partly Cloudy Overcast Fog **Sky (End):** Sunny Partly Cloudy Overcast Fog

PUF SAMPLER

Sampler I.D. No.: FA00692

Certification Date/No.: PUF: P130815 XAD: X130426 Filter: F130523

Elapsed Timer	Black	White
Start:	146	91
Stop:	170	98
Diff.		

Sample Time	
Start:	0907
Stop:	0910
Duration:	

Calibrations

MULTI-POINT CALIBRATION TIME: 9:10 DATE: 07/31/2013			
Magn.	(+)	(-)	SUM
70	3.5	3.4	6.9
60	3.1	2.9	6
50	2.7	2.4	5.1
40	2.1	1.9	4
30	1.6	1.5	3.1

M= 30.9438
B= -0.4907
R^2= 0.9982

Audit flow check within ±10 of set point?			
Date	9.11.13	9.12	
Time	0901	0915	
Magn. Read.	40	41	
△H	3.7	3.7	
Yes/ No?	Y	Y	
Min (-10%)	37.7	Max (+10%)	46.6

Magnehelic Set-point: 42.4

FIELD MEASUREMENTS

Date	Time	Magn. Reading	Wind Speed	Barometric Pressure (in. Hg)	Temp (°F)	Notes (calc flow rate, etc.)
9.11.13	0907	42.5	3	29.97	69	
9.12.13	0914	42.5	1	29.90	69	

TOTAL VOLUME: 327 std. m^3

NOTES Sample ID Format: DD-Site-YYMMDDHHMM-Sample Type; Sample Type: -01=Primary, FB=Field Blank

Average forecast temp 21.1 °C

PAH Dry Deposition Field Data Log Sheet

Site ID FD11 (945 25th St.) **Field Crew:** KG, DK

Deposition Event: Dry 1 (RS) Dry 2 Dry 3 Dry 4 Dry 5

Type: Weekday (W/Th) Weekend (Sat/Sun) **Collection:** 3 /4 (per DD event)

Start Date: 9.11.13 **End Date:** 9.12.13

ATMOSPHERIC CONDITIONS

Sky (Start): Sunny Partly Cloudy Overcast Fog **Sky (End):** Sunny Partly Cloudy Overcast Fog

PUF SAMPLER

Sampler I.D. No.: FA00580

Certification Date/No.: PUF: P130815 XAD: X130426 , Filter: F130523

Elapsed Timer	Black	White
Start:	219	62
Stop:	243	62
Diff.		

Sample Time	
Start:	0945
Stop:	0945
Duration:	24

Calibrations

MULTI-POINT CALIBRATION TIME: 10:30 DATE: 07/31/2013			
Magn.	(+)	(-)	SUM
70	3.2	3.1	6.3
60	2.9	2.8	5.7
50	2.5	2.4	4.9
40	2	2	4
30	1.5	1.4	2.9

M= 33.3411
B= -0.8598
R^2= 0.9948

Audit flow check within ±10 of set point?			
Date	9.11.13	9.12.13	
Time	0941	0950	
Magn. Read.	41	40	
△H	3.6	3.4	
Yes/ No?	Y	Y	
Min (-10%) 39.8		Max (+10%) 49.1	

Magnehelic Set-point: 44.7

FIELD MEASUREMENTS

Date	Time	Magn. Reading	Wind Speed	Barometric Pressure (in. Hg)	Temp (°F)	Notes (calc flow rate, etc.)
9.11.13	0945	45	0	29.98	69	
9.12.13	0942	44	3	29.91	71	

TOTAL VOLUME: 328 std. m^3

NOTES Sample ID Format: DD-Site-YYMMDDHHMM-Sample Type; Sample Type: -01=Primary, FB=Field Blank

Average forecast temp = 21.1 °C

PAH Dry Deposition Field Data Log Sheet

Site ID FD07 (944 Cesar E. Chavez Pkwy) **Field Crew:** KG, DK

Deposition Event: ~~Dry 1~~ Dry 2 Dry 3 Dry 4 Dry 5

Type: Weekday (W/Th) Weekend (Sat/Sun) **Collection:** 3 /4 (per DD event)

Start Date: 9·11·13 **End Date:** 9·12·13

ATMOSPHERIC CONDITIONS

Sky (Start): Sunny Partly Cloudy Overcast Fog **Sky (End):** Sunny Partly Cloudy Overcast Fog

PUF SAMPLER

Sampler I.D. No.: FA00691

Certification Date/No.: PUF: P130815 XAD: X130426 , Filter: F130523

Elapsed Timer	Black	White
Start:	146	43
Stop:	170	43
Diff.		

Sample Time	
Start:	1018
Stop:	1018
Duration:	

Calibrations

MULTI-POINT CALIBRATION
TIME: 11:45 DATE: 07/31/2013

Magn.	(+)	(-)	SUM
70	3.5	3.5	7
60	3	3	6
50	2.6	2.5	5.1
40	2.1	2.1	4.2
30	1.6	1.6	3.2

M= 32.0916
B= -0.8226
R^2= 0.9998

Audit flow check within ±10 of set point?

Date	9.11.13	9.12.13	
Time	1013	1022	
Magn. Read.	38	38	
△H	3.7	3.8	
Yes/ No?	Y	Y	
Min (-10%)	36.9	Max (+10%)	45.6

Magnehelic Set-point: 41.5

FIELD MEASUREMENTS

Date	Time	Magn. Reading	Wind Speed	Barometric Pressure (in. Hg)	Temp (°F)	Notes (calc flow rate, etc.)
9.11.13	1018	42	4	29.95	71	
9.12.13	1014	42	4	29.88	72	

TOTAL VOLUME: 326 std. m^3

NOTES Sample ID Format: DD-Site-YYMMDDHHMM-Sample Type; Sample Type: -01=Primary, FB=Field Blank

Average forecast temp = 21.1°C

PAH Dry Deposition Field Data Log Sheet

Site ID CNM1 (Cabrillo) **Field Crew:** KG, DK

Deposition Event: (Dry 1 RS) (Dry 2) Dry 3 Dry 4 Dry 5

Type: (Weekday (W/Th)) Weekend (Sat/Sun) **Collection:** 3 /4 (per DD event)

Start Date: 9.11.13 **End Date:** 9.12.13

ATMOSPHERIC CONDITIONS

Sky (Start): Sunny (Partly Cloudy) Overcast Fog **Sky (End):** (Sunny) Partly Cloudy Overcast Fog

PUF SAMPLER

Sampler I.D. No.: FA00579

Certification Date/No.: PUF: P130815 XAD: X130426 Filter: F130523

Elapsed Timer	Black	White
Start:	220	00
Stop:	244	60
Diff.		

Sample Time	
Start:	1117
Stop:	1117
Duration:	

Calibrations

MULTI-POINT CALIBRATION TIME: 9:10 DATE: 07/31/2013			
Magn.	(+)	(-)	SUM
70	3.2	3.2	6.4
60	2.8	2.8	5.6
50	2.5	2.5	5
40	2	2	4
30	1.5	1.5	3
M=	34.1618		
B=	-1.092		
R^2=	0.9961		

Audit flow check within ±10 of set point?			
Date	9.11.13	9.12.13	
Time	1112	1125	
Magn. Read.	41	39.5	
△H	3.7	3.3	
Yes/ No?	Y	Y	
Min (-10%) 39.2		Max (+10%) 48.4	

Magnehelic Set-point: 44

FIELD MEASUREMENTS

Date	Time	Magn. Reading	Wind Speed	Barometric Pressure (in. Hg)	Temp (°F)	Notes (calc flow rate, etc.)
9.11.13	1117	44	11	29.85	70	
9.12.13	1101	44	18	29.76	67	

TOTAL VOLUME: 328 std. m^3

NOTES Sample ID Format: DD-Site-YYMMDDHHMM-Sample Type; Sample Type: -01=Primary, FB=Field Blank

Average forecast temp = 21.1°C

PAH Dry Deposition Field Data Log Sheet

Site ID FD12 (4964 Imperial Avenue) **Field Crew:** EM, BS

Deposition Event: ~~Dry 1~~ ~~Dry 2~~ ~~Dry 3~~ ~~Dry 4~~ ~~Dry 5~~ Dry 6

Type: Weekday (W/Th) Weekend (Sat/Sun) **Collection:** 4 /4 (per DD event)

Start Date: 09/14/2013 **End Date:** 09/15/2013

Event Dry 2 Collection 4

ATMOSPHERIC CONDITIONS

Sky (Start): Sunny Partly Cloudy Overcast Fog **Sky (End):** Sunny Partly Cloudy Overcast Fog

PUF SAMPLER

Sampler I.D. No.: FA00692

Certification Date/No.: PUF: 130815 XAD: X130426 Filter: F130523

Elapsed Timer	Black	White
Start:	171	20
Stop:	195	20
Diff.	24 hr	

Sample Time	
Start:	0823
Stop:	0823
Duration:	24 Hrs

Calibrations

MULTI-POINT CALIBRATION TIME: 9:10 DATE: 07/31/2013			
Magn.	(+)	(-)	SUM
70	3.5	3.4	6.9
60	3.1	2.9	6
50	2.7	2.4	5.1
40	2.1	1.9	4
30	1.6	1.5	3.1

M= 30.9438
B= -0.4907
R^2= 0.9982

Audit flow check within ±10 of set point?			
Date	9/14	9/15	
Time	0810	0830	
Magn. Read.	39→40	40	
△H	3.5	3.6	
Yes/ No?	Y	Y	
Min (-10%) 38		Max (+10%)	

Magnehelic Set-point: 42

FIELD MEASUREMENTS

Date	Time	Magn. Reading	Wind Speed	Barometric Pressure (in. Hg)	Temp (°F)	Notes (calc flow rate, etc.)
9/14	0823	42	2	29.09	67	
9/15	0821	42	0	29.71	69	

TOTAL VOLUME: 325 std. m^3

NOTES Sample ID Format: DD-Site-YYMMDDHHMM-Sample Type; Sample Type: -01=Primary, FB=Field Blank

Avg temp 21.83 °C Avg press inHg 29.67

PAH Dry Deposition Field Data Log Sheet

Site ID FD11 (945 25th St.) **Field Crew:** EM, BS

Deposition Event: ~~Dry 1~~ ~~Dry 2~~ ~~Dry 3~~ ~~Dry 4~~ ~~Dry 5~~ Dry 2 collection 4

Type: Weekday (W/Th) ~~Weekend (Sat/Sun)~~ **Collection:** 4 /4 (per DD event)

Start Date: 9/14/13 **End Date:** 09/15/2013

ATMOSPHERIC CONDITIONS

Sky (Start): Sunny Partly Cloudy Overcast Fog **Sky (End):** Sunny Partly Cloudy Overcast Fog

PUF SAMPLER

Sampler I.D. No.: FA00580

Certification Date/No.: PUF: P130815 XAD: X130426 Filter: F130523

Elapsed Timer	Black	White
Start:	243	80.5
Stop:	267	80.5
Diff.	24 hr	

Sample Time	
Start:	0901
Stop:	0901
Duration:	24 hrs

Calibrations

MULTI-POINT CALIBRATION TIME: 10:30 DATE: 07/31/2013			
Magn.	(+)	(-)	SUM
70	3.2	3.1	6.3
60	2.9	2.8	5.7
50	2.5	2.4	4.9
40	2	2	4
30	1.5	1.4	2.9

M= 33.3411
B= -0.8598
R^2= 0.9948

Audit flow check within ±10 of set point?			
Date	9/14	9/15	
Time		0905	
Magn. Read.	40.5	42	
△H	3.6	3.6	
Yes/ No?	Y	Y	
Min (-10%) 39.5		Max (+10%)	48.5

Magnehelic Set-point: 44

FIELD MEASUREMENTS

Date	Time	Magn. Reading	Wind Speed	Barometric Pressure (in. Hg)	Temp (°F)	Notes (calc flow rate, etc.)
9/14	0902	44	1	29.72	67	
9/15	0852	42	3	29.73	70	

TOTAL VOLUME: 322 std. m^3

NOTES Sample ID Format: DD-Site-YYMMDDHHMM-Sample Type; Sample Type: -01=Primary, FB=Field Blank

21.17°C 29.69 Inhs

PAH Dry Deposition Field Data Log Sheet

Site ID FD07 (944 Cesar E. Chavez Pkwy) **Field Crew:** EM, BS

Deposition Event: ~~Dry 1~~ ~~Dry 2~~ ~~Dry 3~~ ~~Dry 4~~ ~~Dry 5~~ → Dry 2, collection 4

Type: Weekday (W/Th) Weekend (Sat/Sun) **Collection:** 4 /4 (per DD event)

Start Date: 09/14/2013 **End Date:** 09/15/2013

ATMOSPHERIC CONDITIONS

Sky (Start): Sunny Partly Cloudy Overcast Fog **Sky (End):** Sunny Partly Cloudy Overcast Fog

PUF SAMPLER

Sampler I.D. No.: FA00691

Certification Date/No.: PUF: 130895 XAD: X130426 Filter: F130523

Elapsed Timer	Black	White
Start:	170	55.5
Stop:	194	555
Diff.	24 hr	

Sample Time	
Start:	0940
Stop:	0940
Duration:	24 hr

Calibrations

MULTI-POINT CALIBRATION TIME: 11:45 DATE: 07/31/2013			
Magn.	(+)	(-)	SUM
70	3.5	3.5	7
60	3	3	6
50	2.6	2.5	5.1
40	2.1	2.1	4.2
30	1.6	1.6	3.2

M= 32.0916
B= -0.8226
R^2= 0.9998

Audit flow check within ±10 of set point?			
Date	9/14	9/15	
Time		0945	
Magn. Read.	39	39	
△H	3.6	3.8	
Yes/ No?	Y	Y	
Min (-10%) 37.6		Max (+10%) 45.4	

Magnehelic Set-point: 41

FIELD MEASUREMENTS

Date	Time	Magn. Reading	Wind Speed	Barometric Pressure (in. Hg)	Temp (°F)	Notes (calc flow rate, etc.)
9/14	0940	41	2	29.69	69	
9/15	0928	42	2	29.71	72	

TOTAL VOLUME: 326.4 std. m^3

NOTES Sample ID Format: DD-Site-YYMMDDHHMM-Sample Type; Sample Type: -01=Primary, FB=Field Blank

Avg temp 21.40°C Bar = 29.65 in

PAH Dry Deposition Field Data Log Sheet

Site ID CNM1 (Cabrillo) **Field Crew:** EM, BS

Deposition Event: ~~Dry 1~~ ~~Dry 2~~ Dry 3 ~~Dry 4~~ ~~Dry 5~~ ~~Dry 6~~

Type: Weekday (W/Th) ~~Weekend (Sat/Sun)~~ **Collection:** 4 /4 (per DD event)

Event DM 2 collection 4

Start Date: 9/14/2013 **End Date:** 09/15/2013

ATMOSPHERIC CONDITIONS

Sky (Start): Sunny ~~Partly Cloudy~~ Overcast Fog **Sky (End):** Sunny ~~Partly Cloudy~~ Overcast Fog

PUF SAMPLER

Sampler I.D. No.: FA00579

Certification Date/No.: PUF: P130815 XAD: X130926 Filter: P130523

Elapsed Timer	Black	White
Start:	244	14
Stop:	268	14
Diff.		

Sample Time	
Start:	1033
Stop:	1033
Duration:	

Calibrations

MULTI-POINT CALIBRATION TIME: 9:10 DATE: 07/31/2013			
Magn.	(+)	(-)	SUM
70	3.2	3.2	6.4
60	2.8	2.8	5.6
50	2.5	2.5	5
40	2	2	4
30	1.5	1.5	3
M=	34.1618		
B=	-1.092		
R^2=	0.9961		

Audit flow check within ±10 of set point?			
Date	9/14	9/15	
Time	1031	1036	
Magn. Read.	40	41	
△H	3.4	3.7	
Yes/ No?	Y	Y	
Min (-10%)		Max (+10%)	

Magnehelic Set-point: 43

FIELD MEASUREMENTS

Date	Time	Magn. Reading	Wind Speed	Barometric Pressure (in. Hg)	Temp (°F)	Notes (calc flow rate, etc.)
9/14	1031	41	5	29.58	66	
9/15	1027	44	11	29.61	68	

TOTAL VOLUME: 327 std. m^3

NOTES Sample ID Format: DD-Site-YYMMDDHHMM-Sample Type; Sample Type: -01=Primary, FB=Field Blank

Avg 19.20 °C Bar = 29.55 in

PAH Dry Deposition Field Data Log Sheet

Site ID FD07

Deposition Event: Dry 1 Dry 2 Dry 3 Dry 4 Dry 5

Type: Weekday (W/Th) Weekend (Sat/Sun)

Start Date: 1-11-14

Field Crew: KG, EM

Collection: #1 /4 (per DD event)

End Date:

ATMOSPHERIC CONDITIONS

Sky Sunny Partly Cloudy Overcast Fog

PUF SAMPLER

Sampler I.D. No.:

Certification Date/No.: PUF: P131219 XAD: X131217 Filter: F131204

Elapsed Timer	Black	White
Start:	~~248~~ 268	54
Stop:	292	54
Diff.	24	

Sample Time	
Start:	10:31
Stop:	10:31
Duration:	24

Calibrations

Magnehelic Set-point for Sampling: 44

BEFORE SAMPLING TIME: DATE:			
Magn.	(+)	(-)	SUM
70			
60			
50			
40			
30			

Coorelation Coefficient: ~~0.9999~~

Audit flow check within +/- 10 of set point: (Y) / N) Δ4 36 40

AFTER SAMPLING TIME: DATE:			
Magn.	(+)	(-)	SUM
70			
60			
50			
40			
30			

Coorelation Coefficient:

Audit flow check within +/- 10 of set point: (Y) / N) Δ 3.7" 42

FIELD MEASUREMENTS

Date	Time	Magn. Reading	Wind Speed	Wind Direction	Temp (°F)	Notes (calc flow rate, etc.)
1-11-14	1030	44	3	226	65	
1-12-14	1025	44	2	333	59	

TOTAL VOLUME: 333 **std. m^3**

NOTES Sample ID Format: DD-Site-YYMMDDHHMM-Sample Type; Sample Type: -01=Primary, FB=Field Blank

Avg T → 13.87

Avg Bar → 30.04

PAH Dry Deposition Field Data Log Sheet

Site ID FDH **Field Crew:** EM, KG

Deposition Event: (Dry 1) Dry 2 Dry 3 Dry 4 Dry 5

Type: Weekday (W/Th) Weekend (Sat/Sun) **Collection:** All /4 (per DD event)

Start Date: 1/11/2014 **End Date:** _____

ATMOSPHERIC CONDITIONS

Sky (Sunny) Partly Cloudy Overcast Fog

PUF SAMPLER

Sampler I.D. No.: _____

Certification Date/No.: PUF: P131219 XAD: X131217 Filter: F131204

Elapsed Timer	Black	White
Start:	268	18
Stop:	292	18
Diff.	24	

Sample Time	
Start:	09:53
Stop:	0953
Duration:	24

Calibrations

Magnehelic Set-point for Sampling: 43

BEFORE SAMPLING TIME: _____ DATE: _____

Magn.	(+)	(-)	SUM
70			
60			
50			
40			
30			

Coorelation Coefficient: _____ Δ3.61

Audit flow check within +/- 10 of set point: (Y) N) 42

AFTER SAMPLING TIME: _____ DATE: _____

Magn.	(+)	(-)	SUM
70			
60			
50			
40			
30			

Coorelation Coefficient: _____

Audit flow check within +/- 10 of set point (Y / N) 42

FIELD MEASUREMENTS

Date	Time	Magn. Reading	Wind Speed	Wind Direction	Temp (°F)	Notes (calc flow rate, etc.)
1-11-14	09:53	~~42~~ 43	4	205	65	
1-12-14	0953	42	1	290	57	

TOTAL VOLUME: 331 **std. m³**

NOTES Sample ID Format: DD-Site-YYMMDDHHMM-Sample Type; Sample Type: -01=Primary, FB=Field Blank

Gaps in weather data. Weather station data from FDIZ was used.

Avg. T → 13.59 Avg Bar 30.05

PAH Dry Deposition Field Data Log Sheet

Site ID FD 12 **Field Crew:** KG, EM

Deposition Event: (Dry 1) Dry 2 Dry 3 Dry 4 Dry 5

Type: Weekday (W/Th) Weekend (Sat/Sun) **Collection:** #1 /4 (per DD event)

Start Date: 1/11/2013 **End Date:** _____

ATMOSPHERIC CONDITIONS

Sky (Sunny) Partly Cloudy Overcast Fog

PUF SAMPLER

Sampler I.D. No.: _____

Certification Date/No.: PUF P131219 XAD: X131217 Filter: F131204

Elapsed Timer	Black	White
Start:	219	80
Stop:	243	80
Diff.	24	

Sample Time	
Start:	0914
Stop:	0914
Duration:	24

Calibrations

Magnehelic Set-point for Sampling: 42

BEFORE SAMPLING TIME: 0906 DATE: 1-11-14

Magn.	(+)	(-)	SUM
70			
60			
50			
40			
30			

Coorelation Coefficient: _____ Δ 3.6"

Audit flow check within +/- 10 of set point: (Y / N) 39

AFTER SAMPLING TIME: 0912 DATE: 1-12-14

Magn.	(+)	(-)	SUM
70			
60			
50			
40			
30			

Coorelation Coefficient: _____ Δ 4.1"

Audit flow check within +/- 10 of set point: (Y) N) 37

FIELD MEASUREMENTS

Date	Time	Magn. Reading	Wind Speed	Wind Direction	Temp (°F)	Notes (calc flow rate, etc.)
1-11-14	0906	42	1	278	63	
1-12-14	0914	—	1	198	45	

TOTAL VOLUME: 339 **std. m³**

NOTES Sample ID Format: DD-Site-YYMMDDHHMM-Sample Type; Sample Type: -01=Primary, FB=Field Blank

Avg. T → 13.59 Avg. Bar → 30.05

PAH Dry Deposition Field Data Log Sheet

Site ID CNM 1 **Field Crew:** KG, EM

Deposition Event: Dry 1 Dry 2 (Dry 3) Dry 4 Dry 5

Type: Weekday (W/Th) Weekend (Sat/Sun) **Collection:** #1 /4 (per DD event)

Start Date: 1-11-14 **End Date:**

ATMOSPHERIC CONDITIONS

Sky (Sunny) Partly Cloudy Overcast Fog

PUF SAMPLER

Sampler I.D. No.:

Certification Date/No.: PUF: P131219 XAD: X131217 Filter: F131204

Elapsed Timer	Black	White	Sample Time	
Start:	1958	58	Start:	1136
Stop: 219	~~795~~	58	Stop:	1136
Diff.			Duration:	

Calibrations

Magnehelic Set-point for Sampling: 42

BEFORE SAMPLING TIME: DATE:			
Magn.	(+)	(-)	SUM
70			
60			
50			
40			
30			

Coorelation Coefficient: _____ Δ 3.7"

Audit flow check within +/- 10 of set point: (Y / N) 42

AFTER SAMPLING TIME: DATE:			
Magn.	(+)	(-)	SUM
70			
60			
50			
40			
30			

Coorelation Coefficient: _____

Audit flow check within +/- 10 of set point: (Y / N) Δ 3.4" 38

FIELD MEASUREMENTS

Date	Time	Magn. Reading	Wind Speed	Wind Direction	Temp (°F)	Notes (calc flow rate, etc.)
1-11-14	1130	42	2	289	68	
1-12-14	1136	42	4	312	55	

TOTAL VOLUME: 331 **std. m³**

NOTES Sample ID Format: DD-Site-YYMMDDHHMM-Sample Type; Sample Type: -01=Primary, FB=Field Blank

Avg T → 12.36 °C Avg. Bar → 29.94

PAH Dry Deposition Field Data Log Sheet

Site ID FD12 **Field Crew:** KG, EM

Deposition Event: Dry 1 Dry 2 (Dry 3) Dry 4 Dry 5

Type: (Weekday (W/Th)) Weekend (Sat/Sun) **Collection:** 2 /4 (per DD event)

Start Date: 1/22/2014 **End Date:** 1/23/2014

ATMOSPHERIC CONDITIONS

Sky (Start): (Sunny) Partly Cloudy Overcast Fog **Sky (End):** Sunny Partly Cloudy Overcast (Fog)

PUF SAMPLER

Sampler I.D. No.: FA00691

Certification Date/No.: PUF: P140113 XAD: X140109 Filter: F131204

Elapsed Timer	Black	White
Start:	244	01
Stop:	268	02
Diff.		

Sample Time	
Start:	08:53
Stop:	08:53
Duration:	24 hrs

Calibrations

MULTI-POINT CALIBRATION TIME: DATE:			
Magn.	(+)	(-)	SUM
70			
60			
50			
40			
30			

M=
B=
R^2=

Magnehelic Set-point: 40

Audit flow check within ±10 of set point?			
Date	1-22-14	1-23-14	
Time	0848	08:59	
Magn. Read.	36	36	
△H	3.4	3.4	
Yes/ No?	Y	Y	
Min (-10%) 36		Max (+10%) 44	

FIELD MEASUREMENTS

Date	Time	Magn. Reading	Wind Speed	Barometric Pressure (in. Hg)	Temp (°F)	Notes (calc flow rate, etc.)
1-22-14	0853	40	0	30.00	61	
1-23-14	0853	40	0	29.96	48	
	Avg	40				

TOTAL VOLUME: 331 std. m^3 Average T 56.46(F) Bar → 29.92

NOTES Sample ID Format: DD-Site-YYMMDDHHMM-Sample Type; Sample Type: -01=Primary, FB=Field Blank

FOGGY, very low visibility and (°C) → 13.59

Condensation build up on sampler hood. However, inside of sampling compartment was dry & filter ~~paper~~ paper was dry.

PAH Dry Deposition Field Data Log Sheet

Site ID: FD11 | Field Crew: KG, EM

Deposition Event: Dry 1 Dry 2 Dry 3 Dry 4 Dry 5

Type: Weekday (W/Th) Weekend (Sat/Sun) | Collection: 2 /4 (per DD event)

Start Date: 1/22/2014 | End Date: 1/23/14

ATMOSPHERIC CONDITIONS

Sky (Start): Sunny Partly Cloudy Overcast Fog | Sky (End): Sunny Partly Cloudy Overcast Fog

PUF SAMPLER

Sampler I. D. No.:

Certification Date/No.: PUF: 9140113 XAD: X140109 Filter: F131204

Elapsed Timer	Black	White
Start:	292	37
Stop:	316	37
Diff.	24	0

Sample Time	
Start:	9:31
Stop:	09:31
Duration:	24 hrs

Calibrations

MULTI-POINT CALIBRATION

TIME: DATE:

Magn.	(+)	(-)	SUM
70			
60			
50			
40			
30			

M=

B=

R^2=

Audit flow check within ±10 of set point?			
Date	1-22-14	1-23-14	
Time	0927	09:35	
Magn. Read.	40	39	
△H	3.7	3.4	
Yes/ No?	Y	Y	
Min (-10%)	38.7	Max (+10%)	47.3

Magnehelic Set-point: 43 4

FIELD MEASUREMENTS

Date	Time	Magn. Reading	Wind Speed	Barometric Pressure (in. Hg)	Temp (°F)	Notes (calc flow rate, etc.)
1-22-14	09:31	44	0	30.02	67	
1-23-14	09:28	44	1	29.99	51	
		Avg. 44				

TOTAL VOLUME: 336 std. m^3 ★ Gaps in Weather Data ★

NOTES Sample ID Format: DD-Site-YYMMDDHHMM-Sample Type; Sample Type: -01=Primary, FB=Field Blank

Low Console Batteries, low battery transmitter used

~~very strong~~ no condensation build up on T + Bar Sampling hood

data from FD12

PAH Dry Deposition Field Data Log Sheet

Site ID FD07 **Field Crew:** KG, EM

Deposition Event: Dry 1 Dry 2 (Dry 3) Dry 4 Dry 5

Type: (Weekday (W/Th)) Weekend (Sat/Sun) **Collection:** 2 /4 (per DD event)

Start Date: 1/22/2014 **End Date:** 1/23/2014

ATMOSPHERIC CONDITIONS

Sky (Start): (Sunny) Partly Cloudy Overcast Fog **Sky (End):** Sunny Partly Cloudy (Overcast) Fog

PUF SAMPLER

Sampler I.D. No.:

Certification Date/No.: PUF: P131219 XAD: X131217 Filter: F131204

Elapsed Timer	Black	White
Start:	292	66
Stop:	316	68
Diff.	24	2

Sample Time	
Start:	10:00
Stop:	10:00
Duration:	24

Calibrations

MULTI-POINT CALIBRATION TIME: DATE:			
Magn.	(+)	(-)	SUM
70			
60			
50			
40			
30			

M=
B=
R^2=

Audit flow check within ±10 of set point?			
Date	1.22.14	1.23.14	
Time	0956	1010	
Magn. Read.	40	40	
△H	3.6	3.4	
Yes/ No?			
Min (-10%) 38.7		Max (+10%) 47.3	

Magnehelic Set-point: 43

FIELD MEASUREMENTS

Date	Time	Magn. Reading	Wind Speed	Barometric Pressure (in. Hg)	Temp (°F)	Notes (calc flow rate, etc.)
1-22-14	1000	42	2	29.98	60	
1-23-14	10:00	44	1	29.96	54	
	10:01					
		Avg. 43				

TOTAL VOLUME: 329 std. m^3

NOTES Sample ID Format: DD-Site-YYMMDDHHMM-Sample Type; Sample Type: -01=Primary, FB=Field Blank

Avg T: 56.4 (F) → 13.56 (°C) No condensation / moisture on sampler hood

Baro: 29.9

PAH Dry Deposition Field Data Log Sheet

Site ID CNMI **Field Crew:** EM, DK

Deposition Event: Dry 1 Dry 2 Dry 3 Dry 4 Dry 5

Type: Weekday (W/Th) Weekend (Sat/Sun) **Collection:** 2 /4 (per DD event)

Start Date: 1/22/2014 **End Date:** 1/23/2014

ATMOSPHERIC CONDITIONS

Sky (Start): Sunny Partly Cloudy Overcast Fog **Sky (End):** Sunny Partly Cloudy Overcast Fog

PUF SAMPLER

Sampler I.D. No.:

Certification Date/No.: PUF: P140113 XAD: X140109 Filter: F131204

Elapsed Timer	Black	White
Start:	219	74
Stop:	243	81
Diff.	24	7

Sample Time	
Start:	1051
Stop:	10:55
Duration:	24:04 min

Calibrations

MULTI-POINT CALIBRATION TIME: DATE:			
Magn.	(+)	(-)	SUM
70			
60			
50			
40			
30			

M=

B=

R^2=

Audit flow check within ±10 of set point?			
Date	1-22-14	1-23-14	
Time	1047	11:07	
Magn. Read.	39	39	
△H	3.6	3.4	
Yes/ No?	Y	Y	
Min (-10%)		Max (+10%)	

Magnehelic Set-point: 42

FIELD MEASUREMENTS

Date	Time	Magn. Reading	Wind Speed	Barometric Pressure (in. Hg)	Temp (°F)	Notes (calc flow rate, etc.)
1-22-14	1051	42	0	29.85	63	
1-23-14	10:55	44	1	29.84	57	
	Avg	43				

TOTAL VOLUME: 353 std. m^3

NOTES Sample ID Format: DD-Site-YYMMDDHHMM-Sample Type; Sample Type: -01=Primary, FB=Field Blank

- No condensation present on sample Avg T 55.9 (F) (13.28°C)

Baro: 29.80

PAH Dry Deposition Field Data Log Sheet

Site ID FD12 **Field Crew:** EM, BS

Deposition Event: Dry 1 Dry 2 (Dry 3) Dry 4 Dry 5

Type: Weekday (W/Th) Weekend (Sat/Sun) **Collection:** 3 /4 (per DD event)

Start Date: ~~1/29/14~~ 1/29/14 **End Date:** 1/30/14

ATMOSPHERIC CONDITIONS

Sky (Start): (Sunny) Partly Cloudy Overcast Fog **Sky (End):** Sunny Partly Cloudy (Overcast) Fog

PUF SAMPLER

Sampler I.D. No.:

Certification Date/No.: PUF: P140113 XAD: X140109 Filter: F131204

Elapsed Timer	Black	White
Start:	208	~~192~~ 210
Stop:	292	216
Diff.	24	~~0~~

Sample Time	
Start:	~~09:03~~ 09:11
Stop:	09:11
Duration:	24 hrs

Calibrations

MULTI-POINT CALIBRATION TIME: DATE:			
Magn.	(+)	(-)	SUM
70			
60			
50			
40			
30			

M=

B=

R^2=

Magnehelic Set-point: 40

Audit flow check within ±10 of set point?			
Date	1/29/14	1/30/14	
Time	08:54	09:13	
Magn. Read.	~~39~~ 37	38	
△H	3.8	3.8	
Yes/ No?	Y	Y	
Min (-10%) 36		Max (+10%) 44	

FIELD MEASUREMENTS

Date	Time	Magn. Reading	Wind Speed	Barometric Pressure (in. Hg)	Temp (°F)	Notes (calc flow rate, etc.)
1/29/14	08:57	40	~~0~~	30.05	59	
1/30/14	09:08	40	1	29.94	59	

TOTAL VOLUME: ~~329~~ 331 **std. m³**

NOTES Sample ID Format: DD-Site-YYMMDDHHMM-Sample Type; Sample Type: -01=Primary, FB=Field Blank

Avg Temp 15.26°C → 59.47°F

29.961 inches

PAH Dry Deposition Field Data Log Sheet

Site ID FD11 **Field Crew:** EM BS

Deposition Event: Dry 1 Dry 2 (Dry 3) Dry 4 Dry 5

Type: (Weekday (W/Th)) Weekend (Sat/Sun) **Collection:** 3 /4 (per DD event)

Start Date: 01/29/2014 **End Date:** 1/30/2014

ATMOSPHERIC CONDITIONS

Sky (Start): (Sunny) Partly Cloudy Overcast Fog **Sky (End):** Sunny Partly Cloudy (Overcast) Fog

PUF SAMPLER

Sampler I.D. No.:

Certification Date/No.: PUF: P140116 XAD: X1440109 Filter: F13 1204

Elapsed Timer	Black	White
Start:	316	416.5
Stop:	340	47.5
Diff.	4	

Sample Time	
Start:	09 42
Stop:	09 42
Duration:	24

Calibrations

MULTI-POINT CALIBRATION TIME: DATE:			
Magn.	(+)	(-)	SUM
70			
60			
50			
40			
30			

M=
B=
R^2=

@ installed

Audit flow check within ±10 of set point?			
Date	1/29/14	1/30/14	
Time	938	0946	
Magn. Read.	40	41	
△H	3.6	3.8	
Yes/ No?	Y	Y	
Min (-10%)	39	Max (+10%)	48

Magnehelic Set-point: 43

Gaps in weather data

FIELD MEASUREMENTS

Date	Time	Magn. Reading	Wind Speed	Barometric Pressure (in. Hg)	Temp (°F)	Notes (calc flow rate, etc.)
1/29/14	0938	44	1	30.08	62	169° - 282° Direction
1/30/14	0939	43	4	29.97	59	175° - 197°

TOTAL VOLUME: ~~334~~ 334 **std. m³**

NOTES Sample ID Format: DD-Site-YYMMDDHHMM-Sample Type; Sample Type: -01=Primary, FB=Field Blank

Gaps in weather data

Temp & Bar data from FD07 used 14.93°C

PAH Dry Deposition Field Data Log Sheet

Site ID FD07 **Field Crew:** BS EM

Deposition Event: Dry 1 Dry 2 (Dry 3) Dry 4 Dry 5

Type: (Weekday (W/Th)) Weekend (Sat/Sun) **Collection:** 3 /4 (per DD event)

Start Date: 01/29/2014 **End Date:** 01/30/2014

ATMOSPHERIC CONDITIONS

Sky (Start): (Sunny) Partly Cloudy Overcast Fog **Sky (End):** Sunny Partly Cloudy (Overcast) Fog

PUF SAMPLER

Sampler I.D. No.:

Certification Date/No.: PUF: P140116 XAD: X140119 Filter: F 13/204

Elapsed Timer	Black	White
Start:	316	82
Stop:	340	84
Diff.		

Sample Time	
Start:	10:09
Stop:	10:11
Duration:	

Calibrations

MULTI-POINT CALIBRATION

TIME: DATE:

Magn:	(+)	(-)	SUM
70			
60			
50			
40			
30			

M=
B= during install
R^2=

Magnehelic Set-point: 44

Audit flow check within ±10 of set point?			
Date	1/29	1/30	
Time	1004	10:15	
Magn. Read.	40	41	
△H	3.6	3.8	
Yes/ No?	Y	Y	
Min (-10%)	40	Max (+10%)	48

FIELD MEASUREMENTS

Date	Time	Magn. Reading	Wind Speed	Barometric Pressure (in. Hg)	Temp (°F)	Notes (calc flow rate, etc.)
1/29	1004	44	1	30.03	61	211° direction word
1/30	10:11	43	5	29.94	61	233°

TOTAL VOLUME: 331 std. m^3

NOTES Sample ID Format: DD-Site-YYMMDDHHMM-Sample Type; Sample Type: -01=Primary, FB=Field Blank

Bar: 29.93317 Temp - 58.88 °F

43.5 Avg

PAH Dry Deposition Field Data Log Sheet

Site ID CNMI [redacted] **Field Crew:** BS, EM

Deposition Event: Dry 1 Dry 2 (Dry 3) Dry 4 Dry 5

Type: (Weekday (W/Th)) Weekend (Sat/Sun) **Collection:** 3 /4 (per DD event)

Start Date: 01/29/2014 **End Date:** 01/30/2014

ATMOSPHERIC CONDITIONS

Sky (Start): (Sunny) Partly Cloudy Overcast Fog **Sky (End):** Sunny Partly Cloudy (Overcast) Fog

PUF SAMPLER

Sampler I.D. No.:

Certification Date/No.: PUF: P140113 XAD: X140109 Filter: F131204

Elapsed Timer	Black	White
Start:	243	99
Stop:	267	99
Diff.		

Sample Time	
Start:	11:01
Stop:	11:01
Duration:	

Calibrations

MULTI-POINT CALIBRATION

TIME: DATE:

Magn.	(+)	(-)	SUM
70			
60			
50			
40			
30			

M=
B=
R^2=

during install

Magnehelic Set-point: 42

Audit flow check within ±10 of set point?			
Date	1/29	1/30/13	
Time	1057	11:06	
Magn. Read.	40	38	
△H	3.8	3.5	
Yes/ No?	Y	Y	
Min (-10%)	38	Max (+10%)	46

FIELD MEASUREMENTS

Date	Time	Magn. Reading	Wind Speed	Barometric Pressure (in. Hg)	Temp (°F)	Notes (calc flow rate, etc.)
1/29	1051	~~42~~	7	29.91	55	274 - 304° wind direct.
	1101	43	3	29.9	56	
1/30	1100	42	2	29.84	58	146°

TOTAL VOLUME: [redacted] 332 std. m^3

NOTES Sample ID Format: DD-Site-YYMMDDHHMM-Sample Type; Sample Type: -01=Primary, FB=Field Blank

Avg T -> 13.25°C / 55.85

Avg Bar -> 29.83

PAH Dry Deposition Field Data Log Sheet

Site ID FD12 **Field Crew:** KG, GM

Deposition Event: Dry 1 Dry 2 (Dry 3) Dry 4 Dry 5

Type: Weekday (W/Th) (Weekend (Sat/Sun)) **Collection:** 4 /4 (per DD event)

Start Date: 2-15-14 **End Date:** 2-16-14

ATMOSPHERIC CONDITIONS

Sky (Start): (Sunny) Partly Cloudy Overcast Fog **Sky (End):** (Sunny) Partly Cloudy Overcast Fog

PUF SAMPLER

Sampler I.D. No.:

Certification Date/No.: PUF: P140113 XAD: X140109 Filter: F131204

Elapsed Timer	Black	White
Start:	292	30
Stop:	316	30
Diff.		

Sample Time	
Start:	0819
Stop:	0819
Duration:	24hrs

Calibrations

MULTI-POINT CALIBRATION TIME: DATE:			
Magn.	(+)	(-)	SUM
70			
60			
50			
40			
30			

M=
B=
R^2=

during install

Audit flow check within ±10 of set point?			
Date	2.15	2.16	
Time	0812	0829	
Magn. Read.	38	38	
△H	3.8	3.7	
Yes/ No?	Y	Y	
Min (-10%)		Max (+10%)	

Magnehelic Set-point: 41

FIELD MEASUREMENTS

Date	Time	Magn. Reading	Wind Speed	Barometric Pressure (in. Hg)	Temp (°F)	Notes (calc flow rate, etc.)
2.15.14	0819	41	1	29.99	62	
2.16.14	0823	41	0	30.02	55	

TOTAL VOLUME: 333 std. m^3

NOTES Sample ID Format: DD-Site-YYMMDDHHMM-Sample Type; Sample Type: -01=Primary, FB=Field Blank

PAH Dry Deposition Field Data Log Sheet

Site ID FD11 **Field Crew:** KG / GM

Deposition Event: Dry 1 Dry 2 (Dry 3) Dry 4 Dry 5

Type: Weekday (W/Th) (Weekend (Sat/Sun) **Collection:** 4 /4 (per DD event)

Start Date: 2-15-14 **End Date:** 2-16-14

ATMOSPHERIC CONDITIONS

Sky (Start): (Sunny) Partly Cloudy Overcast Fog **Sky (End):** (Sunny) Partly Cloudy Overcast Fog

PUF SAMPLER

Sampler I.D. No.:

Certification Date/No.: PUF: P140113 XAD: X140109 Filter: F131204

Elapsed Timer	Black	White
Start:	340	57
Stop:	364	57
Diff.	24	0

Sample Time	
Start:	849
Stop:	849
Duration:	24

Calibrations

MULTI-POINT CALIBRATION

TIME: DATE:

Magn.	(+)	(-)	SUM
70			
60			
50			
40			
30			

M=
B=
R^2=

during install

Audit flow check within ±10 of set point?

Date	2.15	2.16	
Time	0843	0858	
Magn. Read.	40	39	
△H	3.5	3.5	
Yes/ No?	Y		
Min (-10%)		Max (+10%)	

Magnehelic Set-point: 43

FIELD MEASUREMENTS

Date	Time	Magn. Reading	Wind Speed	Barometric Pressure (in. Hg)	Temp (°F)	Notes (calc flow rate, etc.)
2.15	0849	43	0	30.02	68	
2.16	0853	43	1	30.04	58	

TOTAL VOLUME: 331 **std. m^3**

NOTES Sample ID Format: DD-Site-YYMMDDHHMM-Sample Type; Sample Type: -01=Primary, FB=Field Blank

PAH Dry Deposition Field Data Log Sheet

Site ID FD07 **Field Crew:** KG, GM

Deposition Event: Dry 1 Dry 2 (Dry 3) Dry 4 Dry 5

Type: Weekday (W/Th) (Weekend) (Sat/Sun) **Collection:** 4 /4 (per DD event)

Start Date: 2·15·14 **End Date:** 2·16·14

ATMOSPHERIC CONDITIONS

Sky (Start): (Sunny) Partly Cloudy Overcast Fog **Sky (End):** Sunny Partly Cloudy Overcast Fog

PUF SAMPLER

Sampler I.D. No.:

Certification Date/No.: PUF: P140113 XAD: 140109 Filter: F131204

Elapsed Timer	Black	White
Start:	340	93
Stop:	364	93
Diff.	24	

Sample Time	
Start:	0917
Stop:	0917
Duration:	24hrs

Calibrations

MULTI-POINT CALIBRATION TIME: DATE:			
Magn.	(+)	(-)	SUM
70			
60			
50			
40			
30			

M= during install
B=
R^2=

Magnehelic Set-point: 44

Audit flow check within ±10 of set point?			
Date	2·15	2·16	
Time	0914	0922	
Magn. Read.	40	40	
△H	3.6	3.5	
Yes/ No?	Y	Y	
Min (-10%)		Max (+10%)	

FIELD MEASUREMENTS

Date	Time	Magn. Reading	Wind Speed	Barometric Pressure (in. Hg)	Temp (°F)	Notes (calc flow rate, etc.)
2·15·14	0917	44	1	29.98	73	
2·16·14	0922	44	1	29.99	61	

TOTAL VOLUME: 331 **std. m^3**

NOTES Sample ID Format: DD-Site-YYMMDDHHMM-Sample Type; Sample Type: -01=Primary, FB=Field Blank

PAH Dry Deposition Field Data Log Sheet

Site ID CNM1 **Field Crew:** KG, GM

Deposition Event: Dry 1 Dry 2 (Dry 3) Dry 4 Dry 5

Type: Weekday (W/Th) (Weekend) (Sat/Sun) **Collection:** 4 /4 (per DD event)

Start Date: 2.15.14 **End Date:** 2.16.14

ATMOSPHERIC CONDITIONS

Sky (Start): (Sunny) Partly Cloudy Overcast Fog **Sky (End):** (Sunny) Partly Cloudy Overcast Fog

PUF SAMPLER

Sampler I.D. No.:

Certification Date/No.: PUF: P140116 XAD: X140109 Filter: F131204

Elapsed Timer	Black	White
Start:	268	06
Stop:	292	06
Diff.	24	

Sample Time	
Start:	1000
Stop:	1000
Duration:	24 hr

Calibrations

MULTI-POINT CALIBRATION TIME: DATE:			
Magn.	(+)	(-)	SUM
70			
60			
50			
40			
30			

M=
B=
R^2=

during install

Audit flow check within ±10 of set point?			
Date	2.15.14	2.16	
Time	0954	1005	
Magn. Read.	40	39	
△H	3.7	3.6	
Yes/ No?	Y	Y	
Min (-10%)		Max (+10%)	

Magnehelic Set-point: 43

FIELD MEASUREMENTS

Date	Time	Magn. Reading	Wind Speed	Barometric Pressure (in. Hg)	Temp (°F)	Notes (calc flow rate, etc.)
2.15.14	1600	43	2	29.89	71	
2.16.14	1000	43	7	29.9	59	

TOTAL VOLUME: 332 std. m^3

NOTES Sample ID Format: DD-Site-YYMMDDHHMM-Sample Type; Sample Type: -01=Primary, FB=Field Blank

PAH Dry Deposition Field Data Log Sheet

Site ID CNM **Field Crew:** KG, CS

Deposition Event: Dry 1 Dry 2 Dry 3 Dry 4 Dry 5

Type: Weekday (W/Th) Weekend (Sat/Sun) **Collection:** 1 /4 (per DD event)

Start Date: 4-5-14 **End Date:** 4-6

ATMOSPHERIC CONDITIONS

Sky (Start): Sunny Partly Cloudy Overcast Fog **Sky (End):** Sunny Partly Cloudy Overcast Fog

PUF SAMPLER

Sampler I.D. No.:

Certification Date/No.: PUF: P140310 XAD: X140311 Filter: F140205

Elapsed Timer	Black	White
Start:	292	24
Stop:	316	24
Diff.	24	

Sample Time	
Start:	1185
Stop:	1155
Duration:	24

Calibrations

MULTI-POINT CALIBRATION TIME: DATE:			
Magn.	(+)	(-)	SUM
70			6.8
60			5.9
50			5.1
40			4.1
30			3

M= 31.2696
B= -.5265
R^2= .9983

Audit flow check within ±10 of set point?			
Date	4.6		
Time	1140		
Magn. Read.	42		
△H	3.5		
Yes/ No?	Y		
Min (-10%) 39.6		Max (+10%) 48.4	

Magnehelic Set-point: 44

FIELD MEASUREMENTS

Date	Time	Magn. Reading	Wind Speed	Barometric Pressure (in. Hg)	Temp (°F)	Notes (calc flow rate, etc.)
4-5-14	1137	44	2	29.87	63	
4-6-14	1139	44	14	29.99	61	

TOTAL VOLUME: ~~330~~ 336 std. m^3

NOTES Sample ID Format: DD-Site-YYMMDDHHMM-Sample Type; Sample Type: -01=Primary, FB=Field Blank

PAH Dry Deposition Field Data Log Sheet

Site ID Station 12 **Field Crew:** KG, CS

Deposition Event: Dry 1 Dry 2 Dry 3 Dry 4 Dry 5

Type: Weekday (W/Th) (Weekend (Sat/Sun)) **Collection:** 1 /4 (per DD event)

Start Date: 4-5-14 **End Date:** 4-6-14

ATMOSPHERIC CONDITIONS

Sky (Start): (Sunny) Partly Cloudy Overcast Fog **Sky (End):** (Sunny) Partly Cloudy Overcast Fog

PUF SAMPLER

Sampler I.D. No.:

Certification Date/No.: PUF: P140310 XAD: X140311 Filter: F140205

Elapsed Timer	Black	White
Start:	316	70
Stop:	340	70
Diff.	24	

Sample Time	
Start:	0919
Stop:	0919
Duration:	24

Calibrations

MULTI-POINT CALIBRATION TIME: DATE:			
Magn.	(+)	(-)	SUM
70			6.9
60			6.3
50			5.3
40			4.2
30			3.2

M=

B=

R^2= 0.9966

Magnehelic Set-point: 41

Audit flow check within ±10 of set point?			
Date	4-6		
Time	0926		
Magn. Read.	38		
△H	35		
Yes/ No?	Y		
Min (-10%)		Max (+10%)	

FIELD MEASUREMENTS

Date	Time	Magn. Reading	Wind Speed	Barometric Pressure (in. Hg)	Temp (°F)	Notes (calc flow rate, etc.)
4-5-14	0920	41	3	29.99	67	
4-6-14	0916	41	0	30.05	66	

TOTAL VOLUME: 333 std. m^3

NOTES Sample ID Format: DD-Site-YYMMDDHHMM-Sample Type; Sample Type: -01=Primary, FB=Field Blank

PAH Dry Deposition Field Data Log Sheet

Site ID 11 **Field Crew:** KG CS

Deposition Event: Dry 1 Dry 2 Dry 3 Dry 4 Dry 5

Type: Weekday (W/Th) (Weekend (Sat/Sun)) **Collection:** 1 /4 (per DD event)

Start Date: 4-5-14 **End Date:** 4-6-14

ATMOSPHERIC CONDITIONS

Sky (Start): Sunny (Partly Cloudy) Overcast Fog **Sky (End):** (Sunny) Partly Cloudy Overcast Fog

PUF SAMPLER

Sampler I.D. No.:

Certification Date/No.: PUF: P140310 XAD: X140311 Filter: F140205

Elapsed Timer	Black	White
Start:	364	81
Stop:	388	81
Diff.	24	0

Sample Time	
Start:	1005
Stop:	1005
Duration:	

Calibrations

MULTI-POINT CALIBRATION TIME: DATE:

Magn.	(+)	(-)	SUM
70			6.6
60			5.7
50			4.9
40			4
30			3

M= 32.8229
B= -.7986
R^2= .9994

Magnehelic Set-point: 45

Audit flow check within ±10 of set point?

Date	4-6-14		
Time	1010		
Magn. Read.	42		
△H	3.2		
Yes/ No?	Y		
Min (-10%)	40.5	Max (+10%)	49.5

FIELD MEASUREMENTS

Date	Time	Magn. Reading	Wind Speed	Barometric Pressure (in. Hg)	Temp (°F)	Notes (calc flow rate, etc.)
4-5-14	1605	45	1	30.02	59	
4-6-14	0955	45	3	30.08	66	

TOTAL VOLUME: 336 **std. m^3**

NOTES Sample ID Format: DD-Site-YYMMDDHHMM-Sample Type; Sample Type: -01=Primary, FB=Field Blank

PAH Dry Deposition Field Data Log Sheet

Site ID 07 **Field Crew:** ICG, CS

Deposition Event: Dry 1 Dry 2 Dry 3 Dry 4 Dry 5

Type: Weekday (W/Th) Weekend (Sat/Sun) **Collection:** 1 /4 (per DD event)

Start Date: 4-5-14 **End Date:** 4-6-14

ATMOSPHERIC CONDITIONS

Sky (Start): Sunny Partly Cloudy Overcast Fog **Sky (End):** Sunny Partly Cloudy Overcast Fog

PUF SAMPLER

Sampler I.D. No.:

Certification Date/No.: PUF: P140310 XAD: X140311 Filter: F140205

Elapsed Timer	Black	White
Start:	365	14
Stop:	389	14
Diff.	24	

Sample Time	
Start:	1042
Stop:	1042
Duration:	24

Calibrations

MULTI-POINT CALIBRATION TIME: DATE:			
Magn.	(+)	(-)	SUM
70			61.5
60			5.7
50			4.9
40			4
30			3

M= 33.3939
B= -.9215
R^2= .9990

Magnehelic Set-point: 45

Audit flow check within ±10 of set point?			
Date	4-6		
Time	1045		
Magn. Read.	41		
△H	3.3		
Yes/ No?	Y		
Min (-10%)	40.5	Max (+10%)	49.5

FIELD MEASUREMENTS

Date	Time	Magn. Reading	Wind Speed	Barometric Pressure (in. Hg)	Temp (°F)	Notes (calc flow rate, etc.)
4-5-14	1042	45	1	29.98	60	
4-6-14	1030	44	2	30.03	66	

TOTAL VOLUME: 336 std. m^3

NOTES Sample ID Format: DD-Site-YYMMDDHHMM-Sample Type; Sample Type: -01=Primary, FB=Field Blank

PAH Dry Deposition Field Data Log Sheet

Site ID 12 **Field Crew:** KG, GM

Deposition Event: Dry 1 Dry 2 Dry 3 (Dry 4) Dry 5

Type: (Weekday (W/Th)) Weekend (Sat/Sun) **Collection:** ___ /4 (per DD event)

Start Date: 4-9-14 **End Date:** 4-10-14

ATMOSPHERIC CONDITIONS

Sky (Start): (Sunny) Partly Cloudy Overcast Fog **Sky (End):** (Sunny) Partly Cloudy Overcast Fog

PUF SAMPLER

Sampler I.D. No.:

Certification Date/No.: PUF: P140310 XAD: X140311 Filter: F140205

Elapsed Timer	Black	White
Start:	340	79
Stop:	364	79
Diff.	24	

Sample Time	
Start:	0848
Stop:	0848
Duration:	24

Calibrations

MULTI-POINT CALIBRATION TIME: DATE:			
Magn.	(+)	(-)	SUM
70			
60			
50			
40			
30			

M=
B=
R^2=

Audit flow check within ±10 of set point?			
Date	4-9	4-10	
Time	846	0855	
Magn. Read.	40	38	
△H	3.3	3.1	
Yes/ No?	Y	Y	
Min (-10%)		Max (+10%)	

Magnehelic Set-point: 41

FIELD MEASUREMENTS

Date	Time	Magn. Reading	Wind Speed	Barometric Pressure (in. Hg)	Temp (°F)	Notes (calc flow rate, etc.)
4-9-14	0850	41	2	29.99	69	
4-10-14	0854	41	1	29.73	69	

TOTAL VOLUME: 328 std. m^3

NOTES Sample ID Format: DD-Site-YYMMDDHHMM-Sample Type; Sample Type: -01=Primary, FB=Field Blank

PAH Dry Deposition Field Data Log Sheet

Site ID CNM **Field Crew:** KG, GM

Deposition Event: Dry 1 Dry 2 Dry 3 (Dry 4) Dry 5

Type: (Weekday (W/Th)) Weekend (Sat/Sun) **Collection:** 2 /4 (per DD event)

Start Date: 4-9-14 **End Date:** 4-10-14

ATMOSPHERIC CONDITIONS

Sky (Start): (Sunny) Partly Cloudy Overcast Fog **Sky (End):** (Sunny) Partly Cloudy Overcast Fog

PUF SAMPLER

Sampler I.D. No.:

Certification Date/No.: PUF: P140310 XAD: X140311 Filter: F140205

Elapsed Timer	Black	White
Start:	316	27
Stop:	340	27
Diff.	24	

Sample Time	
Start:	1013
Stop:	1013
Duration:	24

Calibrations

MULTI-POINT CALIBRATION TIME: DATE:			
Magn.	(+)	(-)	SUM
70			
60			
50			
40			
30			

M=
B=
R^2=

Audit flow check within ±10 of set point?			
Date	4-9-14	4-10-14	
Time	1010	1020	
Magn. Read.	42	40	
△H	3.4	3.4	
Yes/ No?	Y		
Min (-10%)		Max (+10%)	

Magnehelic Set-point: 43

FIELD MEASUREMENTS

Date	Time	Magn. Reading	Wind Speed	Barometric Pressure (in. Hg)	Temp (°F)	Notes (calc flow rate, etc.)
4-9-14	1013	43	2	29.87	71	
4-10-14	1013	43	4	29.82	66	

TOTAL VOLUME: 331 std. m^3

NOTES Sample ID Format: DD-Site-YYMMDDHHMM-Sample Type; Sample Type: -01=Primary, FB=Field Blank

PAH Dry Deposition Field Data Log Sheet

Site ID 11 **Field Crew:** KG, GM

Deposition Event: Dry 1 Dry 2 Dry 3 (Dry 4) Dry 5

Type: (Weekday (W/Th)) Weekend (Sat/Sun) **Collection:** 1 /4 (per DD event)

Start Date: 4-9-14 **End Date:** 4-10-14

ATMOSPHERIC CONDITIONS

Sky (Start): (Sunny) Partly Cloudy Overcast Fog **Sky (End):** (Sunny) Partly Cloudy Overcast Fog

PUF SAMPLER

Sampler I.D. No.:

Certification Date/No.: PUF: P140310 XAD: X140311 Filter: F140205

Elapsed Timer	Black	White
Start:	388	84
Stop:	412	~~84~~
Diff.	24	

Sample Time	
Start:	0911
Stop:	0911
Duration:	24

Calibrations

MULTI-POINT CALIBRATION TIME: DATE:			
Magn.	(+)	(-)	SUM
70			
60			
50			
40			
30			

M=
B=
R^2=

Audit flow check within ±10 of set point?			
Date	4-9	4-10	
Time	0909	0919	
Magn. Read.	42	42	
△H	3.4	3.2	
Yes/ No?	Y	Y	
Min (-10%)		Max (+10%)	

Magnehelic Set-point: 44

FIELD MEASUREMENTS

Date	Time	Magn. Reading	Wind Speed	Barometric Pressure (in. Hg)	Temp (°F)	Notes (calc flow rate, etc.)
4-9-14			3	30.01	70	
4-10-14	0905	44	4	29.96	69	

TOTAL VOLUME: 330 std. m^3

NOTES Sample ID Format: DD-Site-YYMMDDHHMM-Sample Type; Sample Type: -01=Primary, FB=Field Blank

PAH Dry Deposition Field Data Log Sheet

Site ID 07 **Field Crew:** KG, GM

Deposition Event: Dry 1 Dry 2 Dry 3 (Dry 4) Dry 5

Type: (Weekday (W/Th)) Weekend (Sat/Sun) **Collection:** 2 /4 (per DD event)

Start Date: 4-9-14 **End Date:** 4-10-14

ATMOSPHERIC CONDITIONS

Sky (Start): (Sunny) Partly Cloudy Overcast Fog **Sky (End):** (Sunny) Partly Cloudy Overcast Fog

PUF SAMPLER

Sampler I.D. No.:

Certification Date/No.: PUF: P140310 XAD: X140311 Filter: F140205

Elapsed Timer	Black	White
Start:	389	19
Stop:	413	19
Diff.	24	

Sample Time	
Start:	0929
Stop:	0929
Duration:	24

Calibrations

MULTI-POINT CALIBRATION TIME: DATE:			
Magn.	(+)	(-)	SUM
70			
60			
50			
40			
30			

M=

B=

R^2=

Audit flow check within ±10 of set point?			
Date	4-9	4-10	
Time	0927	0930	
Magn. Read.	42	40	
△H	3.4	3.7	
Yes/ No?	Y	Y	
Min (-10%)		Max (+10%)	

Magnehelic Set-point: 44

FIELD MEASUREMENTS

Date	Time	Magn. Reading	Wind Speed	Barometric Pressure (in. Hg)	Temp (°F)	Notes (calc flow rate, etc.)
4.9.14	0929	44	2	29.97	69	
4.10.14	0929	44	5	29.92	68	

TOTAL VOLUME: 329 std. m^3

NOTES Sample ID Format: DD-Site-YYMMDDHHMM-Sample Type; Sample Type: -01=Primary, FB=Field Blank

PAH Dry Deposition Field Data Log Sheet

Site ID FD 12 **Field Crew:** KG, CS

Deposition Event: Dry 1 Dry 2 Dry 3 (Dry 4) Dry 5

Type: Weekday (W/Th) Weekend (Sat/Sun) **Collection:** 3 /4 (per DD event)

Start Date: 4-12-14 **End Date:** 4-13-14

ATMOSPHERIC CONDITIONS

Sky (Start): Sunny Partly Cloudy (Overcast) Fog **Sky (End):** Sunny Partly Cloudy (Overcast) Fog

PUF SAMPLER

Sampler I.D. No.:

Certification Date/No.: PUF: P140310 XAD: X140311 Filter: F140205

Elapsed Timer	Black	White
Start:	364	85
Stop:	388	85
Diff.	24	

Sample Time	
Start:	0830
Stop:	0830
Duration:	24

Calibrations

MULTI-POINT CALIBRATION TIME: DATE:			
Magn.	(+)	(-)	SUM
70			
60			
50			
40			
30			

M=
B=
R^2=

Audit flow check within ±10 of set point?			
Date	4-12-14	4-13-14	
Time	0820	0825	
Magn. Read.	40	39	
△H	3.8	3.8	
Yes/ No?	Y	Y	
Min (-10%)		Max (+10%)	

Magnehelic Set-point: 42

FIELD MEASUREMENTS

Date	Time	Magn. Reading	Wind Speed	Barometric Pressure (in. Hg)	Temp (°F)	Notes (calc flow rate, etc.)
4-12-14	0830	42	1	29.92	61	
4-13-14	0824	42	0	29.99	59	

TOTAL VOLUME: 335 std. m^3

NOTES Sample ID Format: DD-Site-YYMMDDHHMM-Sample Type; Sample Type: -01=Primary, FB=Field Blank

PAH Dry Deposition Field Data Log Sheet

Site ID FD11 **Field Crew:** KG, CS

Deposition Event: Dry 1 Dry 2 Dry 3 (Dry 4) Dry 5

Type: Weekday (W/Th) Weekend (Sat/Sun) **Collection:** 3 /4 (per DD event)

Start Date: 4-12-14 **End Date:** 4-13-14

ATMOSPHERIC CONDITIONS

Sky (Start): Sunny (Partly Cloudy) Overcast Fog **Sky (End):** Sunny Partly Cloudy (Overcast) Fog

PUF SAMPLER

Sampler I.D. No.:

Certification Date/No.: PUF: PM0310 XAD: X140311 Filter: F140205

Elapsed Timer	Black	White
Start:	413	17
Stop:	437	17
Diff.		

Sample Time	
Start:	0859
Stop:	0859
Duration:	

Calibrations

MULTI-POINT CALIBRATION TIME: DATE:			
Magn.	(+)	(-)	SUM
70			
60			
50			
40			
30			

M=
B=
R^2=

Audit flow check within ±10 of set point?			
Date	4-12-14	4-13-14	
Time	0856	0902	
Magn. Read.	42	41	
△H	3.7	3.6	
Yes/ No?	Y	Y	
Min (-10%)		Max (+10%)	

Magnehelic Set-point: 45

FIELD MEASUREMENTS

Date	Time	Magn. Reading	Wind Speed	Barometric Pressure (in. Hg)	Temp (°F)	Notes (calc flow rate, etc.)
4.12.14	0859	45	2	29.95	60	
4.13.14	0856	44	1	30.01	60	

TOTAL VOLUME: 334 std. m^3

NOTES Sample ID Format: DD-Site-YYMMDDHHMM-Sample Type; Sample Type: -01=Primary, FB=Field Blank

PAH Dry Deposition Field Data Log Sheet

Site ID FD07 **Field Crew:** KG, CS

Deposition Event: Dry 1 Dry 2 Dry 3 (Dry 4) Dry 5

Type: Weekday (W/Th) Weekend (Sat/Sun) **Collection:** 3 /4 (per DD event)

Start Date: 4-12-14 **End Date:** 4-13-14

ATMOSPHERIC CONDITIONS

Sky (Start): Sunny (Partly Cloudy) Overcast Fog **Sky (End):** Sunny Partly Cloudy (Overcast) Fog

PUF SAMPLER

Sampler I.D. No.:

Certification Date/No.: PUF: P140310 XAD: X140311 Filter: F140205

Elapsed Timer	Black	White
Start:	413	59
Stop:	437	59
Diff.	0	

Sample Time	
Start:	0922
Stop:	0922
Duration:	24

Calibrations

MULTI-POINT CALIBRATION TIME: DATE:			
Magn.	(+)	(-)	SUM
70			
60			
50			
40			
30			

M=
B=
R^2=

Audit flow check within ±10 of set point?			
Date	4.12.14	4.13.14	
Time	0918	0925	
Magn. Read.	42	42	
△H	3.6	3.6	
Yes/ No?	Y	Y	
Min (-10%)		Max (+10%)	

Magnehelic Set-point: 45

FIELD MEASUREMENTS

Date	Time	Magn. Reading	Wind Speed	Barometric Pressure (in. Hg)	Temp (°F)	Notes (calc flow rate, etc.)
4.12.14	0922	45	5	29.9	63	
4.13.14	0919	45	7	29.97	60	

TOTAL VOLUME: 334 std. m^3

NOTES Sample ID Format: DD-Site-YYMMDDHHMM-Sample Type; Sample Type: -01=Primary, FB=Field Blank

PAH Dry Deposition Field Data Log Sheet

Site ID CNM **Field Crew:** KG, CS

Deposition Event: Dry 1 Dry 2 (Dry 3) Dry 4 Dry 5

Type: Weekday (W/Th) (Weekend (Sat/Sun)) **Collection:** ___ /4 (per DD event)

Start Date: 4-12-14 **End Date:** 4.13.14

ATMOSPHERIC CONDITIONS

Sky (Start): (Sunny) Partly Cloudy Overcast Fog **Sky (End):** Sunny Partly Cloudy Overcast Fog

PUF SAMPLER

Sampler I.D. No.:

Certification Date/No.: PUF: _____ XAD: _____ Filter: _____

Elapsed Timer	Black	White
Start:	340	69
Stop:	364	69
Diff.		

Sample Time	
Start:	1014
Stop:	1014
Duration:	

Calibrations

MULTI-POINT CALIBRATION TIME: DATE:			
Magn.	(+)	(-)	SUM
70			
60			
50			
40			
30			

M=
B=
R^2=

Audit flow check within ±10 of set point?			
Date	4.12.14	4.13.14	
Time	1011	1019	
Magn. Read.	40	46	
△H	3.6	3.6	
Yes/ No?	Y	Y	
Min (-10%)		Max (+10%)	

Magnehelic Set-point: 43

FIELD MEASUREMENTS

Date	Time	Magn. Reading	Wind Speed	Barometric Pressure (in. Hg)	Temp (°F)	Notes (calc flow rate, etc.)
4.12.14	1014	43	2	29.81	62	
4.13.14	1009	42	2	29.86	61	

TOTAL VOLUME: 330 std. m^3

NOTES Sample ID Format: DD-Site-YYMMDDHHMM-Sample Type; Sample Type: -01=Primary, FB=Field Blank

PAH Dry Deposition Field Data Log Sheet

Site ID CNM **Field Crew:** KG

Deposition Event: Dry 1 Dry 2 Dry 3 (Dry 4) Dry 5

Type: (Weekday (W/Th)) Weekend (Sat/Sun) **Collection:** 4 /4 (per DD event)

Start Date: 4.16.14 **End Date:** 4.17.14

ATMOSPHERIC CONDITIONS

Sky (Start): Sunny Partly Cloudy (Overcast) Fog **Sky (End):** Sunny Partly Cloudy Overcast Fog

PUF SAMPLER

Sampler I.D. No.:

Certification Date/No.: PUF: P140310 XAD: X140811 Filter: F140205

Elapsed Timer	Black	White
Start:	364	74
Stop:	388	74
Diff.	24	

Sample Time	
Start:	0957
Stop:	0957
Duration:	24

Calibrations

MULTI-POINT CALIBRATION TIME: DATE:			
Magn.	(+)	(-)	SUM
70			
60			
50			
40			
30			

M=

B=

R^2=

Audit flow check within ±10 of set point?			
Date	4.16.14	4.17	
Time	0954	1000	
Magn. Read.	41	41	
△H	3.8	3.8	
Yes/ No?	Y	Y	
Min (-10%)		Max (+10%)	

Magnehelic Set-point: 4/4

FIELD MEASUREMENTS

Date	Time	Magn. Reading	Wind Speed	Barometric Pressure (in. Hg)	Temp (°F)	Notes (calc flow rate, etc.)
4.16.14	0957	44	1	29.74	61	
4.17.14	0956	44	1	29.77	60	

TOTAL VOLUME: 327 std. m^3

NOTES Sample ID Format: DD-Site-YYMMDDHHMM-Sample Type; Sample Type: -01=Primary, FB=Field Blank

PAH Dry Deposition Field Data Log Sheet

Site ID: FD07 Field Crew: PG

Deposition Event: Dry 1 Dry 2 Dry 3 (Dry 4) Dry 5

Type: (Weekday (W/Th)) Weekend (Sat/Sun) Collection: ___ /4 (per DD event)

Start Date: 4.16.14 End Date: _____

ATMOSPHERIC CONDITIONS

Sky (Start): Sunny Partly Cloudy (Overcast) Fog Sky (End): Sunny Partly Cloudy Overcast Fog

PUF SAMPLER

Sampler I.D. No.:

Certification Date/No.: PUF: 140310 XAD: X140311 Filter: F140205

Elapsed Timer	Black	White
Start:	437	62
Stop:		
Diff.		

Sample Time	
Start:	0915
Stop:	
Duration:	

Calibrations

MULTI-POINT CALIBRATION TIME: DATE:			
Magn.	(+)	(-)	SUM
70			
60			
50			
40			
30			

M=

B=

R^2=

Audit flow check within ±10 of set point?			
Date	4.16	4.17	
Time	0913	0917	
Magn. Read.	43	43	
△H	3.8	3.7	
Yes/ No?	Y	Y	
Min (-10%)		Max (+10%)	

Magnehelic Set-point: 45

FIELD MEASUREMENTS

Date	Time	Magn. Reading	Wind Speed	Barometric Pressure (in. Hg)	Temp (°F)	Notes (calc flow rate, etc.)
4.16.14	0916	45	3	29.83	57	
4-17-14	0912	45	1	29.87	61	

TOTAL VOLUME: 334 std. m^3

NOTES Sample ID Format: DD-Site-YYMMDDHHMM-Sample Type; Sample Type: -01=Primary, FB=Field Blank

PAH Dry Deposition Field Data Log Sheet

Site ID FD12 **Field Crew:** KG

Deposition Event: Dry 1 Dry 2 Dry 3 (Dry 4) Dry 5

Type: (Weekday (W/Th)) Weekend (Sat/Sun) **Collection:** ___ /4 (per DD event)

Start Date: 4-16-14 **End Date:** 4-17-14

ATMOSPHERIC CONDITIONS

Sky (Start): Sunny Partly Cloudy (Overcast) Fog **Sky (End):** Sunny Partly Cloudy Overcast Fog

PUF SAMPLER

Sampler I.D. No.:

Certification Date/No.: PUF: P140310 XAD: X140311 Filter: F140205

Elapsed Timer	Black	White
Start:	388	91
Stop:	412	91
Diff.	24	

Sample Time	
Start:	0826
Stop:	0826
Duration:	24

Calibrations

MULTI-POINT CALIBRATION TIME: DATE:			
Magn.	(+)	(-)	SUM
70			
60			
50			
40			
30			

M=

B=

R^2=

Audit flow check within ±10 of set point?			
Date	4-16-14	4-17-14	
Time	0823	8?6	
Magn. Read.	40	40	
△H	3.7	3.7	
Yes/ No?	Y	Y	
Min (-10%)		Max (+10%)	

Magnehelic Set-point: 42

FIELD MEASUREMENTS

Date	Time	Magn. Reading	Wind Speed	Barometric Pressure (in. Hg)	Temp (°F)	Notes (calc flow rate, etc.)
4-16-14	0827	42	0	29.85	58	
4-17-14	0820	42	1	29.89	59	

TOTAL VOLUME: 335 std. m^3

NOTES Sample ID Format: DD-Site-YYMMDDHHMM-Sample Type; Sample Type: -01=Primary, FB=Field Blank

PAH Dry Deposition Field Data Log Sheet

Site ID: ED11 Field Crew: KG

Deposition Event: Dry 1 Dry 2 Dry 3 (Dry 4) Dry 5

Type: (Weekday (W/Th)) Weekend (Sat/Sun) Collection: 4 /4 (per DD event)

Start Date: 4.16.14 End Date: 4-17-14

ATMOSPHERIC CONDITIONS

Sky (Start): Sunny Partly Cloudy (Overcast) Fog Sky (End): Sunny Partly Cloudy (Overcast) Fog

PUF SAMPLER

Sampler I.D. No.:

Certification Date/No.: PUF: P140310 XAD: X140311 Filter: F140205

Elapsed Timer	Black	White
Start:	437	21
Stop:	461	21
Diff.		

Sample Time	
Start:	0850
Stop:	0850
Duration:	24

Calibrations

MULTI-POINT CALIBRATION

TIME: DATE:

Magn.	(+)	(-)	SUM
70			
60			
50			
40			
30			

M=

B=

R^2=

Audit flow check within ±10 of set point?

Date	4.16.14	4.17.14	
Time	0850	0855	
Magn. Read.	42	42	
△H	3.8	3.8	
Yes/ No?	Y	Y	
Min (-10%)		Max (+10%)	

Magnehelic Set-point: 45

FIELD MEASUREMENTS

Date	Time	Magn. Reading	Wind Speed	Barometric Pressure (in. Hg)	Temp (°F)	Notes (calc flow rate, etc.)
4.16.14	0851	45	13	29.88	58	

TOTAL VOLUME: 337 std. m^3

NOTES Sample ID Format: DD-Site-YYMMDDHHMM-Sample Type; Sample Type: -01=Primary, FB=Field Blank

PAH Dry Deposition Field Data Log Sheet

Site ID: CNM

Field Crew: KC, GM

Deposition Event: Dry 1 Dry 2 Dry 3 Dry 4 Dry 5

Type: Weekday (W/Th) ~~Weekend~~ (Sat/Sun)

Collection: 1 /4 (per DD event)

Start Date: 5.3.14

End Date: 5.4.14

ATMOSPHERIC CONDITIONS

Sky (Start): (Sunny) Partly Cloudy Overcast Fog

Sky (End): Sunny Partly Cloudy Overcast Fog

PUF SAMPLER

Sampler I.D. No.:

Certification Date/No.: PUF: 140414 XAD: 140416 Filter: 140320

Elapsed Timer	Black	White
Start:	388	86
Stop:	412	86
Diff.	24	

Sample Time	
Start:	1641
Stop:	1041
Duration:	24

Calibrations

MULTI-POINT CALIBRATION

TIME: DATE:

Magn.	(+)	(-)	SUM
70			
60			
50			
40			
30			

M=

B=

R^2=

Audit flow check within ±10 of set point?			
Date	5.3.14	5.4.14	
Time	1038	1045	
Magn. Read.	40	40	
△H	3.5	3.6	
Yes/ No?	Y	Y	
Min (-10%)		Max (+10%)	

Magnehelic Set-point: 43

FIELD MEASUREMENTS

Date	Time	Magn. Reading	Wind Speed	Barometric Pressure (in. Hg)	Temp (°F)	Notes (calc flow rate, etc.)
5.3.14	1041	43	3	29.78	80	
5.4.14	1040	43	4	29.82	65	

TOTAL VOLUME: _____ std. m^3

NOTES Sample ID Format: DD-Site-YYMMDDHHMM-Sample Type; Sample Type: -01=Primary, FB=Field Blank

PAH Dry Deposition Field Data Log Sheet

Site ID FD07 **Field Crew:** KG, GM

Deposition Event: Dry 1 Dry 2 Dry 3 Dry 4 (Dry 5)

Type: Weekday (W/Th) Weekend (Sat/Sun) **Collection:** 1 /4 (per DD event)

Start Date: 5-3-14 **End Date:** 5-4-14

ATMOSPHERIC CONDITIONS

Sky (Start): (Sunny) Partly Cloudy Overcast Fog **Sky (End):** (Sunny) Partly Cloudy Overcast Fog

PUF SAMPLER

Sampler I.D. No.:

Certification Date/No.: PUF: 140414 XAD: 140416 Filter: 140320

Elapsed Timer

	Black	White
Start:	461	75
Stop:	485	75
Diff.		

Sample Time

Start:	0949
Stop:	0949
Duration:	24

Calibrations

MULTI-POINT CALIBRATION TIME: DATE:			
Magn.	(+)	(-)	SUM
70			
60			
50			
40			
30			

M=
B=
R^2=

Audit flow check within ±10 of set point?			
Date	5-3-14	5.4.14	
Time	0946	0955	
Magn. Read.	40	40	
△H	3.5	3.5	
Yes/ No?	Y	Y	
Min (-10%)		Max (+10%)	

Magnehelic Set-point: 44

FIELD MEASUREMENTS

Date	Time	Magn. Reading	Wind Speed	Barometric Pressure (in. Hg)	Temp (°F)	Notes (calc flow rate, etc.)
5.3.14	0944	44	1	29.87	79	
5.4.14	0949	44	1	29.93	64	

TOTAL VOLUME: _____ std. m^3

NOTES Sample ID Format: DD-Site-YYMMDDHHMM-Sample Type; Sample Type: -01=Primary, FB=Field Blank

PAH Dry Deposition Field Data Log Sheet

Site ID FD11 **Field Crew:** K G, BM

Deposition Event: Dry 1 Dry 2 Dry 3 Dry 4 (Dry 5)

Type: Weekday (W/Th) (Weekend (Sat/Sun)) **Collection:** 1 /4 (per DD event)

Start Date: 5-3-14 **End Date:** 5-4-14

ATMOSPHERIC CONDITIONS

Sky (Start): (Sunny) Partly Cloudy Overcast Fog **Sky (End):** Sunny Partly Cloudy Overcast Fog

PUF SAMPLER

Sampler I.D. No.:

Certification Date/No.: PUF: 140414 XAD: 140416 Filter: 140320

Elapsed Timer

	Black	White
Start:	461	48
Stop:	485	408
Diff.		

Sample Time

Start:	0928
Stop:	0928
Duration:	

Calibrations

MULTI-POINT CALIBRATION TIME: DATE:			
Magn.	(+)	(-)	SUM
70			
60			
50			
40			
30			

M=
B=
R^2=

Audit flow check within ±10 of set point?			
Date	5.3.14	5.4.14	
Time	0925	0935	
Magn. Read.	40	40	
△H	3.4	3.6	
Yes/ No?	Y	Y	
Min (-10%)		Max (+10%)	

Magnehelic Set-point: 44

FIELD MEASUREMENTS

Date	Time	Magn. Reading	Wind Speed	Barometric Pressure (in. Hg)	Temp (°F)	Notes (calc flow rate, etc.)
5.3.14	0928	44	4	29.92	81	
5.4.14	0927	44	2	29.98	67	

TOTAL VOLUME: _____ std. m^3

NOTES Sample ID Format: DD-Site-YYMMDDHHMM-Sample Type; Sample Type: -01=Primary, FB=Field Blank

PAH Dry Deposition Field Data Log Sheet

Site ID: FD12 Field Crew: KG, GM

Deposition Event: Dry 1 Dry 2 Dry 3 Dry 4 (Dry 5)

Type: Weekday (W/Th) (Weekend (Sat/Sun)) Collection: 1 /4 (per DD event)

Start Date: 5-3-14 End Date: 5-4-14

ATMOSPHERIC CONDITIONS

Sky (Start): (Sunny) Partly Cloudy Overcast Fog Sky (End): (Sunny) Partly Cloudy Overcast Fog

PUF SAMPLER

Sampler I.D. No.:

Certification Date/No.: PUF: 140414 XAD: 140416 Filter: 140320

Elapsed Timer	Black	White
Start:	413	16
Stop:	437	16
Diff.	24	

Sample Time	
Start:	0907
Stop:	0907
Duration:	24

Calibrations

MULTI-POINT CALIBRATION TIME: DATE:			
Magn.	(+)	(-)	SUM
70			
60			
50			
40			
30			

M=

B=

R^2=

Audit flow check within ±10 of set point?			
Date	5-3-14	5.4.14	
Time	0904	0912	
Magn. Read.	39	38	
△H	3.5	3.5	
Yes/ No?	Y	Y	
Min (-10%)		Max (+10%)	

Magnehelic Set-point: 41

FIELD MEASUREMENTS

Date	Time	Magn. Reading	Wind Speed	Barometric Pressure (in. Hg)	Temp (°F)	Notes (calc flow rate, etc.)
5-3-14	0907	41	1	29.89	82	
5-4-14	0857	41	2	29.94	66	

TOTAL VOLUME: _____ std. m^3

NOTES Sample ID Format: DD-Site-YYMMDDHHMM-Sample Type; Sample Type: -01=Primary, FB=Field Blank

PAH Dry Deposition Field Data Log Sheet

Site ID CNM1 **Field Crew:** KG, GM

Deposition Event: Dry 1 Dry 2 Dry 3 Dry 4 Dry 5

Type: ~~Weekday~~ (W/Th) Weekend (Sat/Sun) **Collection:** 2 /4 (per DD event)

Start Date: 5-7-14 **End Date:** 5-8-14

ATMOSPHERIC CONDITIONS

Sky (Start): (Sunny) Partly Cloudy Overcast Fog **Sky (End):** Sunny Partly Cloudy Overcast Fog

PUF SAMPLER

Sampler I.D. No.:

Certification Date/No.: PUF: _____ XAD: _____ Filter: _____

Elapsed Timer	Black	White
Start:	412	91
Stop:	436	91
Diff.	24	

Sample Time	
Start:	1112
Stop:	1112
Duration:	24

Calibrations

MULTI-POINT CALIBRATION TIME: DATE:			
Magn.	(+)	(-)	SUM
70			
60			
50			
40			
30			

M=
B=
R^2=

Audit flow check within ±10 of set point?			
Date	5-7-14	5-8-14	
Time	1110	1115	
Magn. Read.	42	40	
△H	3.7	3.6	
Yes/ No?	Y	Y	
Min (-10%)		Max (+10%)	

Magnehelic Set-point: 44

FIELD MEASUREMENTS

Date	Time	Magn. Reading	Wind Speed	Barometric Pressure (in. Hg)	Temp (°F)	Notes (calc flow rate, etc.)
5.7.14	1117	44	2	29.86	66	
5.8.14	1111	44	2	29.91	64	

TOTAL VOLUME: _____ std. m^3

NOTES Sample ID Format: DD-Site-YYMMDDHHMM-Sample Type; Sample Type: -01=Primary, FB=Field Blank

PAH Dry Deposition Field Data Log Sheet

Site ID: ED07 | Field Crew: KC, GM

Deposition Event: Dry 1 Dry 2 Dry 3 Dry 4 **Dry 5**

Type: **Weekday (W/Th)** Weekend (Sat/Sun) | Collection: 2/4 (per DD event)

Start Date: 5-7-14 | End Date: 5-8-14

ATMOSPHERIC CONDITIONS

Sky (Start): **Sunny** Partly Cloudy Overcast Fog | Sky (End): **Sunny** Partly Cloudy Overcast Fog

PUF SAMPLER

Sampler I.D. No.:

Certification Date/No.: PUF: _____ XAD: _____ Filter: _____

Elapsed Timer	Black	White
Start:	485	83
Stop:	509	83
Diff.	24	00

Sample Time	
Start:	1021
Stop:	1021
Duration:	24

Calibrations

MULTI-POINT CALIBRATION TIME: DATE:			
Magn.	(+)	(-)	SUM
70			
60			
50			
40			
30			

M=
B=
R^2=

Audit flow check within ±10 of set point?			
Date	5.7.14	5.8.14	
Time	1020	1028	
Magn. Read.	42	42	
△H	3.7	3.5	
Yes/ No?	Y	Y	
Min (-10%)		Max (+10%)	

Magnehelic Set-point: 45

FIELD MEASUREMENTS

Date	Time	Magn. Reading	Wind Speed	Barometric Pressure (in. Hg)	Temp (°F)	Notes (calc flow rate, etc.)
5.7.14	1021	45	9	29.95	65	
5.8.14	1020	45	6	30.01	64	

TOTAL VOLUME: _____ std. m^3

NOTES Sample ID Format: DD-Site-YYMMDDHHMM-Sample Type; Sample Type: -01=Primary, FB=Field Blank

PAH Dry Deposition Field Data Log Sheet

Site ID: FD11 Field Crew: KG, CM

Deposition Event: Dry 1 (Dry 2) Dry 3 Dry 4 (Dry 5)

Type: (Weekday (W/Th)) Weekend (Sat/Sun) Collection: 2 /4 (per DD event)

Start Date: 5-7-14 End Date: 5-8-14

ATMOSPHERIC CONDITIONS

Sky (Start): Sunny (Partly Cloudy) Overcast Fog Sky (End): Sunny Partly Cloudy Overcast Fog

PUF SAMPLER

Sampler I.D. No.:

Certification Date/No.: PUF: _____ XAD: _____ Filter: _____

Elapsed Timer	Black	White
Start:	485	60
Stop:	509	60
Diff.		

Sample Time	
Start:	1000
Stop:	1000
Duration:	24

Calibrations

MULTI-POINT CALIBRATION TIME: DATE:			
Magn.	(+)	(-)	SUM
70			
60			
50			
40			
30			

M=

B=

R^2=

Audit flow check within ±10 of set point?			
Date	5-7-14	5-8-14	
Time	0950		
Magn. Read.	43	41	
△H	3.7		
Yes/ No?	Y		
Min (-10%)		Max (+10%)	

Magnehelic Set-point: 45

FIELD MEASUREMENTS

Date	Time	Magn. Reading	Wind Speed	Barometric Pressure (in. Hg)	Temp (°F)	Notes (calc flow rate, etc.)
5-7-14	10	45	1	30.01	64	
5-8-14	0958	45	2	30.06	64	

TOTAL VOLUME: _____ std. m^3

NOTES Sample ID Format: DD-Site-YYMMDDHHMM-Sample Type; Sample Type: -01=Primary, FB=Field Blank

PAH Dry Deposition Field Data Log Sheet

Site ID FD12 **Field Crew:** KC, GM

Deposition Event: Dry 1 Dry 2 Dry 3 Dry 4 (Dry 5)

Type: Weekday (W/Th) Weekend (Sat/Sun) **Collection:** 2/4 (per DD event)

Start Date: 5-7-14 **End Date:** 5-8-14

ATMOSPHERIC CONDITIONS

Sky (Start): Sunny (Partly Cloudy) Overcast Fog **Sky (End):** Sunny (Partly Cloudy) Overcast Fog

PUF SAMPLER

Sampler I.D. No.:

Certification Date/No.: PUF: 140114 XAD: 140416 Filter: 140320

Elapsed Timer	Black	White
Start:	437	22
Stop:	461	22
Diff.	24	0

Sample Time	
Start:	0936
Stop:	0936
Duration:	24

Calibrations

MULTI-POINT CALIBRATION TIME: DATE:			
Magn.	(+)	(-)	SUM
70			
60			
50			
40			
30			

M=

B=

R^2=

Audit flow check within ±10 of set point?			
Date	5-7-14	5-8-14	
Time	0932	0940	
Magn. Read.	39	39	
△H	3.5	3.7	
Yes/ No?	Y	Y	
Min (-10%)		Max (+10%)	

Magnehelic Set-point: 42

FIELD MEASUREMENTS

Date	Time	Magn. Reading	Wind Speed	Barometric Pressure (in. Hg)	Temp (°F)	Notes (calc flow rate, etc.)
5-7-14	0936	42	5	29.97	61	
5-8-14	0928	42	1	30.02	63	

TOTAL VOLUME: _____ std. m^3

NOTES Sample ID Format: DD-Site-YYMMDDHHMM-Sample Type; Sample Type: -01=Primary, FB=Field Blank

PAH Dry Deposition Field Data Log Sheet

Site ID: FD12

Field Crew: KG, GM

Deposition Event: Dry 1 Dry 2 Dry 3 Dry 4 (Dry 5)

Type: Weekday (W/Th) (Weekend (Sat/Sun))

Collection: 3 /4 (per DD event)

Start Date: 5-10-14

End Date: 5-11-14

ATMOSPHERIC CONDITIONS

Sky (Start): Sunny Partly Cloudy (Overcast) Fog

Sky (End): Sunny Partly Cloudy Overcast Fog

PUF SAMPLER

Sampler I.D. No.:

Certification Date/No.: PUF: _____ XAD: _____ Filter: _____

Elapsed Timer	Black	White
Start:	461	27
Stop:	485	27
Diff.		

Sample Time	
Start:	0824
Stop:	0824
Duration:	24

Calibrations

MULTI-POINT CALIBRATION TIME: DATE:			
Magn.	(+)	(-)	SUM
70			
60			
50			
40			
30			

M=

B=

R^2=

Audit flow check within ±10 of set point?			
Date	5-10-14	5/1-14	
Time	0822	0831	
Magn. Read.	40	40	
△H	3.8	36	
Yes/ No?	Y	Y	
Min (-10%)		Max (+10%)	

Magnehelic Set-point: 41

FIELD MEASUREMENTS

Date	Time	Magn. Reading	Wind Speed	Barometric Pressure (in. Hg)	Temp (°F)	Notes (calc flow rate, etc.)
5.10.14	0824	42	Ø	29.93	63	
5.11.14	0822	42	Ø	29.88	66	

TOTAL VOLUME: 335 std. m^3

NOTES Sample ID Format: DD-Site-YYMMDDHHMM-Sample Type; Sample Type: -01=Primary, FB=Field Blank

PAH Dry Deposition Field Data Log Sheet

Site ID: FD 11 | Field Crew: KG, GM

Deposition Event: Dry 1 Dry 2 Dry 3 Dry 4 Dry 5

Type: Weekday (W/Th) (Weekend (Sat/Sun)) | Collection: 3 /4 (per DD event)

Start Date: 5-10-14 | End Date: 5-11-14

ATMOSPHERIC CONDITIONS

Sky (Start): Sunny (Partly Cloudy) Overcast Fog | Sky (End): (Sunny) Partly Cloudy Overcast Fog

PUF SAMPLER

Sampler I.D. No.:

Certification Date/No.: PUF: _____ XAD: _____ Filter: _____

Elapsed Timer	Black	White
Start:	509	64
Stop:	533	64
Diff.		

Sample Time	
Start:	0846
Stop:	0846
Duration:	24

Calibrations

MULTI-POINT CALIBRATION

TIME: DATE:

Magn.	(+)	(-)	SUM
70			
60			
50			
40			
30			

M=

B=

R^2=

Audit flow check within ±10 of set point?

Date	5-10-14	5-11-14	
Time	0843	0854	
Magn. Read.	41	41	
△H	3.6	3.6	
Yes/ No?	Y	Y	
Min (-10%)		Max (+10%)	

Magnehelic Set-point: 45

FIELD MEASUREMENTS

Date	Time	Magn. Reading	Wind Speed	Barometric Pressure (in. Hg)	Temp (°F)	Notes (calc flow rate, etc.)
5-10-14	0846	45	4	29.97	62	
5-11-14	0844	45	1	29.91	64	

TOTAL VOLUME: 334 std. m^3

NOTES Sample ID Format: DD-Site-YYMMDDHHMM-Sample Type; Sample Type: -01=Primary, FB=Field Blank

PAH Dry Deposition Field Data Log Sheet

Site ID: CAM

Field Crew: KG GM

Deposition Event: Dry 1 Dry 2 Dry 3 Dry 4 (Dry 5)

Type: Weekday (W/Th) (Weekend (Sat/Sun)

Collection: 3 /4 (per DD event)

Start Date: 5.10.14

End Date: 5.11.14

ATMOSPHERIC CONDITIONS

Sky (Start): (Sunny) Partly Cloudy Overcast Fog

Sky (End): (Sunny) Partly Cloudy Overcast Fog

PUF SAMPLER

Sampler I.D. No.:

Certification Date/No.: PUF: _____ XAD: _____ Filter: _____

Elapsed Timer	Black	White
Start:	436	96
Stop:	460	96
Diff.	24	0

Sample Time	
Start:	0951
Stop:	0951
Duration:	24

Calibrations

MULTI-POINT CALIBRATION TIME: DATE:			
Magn.	(+)	(-)	SUM
70			
60			
50			
40			
30			

M=

B=

R^2=

Magnehelic Set-point: 44

Audit flow check within ±10 of set point?		
Date	5.10.14	5.11.14
Time	0950	0955
Magn. Read.	40	40
△H	3.6	3.7
Yes/ No?	Y	Y
Min (-10%)		Max (+10%)

FIELD MEASUREMENTS

Date	Time	Magn. Reading	Wind Speed	Barometric Pressure (in. Hg)	Temp (°F)	Notes (calc flow rate, etc.)
5.10.14	0951	44	3	29.81	66	
5.11.14	0950	43	5	29.76	64	

TOTAL VOLUME: 335 std. m^3

NOTES Sample ID Format: DD-Site-YYMMDDHHMM-Sample Type; Sample Type: -01=Primary, FB=Field Blank

PAH Dry Deposition Field Data Log Sheet

Site ID: ED07 Field Crew: KG, GM

Deposition Event: Dry 1 Dry 2 Dry 3 Dry 4 (Dry 5)

Type: Weekday (W/Th) Weekend (Sat/Sun) Collection: 3 /4 (per DD event)

Start Date: 5-10-14 End Date: 5-11-14

ATMOSPHERIC CONDITIONS

Sky (Start): Sunny (Partly Cloudy) Overcast Fog Sky (End): (Sunny) Partly Cloudy Overcast Fog

PUF SAMPLER

Sampler I.D. No.:

Certification Date/No.: PUF: _____ XAD: _____ Filter: _____

Elapsed Timer	Black	White
Start:	509	90
Stop:	533	90
Diff.	24	0

Sample Time	
Start:	0905
Stop:	0905
Duration:	24

Calibrations

MULTI-POINT CALIBRATION TIME: DATE:			
Magn.	(+)	(-)	SUM
70			
60			
50			
40			
30			

M=

B=

R^2=

Audit flow check within ±10 of set point?			
Date	5.10.14	5.11.14	
Time	0903	0911	
Magn. Read.	41	41	
△H	3.6	3.7	
Yes/ No?	Y	Y	
Min (-10%)		Max (+10%)	

Magnehelic Set-point: 45

FIELD MEASUREMENTS

Date	Time	Magn. Reading	Wind Speed	Barometric Pressure (in. Hg)	Temp (°F)	Notes (calc flow rate, etc.)
5.10.14	0905	45	1	29.92	63	
5.11.14	0903	45	2	29.86	65	

TOTAL VOLUME: 334 std. m^3

NOTES Sample ID Format: DD-Site-YYMMDDHHMM-Sample Type; Sample Type: -01=Primary, FB=Field Blank

PAH Dry Deposition Field Data Log Sheet

Site ID: CNM

Field Crew: KG, GM

Deposition Event: Dry 1 Dry 2 Dry 3 Dry 4 (Dry 5)

Type: (Weekday (W/Th)) Weekend (Sat/Sun)

Collection: 4 /4 (per DD event)

Start Date: 5-20-14

End Date: 5-21-14

ATMOSPHERIC CONDITIONS

Sky (Start): Sunny (Partly Cloudy) Overcast Fog

Sky (End): (Sunny) Partly Cloudy Overcast Fog

PUF SAMPLER

Sampler I.D. No.:

Certification Date/No.: PUF: P140414 XAD: X140416 Filter: F140320

Elapsed Timer	Black	White
Start:	461	01
Stop:	485	01
Diff.	24	

Sample Time	
Start:	1124
Stop:	1129
Duration:	24

Calibrations

MULTI-POINT CALIBRATION TIME: DATE:			
Magn.	(+)	(-)	SUM
70			
60			
50			
40			
30			

M=

B=

R^2=

Audit flow check within ±10 of set point?			
Date	5-20-14	5-21-14	
Time	1121	1138	
Magn. Read.	41	44	
△H	3.6	3.5	
Yes/ No?	Y	Y	
Min (-10%)		Max (+10%)	

Magnehelic Set-point: 44

FIELD MEASUREMENTS

Date	Time	Magn. Reading	Wind Speed	Barometric Pressure (in. Hg)	Temp (°F)	Notes (calc flow rate, etc.)
5-20-14	1127	44	7	29.88	66	
5-21-14	1127	44	9	29.86	68	

TOTAL VOLUME: _____ std. m^3

NOTES Sample ID Format: DD-Site-YYMMDDHHMM-Sample Type; Sample Type: -01=Primary, FB=Field Blank

PAH Dry Deposition Field Data Log Sheet

Site ID: FD11

Field Crew: KG, GM

Deposition Event: Dry 1 Dry 2 Dry 3 Dry 4 (Dry 5)

Type: (Weekday (W/Th)) Weekend (Sat/Sun)

Collection: 4 /4 (per DD event)

Start Date: 5-20-14

End Date: 5-21-14

ATMOSPHERIC CONDITIONS

Sky (Start): Sunny (Partly Cloudy) Overcast Fog

Sky (End): (Sunny) Partly Cloudy Overcast Fog

PUF SAMPLER

Sampler I.D. No.:

Certification Date/No.: PUF: P140414 XAD: X140416 Filter: F140320

Elapsed Timer	Black	White
Start:	533	74
Stop:	557	~~74~~
Diff.	24	

Sample Time	
Start:	1018
Stop:	1018
Duration:	

Calibrations

MULTI-POINT CALIBRATION TIME: DATE:			
Magn.	(+)	(-)	SUM
70			
60			
50			
40			
30			

M=

B=

R^2=

Audit flow check within ±10 of set point?			
Date	5.20.14	5.21.14	
Time	1016	1025	
Magn. Read.	42	40.5	
△H	3.7	3.7	
Yes/ No?	Y	Y	
Min (-10%)		Max (+10%)	

Magnehelic Set-point: 45

FIELD MEASUREMENTS

Date	Time	Magn. Reading	Wind Speed	Barometric Pressure (in. Hg)	Temp (°F)	Notes (calc flow rate, etc.)
5-20-14	1018	45	6	30.07	64	
5-21-14	1018	45	6	30.01	65	

TOTAL VOLUME: _____ std. m^3

NOTES Sample ID Format: DD-Site-YYMMDDHHMM-Sample Type; Sample Type: -01=Primary, FB=Field Blank

PAH Dry Deposition Field Data Log Sheet

Site ID: FD12 | Field Crew: KG, GM

Deposition Event: Dry 1 Dry 2 Dry 3 Dry 4 (Dry 5)

Type: (Weekday (W/Th)) Weekend (Sat/Sun) | Collection: 4 /4 (per DD event)

Start Date: 5-20-14 | End Date: 5-21-14

ATMOSPHERIC CONDITIONS

Sky (Start): Sunny (Partly Cloudy) Overcast Fog | Sky (End): (Sunny) Partly Cloudy Overcast Fog

PUF SAMPLER

Sampler I.D. No.:

Certification Date/No.: PUF: P140414 XAD: X140416 Filter: F140320

Elapsed Timer	Black	White
Start:	465	33
Stop:	509	37
Diff.	24	

Sample Time	
Start:	0948
Stop:	0948
Duration:	24

Calibrations

MULTI-POINT CALIBRATION TIME: DATE:			
Magn.	(+)	(-)	SUM
70			
60			
50			
40			
30			

M=
B=
R^2=

Audit flow check within ±10 of set point?		
Date	5-20-14	5-21-14
Time	0945	0954
Magn. Read.	39	37
△H	3.5	3.6
Yes/ No?	Y	Y
Min (-10%)		Max (+10%)

Magnehelic Set-point: 41

FIELD MEASUREMENTS

Date	Time	Magn. Reading	Wind Speed	Barometric Pressure (in. Hg)	Temp (°F)	Notes (calc flow rate, etc.)
5-20-14	0948	41	7	30.00	67	
5-21-14	0948	41	8	29.98	66	

TOTAL VOLUME: _____ std. m^3

NOTES Sample ID Format: DD-Site-YYMMDDHHMM-Sample Type; Sample Type: -01=Primary, FB=Field Blank

PAH Dry Deposition Field Data Log Sheet

Site ID: FD07 Field Crew: KG, GM

Deposition Event: Dry 1 Dry 2 Dry 3 Dry 4 (Dry 5)

Type: (Weekday (W/Th) / Weekend (Sat/Sun)) Collection: 4 /4 (per DD event)

Start Date: 5-20-14 End Date: 5-21-14

ATMOSPHERIC CONDITIONS

Sky (Start): Sunny (Partly Cloudy) Overcast Fog Sky (End): Sunny (Partly Cloudy) Overcast Fog

PUF SAMPLER

Sampler I.D. No.:

Certification Date/No.: PUF: P140414 XAD: X140416 Filter: F140320

Elapsed Timer	Black	White
Start:	534	00
Stop:	558	
Diff.	24	

Sample Time	
Start:	1039
Stop:	1039
Duration:	24

Calibrations

MULTI-POINT CALIBRATION TIME: DATE:			
Magn.	(+)	(-)	SUM
70			
60			
50			
40			
30			

M=

B=

R^2=

Audit flow check within ±10 of set point?			
Date	5.20.14	5.21.14	
Time	1637	1050	
Magn. Read.	43	43	
△H	3.6	3.6	
Yes/ No?	✓	✓	
Min (-10%)		Max (+10%)	

Magnehelic Set-point: 45

FIELD MEASUREMENTS

Date	Time	Magn. Reading	Wind Speed	Barometric Pressure (in. Hg)	Temp (°F)	Notes (calc flow rate, etc.)
5-20-14	1039	45	6	29.96	65	
5-21-14	1039	45	3	29.88	65	

TOTAL VOLUME: _____ std. m^3

NOTES Sample ID Format: DD-Site-YYMMDDHHMM-Sample Type; Sample Type: -01=Primary, FB=Field Blank

City of San Diego
PAH Transport Study Phase IV
AMEC Project No. 502516C042

PAH Dry Deposition Field Data Log Sheet

Site ID CNM 1 **Field Crew** LD AM

Dry Deposition Sampling Event Pilot Dry 1 Dry 2 Dry 3 (Dry 6 coll. 1)

ATMOSPHERIC CONDITIONS

Sky Sunny (Partly Cloudy) Overcast Fog Raining

Last Rain (> 72 Hours) < 72 Hours **Rainfall** (None) < 0.1" > 0.1"

PUF SAMPLER

Sampler I.D. No.: FA 02867

Lab PUF Sample No.: P161201, X161122, F161117

PUF Cartridge Certification Date: 12/6/16, 11/27/16, 11/21/16

Date/Time PUF Cartridge Installed: 12/13/16 14:28

Elapsed Timer:

Start:

Stop: 208.85

Diff.

Sampling Time

Start: 14:30 12/13/16

Stop: 12/14/16 14:30

Diff. 24 hrs

Audit flow check within +/- 10 of set point: (YES/NO)

TIME	TEMP (°F)	BAROMETRIC PRESSURE ("Hg)	MAGNEHELIC READING	CALCULATED FLOW RATE (std. m3)	READ BY
14:30	60	29.85	37		LD
Avg.					

NOTES/COMMENTS

audit on 12/13/16

2.1 x 2 = 4.2 @ 38

audit on 12/14/16

1.6 x 2 = 3.2 @ 30

City of San Diego
PAH Transport Study Phase IV
AMEC Project No. 502516C042

PAH Dry Deposition Field Data Log Sheet

Site ID FD07 **Field Crew** LD AM

Dry Deposition Sampling Event Pilot Dry 1 Dry 2 Dry 3 (Dry 6 collection 1)

ATMOSPHERIC CONDITIONS

Sky Sunny (Partly Cloudy) Overcast Fog Raining

Last Rain (> 72 Hours) < 72 Hours **Rainfall** (None) < 0.1" > 0.1"

PUF SAMPLER

Sampler I.D. No.: FA 02868

Lab PUF Sample No.: P161201, X161122, F161117

PUF Cartridge Certification Date: 12/6/16, 11/27/16, 11/21/16

Date/Time PUF Cartridge Installed: 12/13/16 15:38

Elapsed Timer:

Start:

Stop: 213.33 hrs

Diff.

Sampling Time

Start: 15:40 12/13/16

Stop: 12/14/16 15:40

Diff. 24 hrs

Audit flow check within +/- 10 of set point: (YES/NO)

TIME	TEMP (°F)	BAROMETRIC PRESSURE ("Hg)	MAGNEHELIC READING	CALCULATED FLOW RATE (std. m3)	READ BY
15:40	68	766.9 mm	31		LD
Avg.					

NOTES/COMMENTS

audit on 12/13/16

2x2=4 @ 38

audit on 12/14/16

2x2=4 @ 36

City of San Diego
PAH Transport Study Phase IV
AMEC Project No. 502516C042

PAH Dry Deposition Field Data Log Sheet

Site ID FD 11 **Field Crew** LD AM

Dry Deposition Sampling Event Pilot Dry 1 Dry 2 Dry 3 (Dry 6 coll. 1)

ATMOSPHERIC CONDITIONS

Sky Sunny (Partly Cloudy) Overcast Fog Raining

Last Rain (> 72 Hours) < 72 Hours **Rainfall** (None) < 0.1" > 0.1"

PUF SAMPLER

Sampler I.D. No.: FA 02869

Lab PUF Sample No.: P161201, X161122, F161117

PUF Cartridge Certification Date: 12/6/16, 11/27/16, 11/21/16

Date/Time PUF Cartridge Installed: 12/13/16 16:18

Elapsed Timer:

Start:

Stop: 198.2 hrs

Diff.

Sampling Time

Start: 16:20 12/13/16

Stop: 12/14/16 16:20

Diff. 24 hrs

Audit flow check within +/- 10 of set point: (YES/NO)

TIME	TEMP (°F)	BAROMETRIC PRESSURE ("Hg)	MAGNEHELIC READING	CALCULATED FLOW RATE (std. m3)	READ BY
16:20	65.9	756.4 mm	32		LD
Avg.					

NOTES/COMMENTS

audit 12/13/16
2x2=4@32

audit on 12/14/16
2x2 = 4 @ 31

City of San Diego
PAH Transport Study Phase IV
AMEC Project No. 502516C042

PAH Dry Deposition Field Data Log Sheet

Site ID FD12 **Field Crew** LD, AM

Dry Deposition Sampling Event Pilot Dry 1 Dry 2 Dry 3 (Dry 6 collection 1)

ATMOSPHERIC CONDITIONS

Sky Sunny (Partly Cloudy) Overcast Fog Raining

Last Rain (> 72 Hours) < 72 Hours **Rainfall** (None) < 0.1" > 0.1"

PUF SAMPLER

Sampler I.D. No.: FA02866

Lab PUF Sample No.: P161201, X161122, F161117

PUF Cartridge Certification Date: 12/6/16, 11/27/16, 11/21/16

Date/Time PUF Cartridge Installed: 12/13/16 17:15

Elapsed Timer:

Start:

Stop:

Diff.

Sampling Time

Start: 17:16 12/13/16

Stop: 12/14/16 17:16

Diff. 24 hrs.

Audit flow check within +/- 10 of set point: (YES/NO)

TIME	TEMP (°F)	BAROMETRIC PRESSURE ("Hg)	MAGNEHELIC READING	CALCULATED FLOW RATE (std. m3)	READ BY
17:20	65	761.7 mm	35		LD
Avg.					

NOTES/COMMENTS

audit 12/13/16
2.1 * 2 = 4.2 @ 40

audit on 12/14/16
2 x 2 = 4 @ 40

City of San Diego
PAH Transport Study Phase IV
AMEC Project No. 502516C042

PAH Dry Deposition Field Data Log Sheet

Site ID FD 12 **Field Crew** LDT AM LM

Dry Deposition Sampling Event: Pilot Dry 1 Dry 2 Dry 3 Dry 4 Dry 5 (Dry 6)

Collection: 1 (2) 3 4 **Start Date Time:** _____ **End Date/Time:** _____

ATMOSPHERIC CONDITIONS (Start)

Sky	Sunny	Partly Cloudy	Overcast	Fog	Raining	
Last Rain	> 72 Hours	(< 72 Hours)	**Rainfall**	None	< 0.1"	(> 0.1")

ATMOSPHERIC CONDITIONS (End)

Sky	(Sunny)	Partly Cloudy	Overcast	Fog	Raining	
Last Rain	> 72 Hours	(< 72 Hours)	**Rainfall**	None	< 0.1"	(> 0.1")

PUF SAMPLER

Sampler I.D. No.: FA 02866

Lab PUF Sample No.: P161201, X161122, F161117

PUF Cartridge Certification Date: 12/6/16, 11/27/16, 11/21/16

Date/Time PUF Cartridge Installed: 12/18/16

Elapsed Timer:

Start:

Stop: 242.20

Diff.

Sampling Time

Start: 12/18/16 12:05

Stop: 12/19/16 12:05

Diff. 24 hrs

Set Point (Mag) 45

Audit flow check within +/- 10 of set point- START: (YES/NO)

Audit flow check within +/- 10 of set point-END: (YES/NO)

TIME	TEMP (°F)	BAROMETRIC PRESSURE ("Hg)	MAGNEHELIC READING	CALCULATED FLOW RATE (std. m3)	READ BY
12/18 12:05	60	30.11	45		
12/19 12:00	70	30.14	39		LD
Avg.	65	30.125	42		LD

NOTES/COMMENTS audit 12/18 ΔH = 2 (4) @ 40 | audit 12/19 ΔH = 1.7 (3.4) @ 36

City of San Diego
PAH Transport Study Phase IV
AMEC Project No. 502516C042

PAH Dry Deposition Field Data Log Sheet

Site ID FD 11 **Field Crew** LDT, AM, LM

Dry Deposition Sampling Event: Pilot Dry 1 Dry 2 Dry 3 Dry 4 Dry 5 (Dry 6)

Collection: 1 (2) 3 4 **Start Date Time:** _____ **End Date/Time:** _____

ATMOSPHERIC CONDITIONS (Start)

Sky	Sunny	Partly Cloudy	Overcast	Fog	Raining	
Last Rain	> 72 Hours	(< 72 Hours)	**Rainfall**	None	< 0.1"	(> 0.1")

ATMOSPHERIC CONDITIONS (End)

Sky	(Sunny)	Partly Cloudy	Overcast	Fog	Raining	
Last Rain	> 72 Hours	(< 72 Hours)	**Rainfall**	None	< 0.1"	(> 0.1")

PUF SAMPLER

Sampler I.D. No.: FAD2869

Lab PUF Sample No.: P161201, X161122, F161117

PUF Cartridge Certification Date: 12/6/16, 11/27/16, 11/21/16

Date/Time PUF Cartridge Installed: 12/18/16

Elapsed Timer:

Start:

Stop: 220.74

Diff.

Sampling Time

Start: 12/18/16 13:30

Stop: 12/19/16 13:30

Diff. 24 hrs

Set Point (Mag) 35

Audit flow check within +/- 10 of set point- START: (YES/NO)

Audit flow check within +/- 10 of set point-END: (YES/NO)

TIME	TEMP (°F)	BAROMETRIC PRESSURE ("Hg)	MAGNEHELIC READING	CALCULATED FLOW RATE (std. m3)	READ BY
12/18 13:30	60.2	29.87	32		
12/19 13:20	69.8	29.89	29		LD
Avg.	65	29.88	30.5		LD

NOTES/COMMENTS audit 12/18 ΔH = 1.95 (3.9) @ 28 | audit 12/19 ΔH = 1.6 (3.2) @ 24

City of San Diego
PAH Transport Study Phase IV
AMEC Project No. 502516C042

PAH Dry Deposition Field Data Log Sheet

Site ID FD 07 **Field Crew** LDT AM LM

Dry Deposition Sampling Event: Pilot Dry 1 Dry 2 Dry 3 Dry 4 Dry 5 (Dry 6)

Collection: 1 (2) 3 4 **Start Date Time:** _____ **End Date/Time:** _____

ATMOSPHERIC CONDITIONS (Start)

Sky	Sunny	Partly Cloudy	Overcast	Fog	Raining	
Last Rain	> 72 Hours	(< 72 Hours)	**Rainfall**	None	< 0.1"	(> 0.1")

ATMOSPHERIC CONDITIONS (End)

Sky	(Sunny)	Partly Cloudy	Overcast	Fog	Raining	
Last Rain	> 72 Hours	(< 72 Hours)	**Rainfall**	None	< 0.1"	(> 0.1")

PUF SAMPLER

Sampler I.D. No.: FA02868

Lab PUF Sample No.: P161201, X161122, F161117

PUF Cartridge Certification Date: 12/6/12, 11/27/16, 11/21/16

Date/Time PUF Cartridge Installed: 12/18/16

Elapsed Timer:

Start:

Stop: 237.91

Diff.

Sampling Time

Start: 12/18/16 14:55

Stop: 12/19/16 14:55

Diff. 24 hrs

Set Point (Mag) 40

Audit flow check within +/- 10 of set point- START: (YES/NO)

Audit flow check within +/- 10 of set point-END: (YES/NO)

TIME	TEMP (°F)	BAROMETRIC PRESSURE ("Hg)	MAGNEHELIC READING	CALCULATED FLOW RATE (std. m3)	READ BY
12/18 14:55	62	30.30	36		
12/19 14:45	73	30.29	34		LD
Avg.	67.5	30.295	35		LD

NOTES/COMMENTS

audit 12/18
ΔH = 2(4) @ 32

audit 12/19
ΔH = 1.9(3.8) @ 32

City of San Diego
PAH Transport Study Phase IV
AMEC Project No. 502516C042

PAH Dry Deposition Field Data Log Sheet

Site ID CNM1 **Field Crew** LDT, AM, LM

Dry Deposition Sampling Event: Pilot Dry 1 Dry 2 Dry 3 Dry 4 Dry 5 (Dry 6)

Collection: 1 (2) 3 4 **Start Date Time:** _____ **End Date/Time:** _____

ATMOSPHERIC CONDITIONS (Start)

Sky Sunny Partly Cloudy Overcast Fog Raining

Last Rain > 72 Hours (< 72 Hours) **Rainfall** None < 0.1" (> 0.1")

ATMOSPHERIC CONDITIONS (End)

Sky (Sunny) Partly Cloudy Overcast Fog Raining

Last Rain > 72 Hours (< 72 Hours) **Rainfall** None < 0.1" (> 0.1")

PUF SAMPLER

Sampler I.D. No.: FA 02867

Lab PUF Sample No.: P161201, X161122, F161117

PUF Cartridge Certification Date: 12/6/16, 11/27/16, 11/21/16

Date/Time PUF Cartridge Installed: 12/18/16

Elapsed Timer:

Start:

Stop: 232.97

Diff.

Sampling Time

Start: 12/18/16 16:50

Stop: 12/19/16 16:50

Diff. 24 hrs

Set Point (Mag) 39.9

Audit flow check within +/- 10 of set point- START: (YES/NO)

Audit flow check within +/- 10 of set point-END: (YES/NO)

TIME	TEMP (°F)	BAROMETRIC PRESSURE ("Hg)	MAGNEHELIC READING	CALCULATED FLOW RATE (std. m3)	READ BY
12/18 16:50	54	29.89	38		
12/19 16:40	61	29.95	37		LD
Avg.	57.5	29.92	37.5		LD

NOTES/COMMENTS audit 12/18 ΔH = 1.85 (3.7) @ 34 | audit 12/19 ΔH = 1.3 (2.6) @ 30

City of San Diego
PAH Transport Study Phase IV
AMEC Project No. 502516C042

PAH Dry Deposition Field Data Log Sheet

Site ID FD 12 **Field Crew** KH, KG - BS, SS

Dry Deposition Sampling Event: Pilot Dry 1 Dry 2 Dry 3 Dry 4 Dry 5 (Dry 6)

Collection: 1 2 (3) 4 **Start Date Time:** 1/7/17 0932 **End Date/Time:** 1/8/17 0932

ATMOSPHERIC CONDITIONS (Start)

Sky (Sunny) Partly Cloudy Overcast Fog Raining

Last Rain > 72 Hours (< 72 Hours) **Rainfall** None ~~< 0.1"~~ (> 0.1") ended 1/5/17 17:45

ATMOSPHERIC CONDITIONS (End)

Sky (Sunny) Partly Cloudy Overcast Fog Raining

Last Rain > 72 Hours (< 72 Hours) **Rainfall** None ~~< 0.1"~~ (> 0.1")

PUF SAMPLER

Sampler I.D. No.: FA 02866

Lab PUF Sample No.: P161201, X161122, F16117 2742-39-10

PUF Cartridge Certification Date: 12/16/16, 11/27/16, ~~11/21/16~~ FilterBatch = F161208 12/9/16

Date/Time PUF Cartridge Installed: 1/7/17 0932

Elapsed Timer:

Start: 242.62

Stop: 266.62

Diff. 24

Sampling Time

Start: 1/7/17 09:32

Stop: 1/8/17 09:32

Diff. 24 hr

Set Point (Mag) 47

Audit flow check within +/- 10 of set point- START: (YES/NO)

Audit flow check within +/- 10 of set point-END: (YES/NO)

	TIME	TEMP (°F)	BAROMETRIC PRESSURE ("Hg)	MAGNEHELIC READING	CALCULATED FLOW RATE (std. m3)	READ BY
1/7/17	0932	59	30.19	47		KH
1/8/17	0932	—	—	48		SS
1/8/17	0943	70	30.16	—		SS
	Avg.					

NOTES/COMMENTS weather data downloaded 1/8/17 w/ file name test.
3 photos taken, SS Total volume = 336m³

City of San Diego
PAH Transport Study Phase IV
AMEC Project No. 502516C042

PAH Dry Deposition Field Data Log Sheet

Site ID FD11 **Field Crew** KG, KH BS, SS

Dry Deposition Sampling Event: Pilot Dry 1 Dry 2 Dry 3 Dry 4 Dry 5 (Dry 6)

Collection: 1 2 (3) 4 **Start Date Time:** 1/7/17 1036 **End Date/Time:** 1/8/17 1040

ATMOSPHERIC CONDITIONS (Start)

Sky Sunny (Partly Cloudy) Overcast Fog Raining

Last Rain > 72 Hours (< 72 Hours) **Rainfall** None (< 0.1") > 0.1"

ATMOSPHERIC CONDITIONS (End)

Sky Sunny (Partly Cloudy) Overcast Fog Raining

Last Rain > 72 Hours (< 72 Hours) **Rainfall** None (< 0.1") > 0.1"

PUF SAMPLER

Sampler I.D. No.: FA02869

Lab PUF Sample No.: P161201, X161122, F16117 ~~24~~ 2742-39-10

PUF Cartridge Certification Date: 12/6/16, 11/27/16, 11/21/16

Date/Time PUF Cartridge Installed: 1/7/17 10:36

Elapsed Timer:

Start: 221.09

Stop: 245.15

Diff. 24.06

Sampling Time

Start: 1/7/17 10:36

Stop: 1/8/17 10:40

Diff. 24hr 4min

Set Point (Mag) 37

Audit flow check within +/- 10 of set point- START: (YES/NO)

Audit flow check within +/- 10 of set point-END: (YES/NO)

TIME	TEMP (°F)	BAROMETRIC PRESSURE ("Hg)	MAGNEHELIC READING	CALCULATED FLOW RATE (std. m3)	READ BY
1/7/17 1036	64.3	29.98	37		KH
1/8/17 1040	73.3	29.95	33		SS
Avg.					

NOTES/COMMENTS weather station downloaded 1/8/17. Operating normally, but one wind ball appears to be damaged. Photos taken - BS

Total vol = 325 m³

City of San Diego
PAH Transport Study Phase IV
AMEC Project No. 502516C042

PAH Dry Deposition Field Data Log Sheet

Site ID: FD07 Field Crew: KG, KH BS, SS

Dry Deposition Sampling Event: Pilot Dry 1 Dry 2 Dry 3 Dry 4 Dry 5 (Dry 6)

Collection: 1 2 (3) 4 Start Date Time: 1/7/17 1128 End Date/Time: 1/8/17 1128

ATMOSPHERIC CONDITIONS (Start)

Sky: (Sunny) Partly Cloudy Overcast Fog Raining

Last Rain: > 72 Hours (< 72 Hours) Rainfall: None ~~< 0.1"~~ (> 0.1") ended 1/5/17 20:15

ATMOSPHERIC CONDITIONS (End)

Sky: (Sunny) Partly Cloudy Overcast Fog Raining

Last Rain: > 72 Hours (< 72 Hours) Rainfall: None ~~< 0.1"~~ (> 0.1")

PUF SAMPLER

Sampler I.D. No.: FA 0268

Lab PUF Sample No.: P16120I, X16112, ~~F16119~~ F16120 2742-39-10

PUF Cartridge Certification Date: 12/6/16, 11/27/16, 12/9/16

Date/Time PUF Cartridge Installed: 1/7/17 11:20

Elapsed Timer:

Start: ~~1/7/17~~ 238.15

Stop: 262.15

Diff. 24

Sampling Time

Start: 1/7/17 11:28

Stop: 1/8/17 11:28

Diff. 24

Set Point (Mag) 40.8

Audit flow check within +/- 10 of set point- START: (YES/NO)

Audit flow check within +/- 10 of set point-END: (YES/NO)

TIME	TEMP (°F)	BAROMETRIC PRESSURE ("Hg)	MAGNEHELIC READING	CALCULATED FLOW RATE (std. m3)	READ BY
1/7/17 1128	69	30.35	41		KH
1/8/17 1120	72	30.36	42		BS
Avg.					

NOTES/COMMENTS: weather station data downloaded 1/8/17. Operating normally ~~weather~~ BS but one wind ball appears to be damaged.

Total vol = 333 m³

City of San Diego
PAH Transport Study Phase IV
AMEC Project No. 502516C042

PAH Dry Deposition Field Data Log Sheet

Site ID CNM1 **Field Crew** ~~KH~~, ~~KH~~ BS, SS

Dry Deposition Sampling Event: Pilot Dry 1 Dry 2 Dry 3 Dry 4 Dry 5 (Dry 6)

Collection: 1 2 (3) 4 **Start Date Time:** 1/17/17 1244 **End Date/Time:** 1/8/17 1244

ATMOSPHERIC CONDITIONS (Start)

Sky Sunny (Partly Cloudy) Overcast Fog Raining

Last Rain > 72 Hours (< 72 Hours) **Rainfall** None ~~< 0.1"~~ (> 0.1") ended 1/5/17 1320

ATMOSPHERIC CONDITIONS (End)

Sky (Sunny) Partly Cloudy Overcast Fog Raining

Last Rain > 72 Hours (< 72 Hours) **Rainfall** None ~~< 0.1"~~ (> 0.1")

PUF SAMPLER

Sampler I.D. No.: FA 02867

Lab PUF Sample No.: P16201, X16122, F16120

PUF Cartridge Certification Date: 12/6/16, 11/27/16, 12/9/16

Date/Time PUF Cartridge Installed: 1/7/17

Elapsed Timer:

Start: 233.22

Stop: 257.22

Diff. 24

Sampling Time

Start: 1/7/17 1244

Stop: 1/8/17 12:45

Diff. 24

Set Point (Mag) 43.1

Audit flow check within +/- 10 of set point- START: (YES/NO)

Audit flow check within +/- 10 of set point-END: (YES/NO)

TIME	TEMP (°F)	BAROMETRIC PRESSURE ("Hg)	MAGNEHELIC READING	CALCULATED FLOW RATE (std. m3)	READ BY
1/7/17 1247	69	29.96	43		KH
1/8/17 1244	73	29.96	45		SS
Avg.					

NOTES/COMMENTS weather station downloaded 1/8/17

Total vol = 336m³

City of San Diego
PAH Transport Study Phase IV
AMEC Project No. 502516C042

PAH Dry Deposition Field Data Log Sheet

Site ID: FD12 | Field Crew: LDLT, AM, BS, KH

Dry Deposition Sampling Event: Pilot Dry 1 Dry 2 Dry 3 Dry 4 Dry 5 (Dry 6)

Collection: 1 2 3 (4) Start Date Time: 1/17/17 8:10 End Date/Time: 1/18/17 0828

ATMOSPHERIC CONDITIONS (Start)

Sky	(Sunny)	Partly Cloudy	Overcast	Fog	Raining	
Last Rain	(> 72 Hours)	< 72 Hours	**Rainfall**	(None)	< 0.1"	> 0.1"

ATMOSPHERIC CONDITIONS (End)

Sky	(Sunny)	Partly Cloudy	Overcast	Fog	Raining	
Last Rain	(> 72 Hours)	< 72 Hours	**Rainfall**	(None)	< 0.1"	> 0.1"

PUF SAMPLER

Sampler I.D. No.: FA02866

Lab PUF Sample No.: P170104, X161228, F161222

PUF Cartridge Certification Date: 1/9/17, 1/12/16 (2), 1/3/17

Date/Time PUF Cartridge Installed: 08:37

Elapsed Timer:

Start: 267.2

Stop: 291.2

Diff. 24

Sampling Time

Start: 08:38 1/17

Stop: 08:38 1/18

Diff. 24

Set Point (Mag) 45

Audit flow check within +/- 10 of set point- START: (YES/NO)

Audit flow check within +/- 10 of set point-END: (YES/NO)

	TIME	TEMP (°F)	BAROMETRIC PRESSURE ("Hg)	MAGNEHELIC READING	CALCULATED FLOW RATE (std. m3)	READ BY
	[illegible]					
1/17	17 8:38	53	30.1 in.	45		LDLT
1/18	18 8:36	52	30.18in	40		KH
	Avg.					

NOTES/COMMENTS

City of San Diego
PAH Transport Study Phase IV
AMEC Project No. 502516C042

PAH Dry Deposition Field Data Log Sheet

Site ID: FD 11 | Field Crew: LDLT AM KH BS

Dry Deposition Sampling Event: Pilot Dry 1 Dry 2 Dry 3 Dry 4 Dry 5 (Dry 6)

Collection: 1 2 3 (A) Start Date Time: 1/17/17 9:07 End Date/Time: 1/18/17 09:37

ATMOSPHERIC CONDITIONS (Start)

Sky	(Sunny)	Partly Cloudy	Overcast	Fog	Raining	
Last Rain	(> 72 Hours)	< 72 Hours	**Rainfall**	(None)	< 0.1"	> 0.1"

ATMOSPHERIC CONDITIONS (End)

Sky	(Sunny)	Partly Cloudy	Overcast	Fog	Raining	
Last Rain	(> 72 Hours)	< 72 Hours	**Rainfall**	(None)	< 0.1"	> 0.1"

PUF SAMPLER

Sampler I.D. No.: FA02869

Lab PUF Sample No.: P170104, X161228, F161222

PUF Cartridge Certification Date: 1/9/17, 1-12-16, 1-3-17

Date/Time PUF Cartridge Installed: 09:37

Elapsed Timer:

Start: 245.49

Stop: 269.50

Diff.

Sampling Time

Start: 09:37

Stop: 09:37

Diff. 24 hr

Set Point (Mag) 35

Audit flow check within +/- 10 of set point- START: (YES/NO)

Audit flow check within +/- 10 of set point-END: (YES/NO)

	TIME	TEMP (°F)	BAROMETRIC PRESSURE ("Hg)	MAGNEHELIC READING	CALCULATED FLOW RATE (std. m3)	READ BY
1/17/17	9:38	58.8	29.9 in.	28		LDLT
1/18/17	9:26	55.8	29.9in	29		KH
	Avg.					

NOTES/COMMENTS

City of San Diego
PAH Transport Study Phase IV
AMEC Project No. 502516C042

PAH Dry Deposition Field Data Log Sheet

Site ID: FD07 | Field Crew: LDLT AM

Dry Deposition Sampling Event: Pilot Dry 1 Dry 2 Dry 3 Dry 4 Dry 5 (Dry 6)

Collection: 1 2 3 (4) Start Date Time: 1-17-17 09:50 | End Date/Time: 1/18/17 10:31

ATMOSPHERIC CONDITIONS (Start)

Sky	(Sunny)	Partly Cloudy	Overcast	Fog	Raining	
Last Rain	(> 72 Hours)	< 72 Hours	**Rainfall**	(None)	< 0.1"	> 0.1"

ATMOSPHERIC CONDITIONS (End)

Sky	(Sunny)	Partly Cloudy	Overcast	Fog	Raining	
Last Rain	(> 72 Hours)	< 72 Hours	**Rainfall**	(None)	< 0.1"	> 0.1"

PUF SAMPLER

Sampler I.D. No.: FA02868

Lab PUF Sample No.: P170104, X161228, F161222

PUF Cartridge Certification Date: 1-9-17, 1-12-16, 1-3-17

Date/Time PUF Cartridge Installed: 10:20

Elapsed Timer:

Start: 262.38

Stop: 286.52

Diff. 24.14

Sampling Time

Start: 10:21

Stop: 10:31

Diff. 24 hr 10 min

Set Point (Mag) ~~39~~ 32

Audit flow check within +/- 10 of set point- START: (YES/NO)

Audit flow check within +/- 10 of set point-END: (YES/NO)

	TIME	TEMP (°F)	BAROMETRIC PRESSURE ("Hg)	MAGNEHELIC READING	CALCULATED FLOW RATE (std. m3)	READ BY
1/17/17	10:23	61	30.31 in.	38		LDLT
1/18/17	10:35	61	30.37in	32		BS
	Avg.					

NOTES/COMMENTS

City of San Diego
PAH Transport Study Phase IV
AMEC Project No. 502516C042

PAH Dry Deposition Field Data Log Sheet

Site ID: CNM2 Field Crew: LDLT AM KH BS

Dry Deposition Sampling Event: Pilot Dry 1 Dry 2 Dry 3 Dry 4 Dry 5 (Dry 6)

Collection: 1 2 3 (4) Start Date Time: 1-17-17 11:17 End Date/Time: 1/18/17 1138

ATMOSPHERIC CONDITIONS (Start)

Sky: (Sunny) Partly Cloudy Overcast Fog Raining

Last Rain: (> 72 Hours) < 72 Hours Rainfall (None) < 0.1" > 0.1"

ATMOSPHERIC CONDITIONS (End)

Sky: (Sunny) Partly Cloudy Overcast Fog Raining

Last Rain: (> 72 Hours) < 72 Hours Rainfall (None) < 0.1" > 0.1"

PUF SAMPLER

Sampler I.D. No.: FA02867

Lab PUF Sample No.: P170104, X161228, F161222

PUF Cartridge Certification Date: 1-9-17, 1-12-16, 1-3-17

Date/Time PUF Cartridge Installed: 1/17/17 11:38

Elapsed Timer:

Start: 257.42

Stop: 281.42

Diff. 24

Sampling Time

Start: 11:39

Stop: 11:38

Diff. 24 hr

Set Point (Mag) 44

Audit flow check within +/- 10 of set point- START: (YES/NO)

Audit flow check within +/- 10 of set point-END: (YES/NO)

	TIME	TEMP (°F)	BAROMETRIC PRESSURE ("Hg)	MAGNEHELIC READING	CALCULATED FLOW RATE (std. m3)	READ BY
1/17/17	11:39	58	29.93 in.	~~40-44~~		LDLT
1/18/17	11:35	59	29.99 in	38		KH
Avg.						

NOTES/COMMENTS
vantage vue data logger constantly shutting off/restarting
power supply is good. possibly logger

Calibration Records
(from manufacture at delivery and individual event calibrations)

Attachment B

FA00581

TISCH ENVIROMENTAL, INC.
145 SOUTH MIAMI AVE.
VILLAGE OF CLEVES, OH 45002
513.467.9000
877.263.7610 TOLL FREE
513.467.9009 FAX
WWW.TISCH-ENV.COM

AIR POLLUTION MONITORING EQUIPMENT

ORIFICE TRANSFER STANDARD CERTIFICATION WORKSHEET TE-5040A

Date - Mar 15, 2013 Rootsmeter S/N 0438320 Ta (K) - 293
Operator Jim Tisch Orifice I.D. - 2440 Pa (mm) - 753.11

PLATE OR VDC #	VOLUME START (m3)	VOLUME STOP (m3)	DIFF VOLUME (m3)	DIFF TIME (min)	METER DIFF Hg (mm)	ORFICE DIFF H2O (in.)
1	NA	NA	1.00	6.4240	3.6	2.00
2	NA	NA	1.00	3.8790	10.0	5.50
3	NA	NA	1.00	3.1170	15.5	8.50
4	NA	NA	1.00	2.6660	21.0	11.50
5	NA	NA	1.00	2.3670	26.5	14.50
6	NA	NA	1.00	2.2050	30.2	16.50

DATA TABULATION

Vstd	(x axis) Qstd	(y axis)
1.0029	0.1561	1.4197
0.9944	0.2563	2.3544
0.9870	0.3166	2.9269
0.9797	0.3674	3.4044
0.9723	0.4107	3.8228
0.9674	0.4387	4.0779

Qstd slope (m) = 9.42521
intercept (b) = -0.05625
coefficient (r) = 0.99998

y axis = SQRT[H2O(Pa/760)(298/Ta)]

Va	(x axis) Qa	(y axis)
0.9951	0.1549	0.8821
0.9867	0.2543	1.4628
0.9794	0.3142	1.8185
0.9721	0.3646	2.1152
0.9647	0.4075	2.3751
-0.9599	0.4353	2.5336

Qa slope (m) = 5.90191
intercept (b) = -0.03495
coefficient (r) = 0.99998

y axis = SQRT[H2O(Ta/Pa)]

CALCULATIONS

Vstd = Diff. Vol[(Pa-Diff. Hg)/760](298/Ta)
Qstd = Vstd/Time

Va = Diff Vol [(Pa-Diff Hg)/Pa]
Qa = Va/Time

For subsequent flow rate calculations:

Qstd = 1/m{[SQRT(H2O(Pa/760)(298/Ta))]- b}
Qa = 1/m{[SQRT H2O(Ta/Pa)]- b}

Calculating Flow Rate **Section 11.2.2.24 of TO13-A**

Event 1, Collection 1 7/31/2013-8/1/2013

Parameter	FD07	FD11	FD12	CNM1	Units	Notes
Desired Flow Rate	8	8	8	8	std ft^3/min	
	0.225	0.225	0.225	0.225	m^3/min	
Pa	762	762	762	762	mm Hg	Avg in SD and forecast
Ta	292.4	292.4	292.4	292.4	K	forecast temp around 67°F NOAA 7/30/2013 19:00
M2	32.0916	33.3411	30.9438	34.1618	-	from calibration
B2	-0.8226	-0.8598	-0.4907	-1.092	-	from calibration
Tstd	298	298	298	298	K	avg in SD
Pstd	762	762	762	762	mm Hg	avg in SD

Aug2013 event	FD07	FD11	FD12	CNM1	Units	Notes
Magnehelic Gage Set Point						
Set Point	**42**	**45**	**43**	**44**		
(-)10%	37.8	40.5	38.7	39.6		
(+)10%	46.2	49.5	47.3	48.4		

Actual Flow Volume						
SiteID	**FD07**	**FD11**	**FD12**	**CNM1**	**Units**	**Notes**
Average Magnehelic	43	44.5	43	43.5		
Temp (°C)	22.20	20.00	19.72	20.00	°C	From Weather Data (24-hour period)
Pressure (in.)	29.96	30.05	30.03	29.93	inches	From Weather Data (24-hour period)
Temp (K)	295	293	293	293	K	conversion
Pressure (mm)	761	763	763	760	mm	conversion
1/m	0.031	0.030	0.032	0.029	-	Total Flow Volume Equation
Sqrt(magn)(Pav/760)(298/Tav)	6.593	6.741	6.628	6.652	-	
b	-0.823	-0.860	-0.491	-1.092	-	
std m3/min	0.231	0.228	0.230	0.227	m^3/min	
total sample volume	**332.7**	**328**	**331**	**326**	**m^3**	

Equations		Notes
Actual Flow Volume	1/m([Sqrt(magn)(Pav/760)(298/Tav)]-b)	
Set Point	[(Expected Pa)/(Expected Ta) (Tstd/Pstd)] [(M2 (Desired Flow Rate) +B2]^2	
where:		
Pa	Expected atmospheric pressure (Pa), mm Hg	
Ta	Expected atmospheric temperature (Ta), K	
M2	Slope of developed relationship	
B2	Intercept of developed relationship	
Tstd	Temperature standard, 273 + 25°C	
Pstd	Pressure standard, 760 mm Hg	

KEY
updated per day
update per event

Calculating Flow Rate **Section 11.2.2.24 of TO13-A**

Event 1, Collection 2 8/3/2013-8/4/203

Parameter	FD07	FD11	FD12	CNM1	Units	Notes
Desired Flow Rate	8	8	8	8	std ft^3/min	
	0.225	0.225	0.225	0.225	m^3/min	
Pa	762	762	762	762	mm Hg	Avg in SD and forecast
Ta	294.1	294.1	294.1	294.1	K	forecast temp around 70°F NOAA 7/30/2013 19:00
M2	32.0916	33.3411	30.9438	34.1618	-	from calibration
B2	-0.8226	-0.8598	-0.4907	-1.092	-	from calibration
Tstd	298	298	298	298	K	avg in SD
Pstd	762	762	762	762	mm Hg	avg in SD

Aug2013 event	FD07	FD11	FD12	CNM1	Units	Notes
Magnehelic Gage Set Point						
Set Point	**41**	**45**	**42**	**44**		
(-)10%	36.9	40.5	37.8	39.6		
(+)10%	45.1	49.5	46.2	48.4		

Actual Flow Volume						
SiteID	**FD07**	**FD11**	**FD12**	**CNM1**	**Units**	**Notes**
Average Magnehelic	42	44	42	44		
Temp (°C)	19.18	18.69	19.28	17.87	°C	From Weather Data (24-hour period)
Pressure (in.)	29.94	29.96	29.94	29.83	inches	From Weather Data (24-hour period)
Temp (K)	292	292	292	291	K	conversion
Pressure (mm)	760	761	760	758	mm	conversion
1/m	0.031	0.030	0.032	0.029	-	Total Flow Volume Equation
Sqrt(magn)(Pav/760)(298/Tav)	6.547	6.709	6.546	6.704	-	
b	-0.823	-0.860	-0.491	-1.092	-	
std m3/min	0.230	0.227	0.227	0.228	m^3/min	
total sample volume	**331**	**327**	**327**	**329**	**m^3**	

Equations		Notes
Actual Flow Volume	1/m([Sqrt(magn)(Pav/760)(298/Tav)]-b)	
Set Point	[(Expected Pa)/(Expected Ta) (Tstd/Pstd)] [(M2 (Desired Flow Rate) +B2]^2	
where:		
Pa	Expected atmospheric pressure (Pa), mm Hg	
Ta	Expected atmospheric temperature (Ta), K	
M2	Slope of developed relationship	
B2	Intercept of developed relationship	
Tstd	Temperature standard, 273 + 25°C	
Pstd	Pressure standard, 760 mm Hg	

KEY
updated per day
update per event

Calculating Flow Rate **Section 11.2.2.24 of TO13-A**

Event 1, Collection 3 8/7/2013-8/8/2013

Parameter	FD07	FD11	FD12	CNM1	Units	Notes
Desired Flow Rate	8	8	8	8	std ft^3/min	
	0.225	0.225	0.225	0.225	m^3/min	
Pa	762	762	762	762	mm Hg	Avg in SD and forecast
Ta	291	291	291	291	K	forecast temp around 65°F NOAA 8/6/2013 19:00
M2	32.0916	33.3411	30.9438	34.1618	-	from calibration
B2	-0.8226	-0.8598	-0.4907	-1.092	-	from calibration
Tstd	298	298	298	298	K	avg in SD
Pstd	762	762	762	762	mm Hg	avg in SD

Aug2013 event	FD07	FD11	FD12	CNM1	Units	Notes
Magnehelic Gage Set Point						
Set Point	**42**	**45**	**43**	**44**		
(-)10%	37.8	40.5	38.7	39.6		
(+)10%	46.2	49.5	47.3	48.4		

Actual Flow Volume						
SiteID	**FD07**	**FD11**	**FD12**	**CNM1**	**Units**	**Notes**
Average Magnehelic	42	45	42	45		
Temp (°C)	19.70	19.10	20.07	18.14	°C	From Weather Data (24-hour period)
Pressure (in.)	29.99	29.99	29.98	29.85	inches	From Weather Data (24-hour period)
Temp (K)	293	292	293	291	K	conversion
Pressure (mm)	762	762	761	758	mm	conversion
1/m	0.031	0.030	0.032	0.029	-	Total Flow Volume Equation
Sqrt(magn)(Pav/760)(298/Tav)	6.546	6.783	6.541	6.779	-	
b	-0.823	-0.860	-0.491	-1.092	-	
std m3/min	0.230	0.229	0.227	0.230	m^3/min	
total sample volume	**331**	**330**	**327**	**332**	**m^3**	

Equations		Notes
Actual Flow Volume	1/m([Sqrt(magn)(Pav/760)(298/Tav)]-b)	
Set Point	[(Expected Pa)/(Expected Ta) (Tstd/Pstd)] [(M2 (Desired Flow Rate) +B2]^2	
where:		
Pa	Expected atmospheric pressure (Pa), mm Hg	
Ta	Expected atmospheric temperature (Ta), K	
M2	Slope of developed relationship	
B2	Intercept of developed relationship	
Tstd	Temperature standard, 273 + 25°C	
Pstd	Pressure standard, 760 mm Hg	

KEY

updated per day

update per event

Calculating Flow Rate **Section 11.2.2.24 of TO13-A**

Event 1, Collection 4 8/10/2013-8/11/2013

Parameter	FD07	FD11	FD12	CNM1	Units	Notes
Desired Flow Rate	8	8	8	8	std ft^3/min	
	0.225	0.225	0.225	0.225	m^3/min	
Pa	762	762	762	762	mm Hg	Avg in SD and forecast
Ta	292.4	292.4	292.4	292.4	K	forecast temp around 67°F NOAA 7/30/2013 19:00
M2	32.0916	33.3411	30.9438	34.1618	-	from calibration
B2	-0.8226	-0.8598	-0.4907	-1.092	-	from calibration
Tstd	298	298	298	298	K	avg in SD
Pstd	762	762	762	762	mm Hg	avg in SD

Aug2013 event	FD07	FD11	FD12	CNM1	**Units**	**Notes**
Magnehelic Gage Set Point						
Set Point	**42**	**45**	**43**	**44**		
(-)10%	37.8	40.5	38.7	39.6		
(+)10%	46.2	49.5	47.3	48.4		

Actual Flow Volume						
SiteID	**FD07**	**FD11**	**FD12**	**CNM1**	**Units**	**Notes**
Average Magnehelic	45	45.5	42	45		Power was unplugged from sampler at station 7 immediately after sampler was started on Saturday, 8/10. Started at 930, 8/11.
Temp (°C)	19.63	18.1026518	18.51075642	17.690717	°C	From Weather Data (24-hour period)
Pressure (in.)	**29.9046717**	29.9806953	29.96261138	29.842604	inches	From Weather Data (24-hour period)
Temp (K)	293	291	292	291	K	conversion
Pressure (mm)	760	762	761	758	mm	conversion
1/m	0.031	0.030	0.032	0.029	-	Total Flow Volume Equation
Sqrt(magn)(Pav/760)(298/Tav)	6.768	6.832	6.557	6.783	-	
b	-0.823	-0.860	-0.491	-1.092	-	
std m3/min	0.237	0.231	0.228	0.231	m^3/min	
total sample volume	**340.6**	**332**	**328**	**332**	**m^3**	

Equations		**Notes**
Actual Flow Volume	1/m([Sqrt(magn)(Pav/760)(298/Tav)]-b)	
Set Point	[(Expected Pa)/(Expected Ta) (Tstd/Pstd)] [(M2 (Desired Flow Rate) +B2]^2	
where:		
Pa	Expected atmospheric pressure (Pa), mm Hg	
Ta	Expected atmospheric temperature (Ta), K	
M2	Slope of developed relationship	
B2	Intercept of developed relationship	
Tstd	Temperature standard, 273 + 25°C	
Pstd	Pressure standard, 760 mm Hg	

KEY
updated per day
update per event

Calculating Flow Rate **Section 11.2.2.24 of TO13-A**

KEY

Event 2, Collection 1 9/4/2013-9/5/2013

Parameter	FD07	FD11	FD12	CNM1	Units	Notes
Desired Flow Rate	8	8	8	8	std ft^3/min	
	0.225	0.225	0.225	0.225	m^3/min	
Pa	762	762	762	762	mm Hg	Avg in SD and forecast
Ta	292.4	292.4	292.4	292.4	K	forecast temp around 67°F NOAA 7/30/2013 19:00
M2	32.0916	33.3411	30.9438	34.1618	-	from calibration
B2	-0.8226	-0.8598	-0.4907	-1.092	-	from calibration
Tstd	298	298	298	298	K	avg in SD
Pstd	762	762	762	762	mm Hg	avg in SD

updated per day

update per event

Sept2013 event	FD07	FD11	FD12	CNM1	Units	Notes
Magnehelic Gage Set Point						
Set Point	**41**	**44**	**42**	**44**		
(-)10%	36.9	39.0	36.0	38.0		
(+)10%	45.1	48.4	45.0	48.0		

Actual Flow Volume						
SiteID	**FD07**	**FD11**	**FD12**	**CNM1**	**Units**	**Notes**
Average Magnehelic	41	43.5	43	44.5		
Temp (°C)	25.38	27.4	27.4	25.62468	°C	There were some weather data gaps at FD07 and FD11. The mean 24 hour Temperature for FD12 was applied at FD07 and FD11
Pressure (in.)	29.80655	29.80655	29.80655	29.80655	inches	From Weather Data (24-hour period)
Temp (K)	298	292	300	299	K	conversion
Pressure (mm)	757	757	757	757	mm	conversion
1/m	0.031	0.030	0.032	0.029	-	Total Flow Volume Equation
Sqrt(magn)(Pav/760)(298/Tav)	6.387	6.650	6.519	6.651	-	
b	-0.823	-0.860	-0.491	-1.092	-	
std m3/min	0.225	0.225	0.227	0.227	m^3/min	
total sample volume	**323.5**	**324**	**326**	**326**	**m^3**	

Equations		Notes
Actual Flow Volume	1/m([Sqrt(magn)(Pav/760)(298/Tav)]-b)	
Set Point	[(Expected Pa)/(Expected Ta) (Tstd/Pstd)] [(M2 (Desired Flow Rate) +B2] ^{2}	
where:		
Pa	Expected atmospheric pressure (Pa), mm Hg	
Ta	Expected atmospheric temperature (Ta), K	
M2	Slope of developed relationship	
B2	Intercept of developed relationship	
Tstd	Temperature standard, 273 + 25°C	
Pstd	Pressure standard, 760 mm Hg	

Calculating Flow Rate **Section 11.2.2.24 of TO13-A** KEY

Event 2, Collection 2 9/07/2013-9/8/2013

updated per day
update per event

Parameter	FD07	FD11	FD12	CNM1	Units	Notes
Desired Flow Rate	8	8	8	8	std ft^3/min	
	0.225	0.225	0.225	0.225	m^3/min	
Pa	762	762	762	762	mm Hg	Avg in SD and forecast
Ta	297.86	297.86	297.86	297.86	K	Avg forecast temp around 24.86°C NOAA 9/7/2013 thru 9/8/2013
M2	32.0916	33.3411	30.9438	34.1618	-	from calibration
B2	-0.8226	-0.8598	-0.4907	-1.092	-	from calibration
Tstd	298	298	298	298	K	avg in SD
Pstd	762	762	762	762	mm Hg	avg in SD

Sept2013 event	FD07	FD11	FD12	CNM1	**Units**	**Notes**
Magnehelic Gage Set Point						
Set Point	**41**	**44**	**42**	**44**		
(-)10%	36.9	39.0	36.0	38.0		
(+)10%	45.1	48.4	45.0	48.0		

Actual Flow Volume						
SiteID	**FD07**	**FD11**	**FD12**	**CNM1**	**Units**	**Notes**
Average Magnehelic	41	44	42	43		
Temp (°C)	24.69	24.52	25.68	21.52	°C	From Weather Data (24-hour period)
Pressure (in.)	29.81154	29.84029	29.82578	29.70658	inches	From Weather Data (24-hour period)
Temp (K)	298	292	299	295	K	conversion
Pressure (mm)	757	758	758	755	mm	conversion
1/m	0.031	0.030	0.032	0.029	-	Total Flow Volume Equation
Sqrt(magn)(Pav/760)(298/Tav)	6.395	6.692	6.463	6.572	-	
b	-0.823	-0.860	-0.491	-1.092	-	
std m3/min	0.225	0.227	0.225	0.224	m^3/min	
total sample volume	**323.9**	**326**	**324**	**323**	**m^3**	

Equations		**Notes**
Actual Flow Volume	1/m([Sqrt(magn)(Pav/760)(298/Tav)]-b)	
Set Point	[(Expected Pa)/(Expected Ta) (Tstd/Pstd)] [(M2 (Desired Flow Rate) +B2]^2	
where:		
Pa	Expected atmospheric pressure (Pa), mm Hg	
Ta	Expected atmospheric temperature (Ta), K	
M2	Slope of developed relationship	
B2	Intercept of developed relationship	
Tstd	Temperature standard, 273 + 25°C	
Pstd	Pressure standard, 760 mm Hg	

Calculating Flow Rate **Section 11.2.2.24 of TO13-A** KEY

Event 2, Collection 3 9/11/2013-9/12/2013

updated per day

update per event

Parameter	FD07	FD11	FD12	CNM1	Units	Notes
Desired Flow Rate	8	8	8	8	std ft^3/min	
	0.225	0.225	0.225	0.225	m^3/min	
Pa	762	762	762	762	mm Hg	Avg in SD and forecast
Ta	294.1	294.1	294.1	294.1	K	Avg forecast temp around 21.1°C NOAA 9/11/2013 thru 9/12/2013
M2	32.0916	33.3411	30.9438	34.1618	-	from calibration
B2	-0.8226	-0.8598	-0.4907	-1.092	-	from calibration
Tstd	298	298	298	298	K	avg in SD
Pstd	762	762	762	762	mm Hg	avg in SD

Sept2013 event	FD07	FD11	FD12	CNM1	**Units**	**Notes**
Magnehelic Gage Set Point						
Set Point	**41**	**44**	**42**	**44**		
(-)10%	36.9	39.0	36.0	38.0		
(+)10%	45.1	48.4	45.0	48.0		

Actual Flow Volume						
SiteID	**FD07**	**FD11**	**FD12**	**CNM1**	**Units**	**Notes**
Average Magnehelic	41	44.5	42	44		
Temp (°C)	20.41	19.81	20.25	19.2	°C	From Weather Data (24-hour period)
Pressure (in.)	29.91139	29.94431	29.93039	29.802722	inches	From Weather Data (24-hour period)
Temp (K)	293	292	293	292	K	conversion
Pressure (mm)	760	761	760	757	mm	conversion
1/m	0.031	0.030	0.032	0.029	-	Total Flow Volume Equation
Sqrt(magn)(Pav/760)(298/Tav)	6.452	6.742	6.534	6.685	-	
b	-0.823	-0.860	-0.491	-1.092	-	
std m3/min	0.227	0.228	0.227	0.228	m^3/min	
total sample volume	**326.4**	**328**	**327**	**328**	**m^3**	

Equations		**Notes**
Actual Flow Volume	1/m([Sqrt(magn)(Pav/760)(298/Tav)]-b)	
Set Point	[(Expected Pa)/(Expected Ta) (Tstd/Pstd)] [(M2 (Desired Flow Rate) +B2]^2	
where:		
Pa	Expected atmospheric pressure (Pa), mm Hg	
Ta	Expected atmospheric temperature (Ta), K	
M2	Slope of developed relationship	
B2	Intercept of developed relationship	
Tstd	Temperature standard, 273 + 25°C	
Pstd	Pressure standard, 760 mm Hg	

Calculating Flow Rate **Section 11.2.2.24 of TO13-A** KEY

Event 2, Collection 4 9/14/2013-9/15/2013

updated per day

update per event

Parameter	FD07	FD11	FD12	CNM1	Units	Notes
Desired Flow Rate	8	8	8	8	std ft^3/min	
	0.225	0.225	0.225	0.225	m^3/min	
Pa	762	762	762	762	mm Hg	Avg in SD and forecast
Ta	295.6	295.6	295.6	295.6	K	Avg forecast temp around 72.3F NOAA 9/7/2013 thru 9/8/2013
M2	32.0916	33.3411	30.9438	34.1618	-	from calibration
B2	-0.8226	-0.8598	-0.4907	-1.092	-	from calibration
Tstd	298	298	298	298	K	avg in SD
Pstd	762	762	762	762	mm Hg	avg in SD

Sept2013 event	FD07	FD11	FD12	CNM1	**Units**	**Notes**
Magnehelic Gage Set Point						
Set Point	**41**	**44**	**42**	**44**		
(-)10%	36.9	39.0	36.0	38.0		
(+)10%	45.1	48.4	45.0	48.0		

Actual Flow Volume						
SiteID	**FD07**	**FD11**	**FD12**	**CNM1**	**Units**	**Notes**
Average Magnehelic	41.5	43	42	44		
Temp (°C)	21.4	21.17	21.83	19.2	°C	From Weather Data (24-hour period)
Pressure (in.)	29.65	29.69	29.67	29.55	inches	From Weather Data (24-hour period)
Temp (K)	294	292	295	292	K	conversion
Pressure (mm)	753	754	754	751	mm	conversion
1/m	0.031	0.030	0.032	0.029	-	Total Flow Volume Equation
Sqrt(magn)(Pav/760)(298/Tav)	6.452	6.599	6.488	6.657	-	
b	-0.823	-0.860	-0.491	-1.092	-	
std m3/min	0.227	0.224	0.226	0.227	m^3/min	
total sample volume	**326.4**	**322**	**325**	**327**	**m^3**	

Equations		**Notes**
Actual Flow Volume	1/m([Sqrt(magn)(Pav/760)(298/Tav)]-b)	
Set Point	[(Expected Pa)/(Expected Ta) (Tstd/Pstd)] [(M2 (Desired Flow Rate) +B2]^2	
where:		
Pa	Expected atmospheric pressure (Pa), mm Hg	
Ta	Expected atmospheric temperature (Ta), K	
M2	Slope of developed relationship	
B2	Intercept of developed relationship	
Tstd	Temperature standard, 273 + 25°C	
Pstd	Pressure standard, 760 mm Hg	

Calculating Flow Rate

Event 3, Collection 1 1/11/2014-1/12/2014

Parameter	FD07	FD11	FD12	CNM1	Units
Desired Flow Rate	8	8	8	8	std ft^3/min
	0.225	0.225	0.225	0.225	m^3/min
Pa	762	762	762	762	mm Hg
Ta	294	294	294	294	K
M2	32.395	30.7264	32.2249	31.4438	-
B2	-0.7261	-0.4073	-0.9635	-0.5998	-
Tstd	298	298	298	298	K
Pstd	762	762	762	762	mm Hg

Aug2013 event	FD07	FD11	FD12	CNM1	Units
Magnehelic Gage Set Point					
Set Point	**44**	**43**	**40**	**42**	
(-)10%	39.6	38.7	36.0	37.8	
(+)10%	48.4	47.3	44.0	46.2	

Actual Flow Volume					
SiteID	**FD07**	**FD11**	**FD12**	**CNM1**	**Units**
Average Magnehelic	42	45	42	45	
Temp (°C)	19.70	19.10	20.07	18.14	°C
Pressure (in.)	29.99	29.99	29.98	29.85	inches
Temp (K)	293	292	293	291	K
Pressure (mm)	762	762	761	758	mm
1/m	0.031	0.033	0.031	0.032	-
Sqrt(magn)(Pav/760)(298/Tav)	6.546	6.783	6.541	6.779	-
b	-0.726	-0.407	-0.964	-0.600	-
std m3/min	0.224	0.234	0.233	0.235	m^3/min
total sample volume	**323**	**337**	**335**	**338**	**m^3**

Equations	
Actual Flow Volume	1/m([Sqrt(magn)(Pav/760)(298/Tav)]-b)
Set Point	[(Expected Pa)/(Expected Ta) (Tstd/Pstd)] [(M2 (Desired Flow Rate) +B2]^2
where:	
Pa	Expected atmospheric pressure (Pa), mm Hg
Ta	Expected atmospheric temperature (Ta), K
M2	Slope of developed relationship
B2	Intercept of developed relationship
Tstd	Temperature standard, 273 + 25°C
Pstd	Pressure standard, 760 mm Hg

Section 11.2.2.24 of TO13-A	KEY
Notes	updated per day
	update per event

Avg in SD and forecast
forecast temp around 70°F NOAA 1/11/2014
from calibration
from calibration
avg in SD
avg in SD

294

Notes

Notes
From Weather Data (24-hour period)
From Weather Data (24-hour period)
conversion
conversion
Total Flow Volume Equation

Notes

Calculating Flow Rate

Event 3, Collection 2 1/22/2014-1/23/2014

Parameter	FD07	FD11	FD12	CNM1	Units
Desired Flow Rate	8	8	8	8	std ft^3/min
	0.225	0.225	0.225	0.225	m^3/min
Pa	762	762	762	762	mm Hg
Ta	295	295	295	295	K
M2	32.395	30.7264	32.2249	31.4438	-
B2	-0.7261	-0.4073	-0.9635	-0.5998	-
Tstd	298	298	298	298	K
Pstd	762	762	762	762	mm Hg
Aug2013 event	FD07	FD11	FD12	CNM1	**Units**
Magnehelic Gage Set Point					
Set Point	**43**	**43**	**40**	**42**	
(-)10%	38.7	38.7	36.0	37.8	
(+)10%	47.3	47.3	44.0	46.2	

Actual Flow Volume					
SiteID	**FD07**	**FD11**	**FD12**	**CNM1**	**Units**
Average Magnehelic	43	44	40	43	
Temp (℃)	13.56	13.59	13.59	13.28	℃
Pressure (in.)	29.90	29.92	29.92	29.80	inches
Temp (K)	287	287	287	286	K
Pressure (mm)	759	760	760	757	mm
1/m	0.031	0.033	0.031	0.032	-
Sqrt(magn)(Pav/760)(298/Tav)	6.685	6.764	6.449	6.677	-
b	-0.726	-0.407	-0.964	-0.600	-
std m3/min	0.229	0.233	0.230	0.231	m^3/min
total sample volume	**329**	**336**	**331**	**333**	**m^3**

Equations	
Actual Flow Volume	1/m([Sqrt(magn)(Pav/760)(298/Tav)]-b)
Set Point	[(Expected Pa)/(Expected Ta) (Tstd/Pstd)] [(M2 (Desired Flow Rate) +B2]^2
where:	
Pa	Expected atmospheric pressure (Pa), mm Hg
Ta	Expected atmospheric temperature (Ta), K
M2	Slope of developed relationship
B2	Intercept of developed relationship
Tstd	Temperature standard, 273 + 25℃
Pstd	Pressure standard, 760 mm Hg

Section 11.2.2.24 of TO13-A	KEY
Notes	updated per day
	update per event

Avg in SD and forecast
forecast temp around 72°F NOAA 1/22/2014
from calibration
from calibration
avg in SD
avg in SD

294

Notes

Notes

Gaps in FD11 Weather Data Data from FD12 was used

From Weather Data (24-hour period)
From Weather Data (24-hour period)
conversion
conversion

Total Flow Volume Equation

Notes

Calculating Flow Rate

Event 3, Collection 3 1/29/2014-1/30/2014

Parameter	FD07	FD11	FD12	CNM1	Units
Desired Flow Rate	8	8	8	8	std ft^3/min
	0.225	0.225	0.225	0.225	m^3/min
Pa	762	762	762	762	mm Hg
Ta	289	295	295	295	K
M2	32.395	30.7264	32.2249	31.4438	-
B2	-0.7261	-0.4073	-0.9635	-0.5998	-
Tstd	298	298	298	298	K
Pstd	762	762	762	762	mm Hg
Aug2013 event	FD07	FD11	FD12	CNM1	**Units**
Magnehelic Gage Set Point					
Set Point	**44**	**43**	**40**	**42**	
(-)10%	39.6	38.7	36.0	37.8	
(+)10%	48.4	47.3	44.0	46.2	

Actual Flow Volume					
SiteID	**FD07**	**FD11**	**FD12**	**CNM1**	**Units**
Average Magnehelic	43.5	43.5	40	42.5	
Temp (°C)	14.93	14.93	15.26	13.25	°C
Pressure (in.)	29.93	29.93	29.96	29.83	inches
Temp (K)	288	288	288	286	K
Pressure (mm)	760	760	761	758	mm
1/m	0.031	0.033	0.031	0.032	-
Sqrt(magn)(Pav/760)(298/Tav)	6.711	6.711	6.435	6.642	-
b	-0.726	-0.407	-0.964	-0.600	-
std m3/min	0.230	0.232	0.230	0.230	m^3/min
total sample volume	**331**	**334**	**331**	**332**	**m^3**

Equations	
Actual Flow Volume	1/m([Sqrt(magn)(Pav/760)(298/Tav)]-b)
Set Point	[(Expected Pa)/(Expected Ta) (Tstd/Pstd)] [(M2 (Desired Flow Rate) +B2]^2
where:	
Pa	Expected atmospheric pressure (Pa), mm Hg
Ta	Expected atmospheric temperature (Ta), K
M2	Slope of developed relationship
B2	Intercept of developed relationship
Tstd	Temperature standard, 273 + 25°C
Pstd	Pressure standard, 760 mm Hg

Section 11.2.2.24 of TO13-A	KEY
Notes	updated per day
	update per event

Avg in SD and forecast
forecast temp around 71°F NOAA 1/29/2014
from calibration
from calibration
avg in SD
avg in SD

294

Notes

Notes

Gaps in FD11 Weather Data Data from FD07 was used

From Weather Data (24-hour period)
From Weather Data (24-hour period)
conversion
conversion

Total Flow Volume Equation

Notes

Calculating Flow Rate

Event 3, Collection 4 2/15/2014-2/16/2014

Parameter	FD07	FD11	FD12	CNM1	Units
Desired Flow Rate	8	8	8	8	std ft^3/min
	0.225	0.225	0.225	0.225	m^3/min
Pa	762	762	762	762	mm Hg
Ta	290	290	290	290	K
M2	32.395	30.7264	32.2249	31.4438	-
B2	-0.7261	-0.4073	-0.9635	-0.5998	-
Tstd	298	298	298	298	K
Pstd	762	762	762	762	mm Hg
Dry 3 Collection 4	FD07	FD11	FD12	CNM1	**Units**
Magnehelic Gage Set Point					
Set Point	**44**	**43**	**41**	**43**	
(-)10%	39.6	38.7	36.9	38.7	
(+)10%	48.4	47.3	45.1	47.3	

Actual Flow Volume					
SiteID	**FD07**	**FD11**	**FD12**	**CNM1**	**Units**
Average Magnehelic	44	43	41	43	
Temp (°C)	17.18	17.18	17.18	15.87	°C
Pressure (in.)	29.96	29.96	29.96	29.86	inches
Temp (K)	290	290	290	289	K
Pressure (mm)	761	761	761	758	mm
1/m	0.031	0.033	0.031	0.032	-
Sqrt(magn)(Pav/760)(298/Tav)	6.726	6.649	6.493	6.653	-
b	-0.726	-0.407	-0.964	-0.600	-
std m3/min	0.230	0.230	0.231	0.231	m^3/min
total sample volume	**331**	**331**	**333**	**332**	**m^3**

Equations	
Actual Flow Volume	1/m([Sqrt(magn)(Pav/760)(298/Tav)]-b)
Set Point	[(Expected Pa)/(Expected Ta) (Tstd/Pstd)] [(M2 (Desired Flow Rate) +B2]^2
where:	
Pa	Expected atmospheric pressure (Pa), mm Hg
Ta	Expected atmospheric temperature (Ta), K
M2	Slope of developed relationship
B2	Intercept of developed relationship
Tstd	Temperature standard, 273 + 25°C
Pstd	Pressure standard, 760 mm Hg

Section 11.2.2.24 of TO13-A	KEY
Notes	updated per day
	update per event

Avg in SD and forecast
forecast temp around 63°F NOAA 2/14/2014
from calibration
from calibration
avg in SD
avg in SD

294

Notes

Notes

Gaps in FD11 Weather Data and FD12 was lost Data from FD07 was used

From Weather Data (24-hour period)
From Weather Data (24-hour period)
conversion
conversion
Total Flow Volume Equation

Notes

TISCH Environmental

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ORIFICE TRANSFER STANDARD CERTIFICATION WORKSHEET TE-5040A

Date - Aug 05, 2016 Rootsmeter S/N 0438320 Ta (K) - 293
Operator Jim Tisch Orifice I.D. - 3179 Pa (mm) - 751.84

PLATE OR VDC #	VOLUME START (m3)	VOLUME STOP (m3)	DIFF VOLUME (m3)	DIFF TIME (min)	METER DIFF Hg (mm)	ORFICE DIFF H2O (in.)
1	NA	NA	1.00	6.6590	3.6	2.00
2	NA	NA	1.00	4.0700	10.0	5.50
3	NA	NA	1.00	3.2470	15.5	8.50
4	NA	NA	1.00	2.7720	21.0	11.50
5	NA	NA	1.00	2.4500	26.5	14.50
6	NA	NA	1.00	2.2930	30.2	16.50

DATA TABULATION

Vstd	(x axis) Qstd	(y axis)		Va	(x axis) Qa	(y axis)
1.0012	0.1503	1.4186		0.9951	0.1494	0.8828
0.9927	0.2439	2.3524		0.9867	0.2424	1.4640
0.9854	0.3034	2.9244		0.9793	0.3016	1.8200
0.9780	0.3528	3.4016		0.9720	0.3506	2.1170
0.9706	0.3961	3.8196		0.9647	0.3937	2.3771
0.9657	0.4211	4.0745	-	-0.9598	0.4186	2.5358
Qstd slope (m) =		9.76687		Qa slope (m) =		6.11585
intercept (b) =		-0.04219		intercept (b) =		-0.02626
coefficient (r) =		0.99994		coefficient (r) =		0.99994
y axis = SQRT[H2O(Pa/760)(298/Ta)]				y axis = SQRT[H2O(Ta/Pa)]		

CALCULATIONS

Vstd = Diff. Vol[(Pa-Diff. Hg)/760](298/Ta)
Qstd = Vstd/Time

Va = Diff Vol [(Pa-Diff Hg)/Pa]
Qa = Va/Time

For subsequent flow rate calculations:

Qstd = 1/m{[SQRT(H2O(Pa/760)(298/Ta))]- b}
Qa = 1/m{[SQRT H2O(Ta/Pa)]- b}

TE-1000 PUF Calibration Worksheet

Site Information

Location:	San Diego	**Site ID:**	CNM1	**Date:**	13-Dec-16
Sampler:	TE-1000	**Serial No:**	FA02867	**Tech:**	LDT, AM

Site Conditions

Barometric Pressure (in Hg):	30.10	**Corrected Pressure (mm Hg):**	764.5
Temperature (deg F):	58.0	**Temperature (deg K):**	287.6
Average Pressure (in Hg):	30.10	**Corrected Average Pressure (mm Hg):**	764.5
Average Temperature (deg F):	64.0	**Average Temperature (deg K):**	290.9

Calibration Orifice

Make:	Tisch	**Qstd Slope:**	9.76687
Model:	TE-5040A	**Qstd Intercept:**	-0.04219
Serial#:	3179	**Calibration Due Date:**	5-Aug-16

Calibration Information

Plate or Test #	delta H	Pressure (in H_20)	Qstd (m3/min)	Flow (magn)	Flow (corrected)	Linear Regression	
1	3.7	7.40	0.289	70.0	8.54	**Slope:**	34.4868
2	3.3	6.60	0.273	60.0	7.91	**Intercept:**	-1.4727
3	2.8	5.60	0.252	50.0	7.22	**Corr. Coeff:**	0.9978
4	2.4	4.80	0.233	40.0	6.46		
5	1.8	3.60	0.203	30.0	5.59	**# of Observations:**	5

Calculating Flow Rate **Section 11.2.2.24 of TO13-A**

Equation Set Point = $[(\text{Expected Pa})/(\text{Expected Ta})\ (\text{Tstd}/\text{Pstd})]\ [(\text{M2}\ (\text{Desired Flow Rate}) + \text{B2}]^2$

Pa Expected atmospheric pressure (Pa), mm Hg
Ta Expected atmospheric temperature (Ta), K
M2 Slope of developed relationship
B2 Intercept of developed relationship
Tstd Temperature standard, 273 + 25°C
Pstd Pressure standard, 760 mm Hg

	Sampler Unit	Units
Desired Flow Rate	8	Standard Cubic Feet per Minute (scfm)
	0.225	Cubic Meter per Minute (m^3/min)

Numbers From the 5-pt Calibration

Parameter	Sampler Unit	Units	
Pa	764.5	mm Hg	Average in San Diego for December
Ta	287.6	K	Avg. Forecast Temp 12/13-12/14 8AM-8AM
M2	34.4868	-	from calibration
B2	-1.4727	-	from calibration
Tstd	298	K	provided in method
Pstd	760	mm Hg	provided in method

Magnehelic Gage	**CNM1**
Set Point	41.2

		Pressure (in H_20)	Qstd (m3/min)	Flow (magn)	Flow (corrected)	RPD	
Audit-Before	2.1	4.20	0.219	38.0	6.29	0.21	12/13/2016 0:00
Audit-After	1.6	3.20	0.191	30.0	5.59		12/14/2016 0:00

• Samplers are designed to operate at an actual flow rate of 8 scfm, with a maximum acceptable flow-rate fluctuation range of ±10 percent of this value

Calculations

Qstd = 1/m[Sqrt((H20)(Pa/760)(298/Ta))-b]
Flow (corrected)=Sqrt((magn)(Pa/Pstd)(Tstd/Ta))

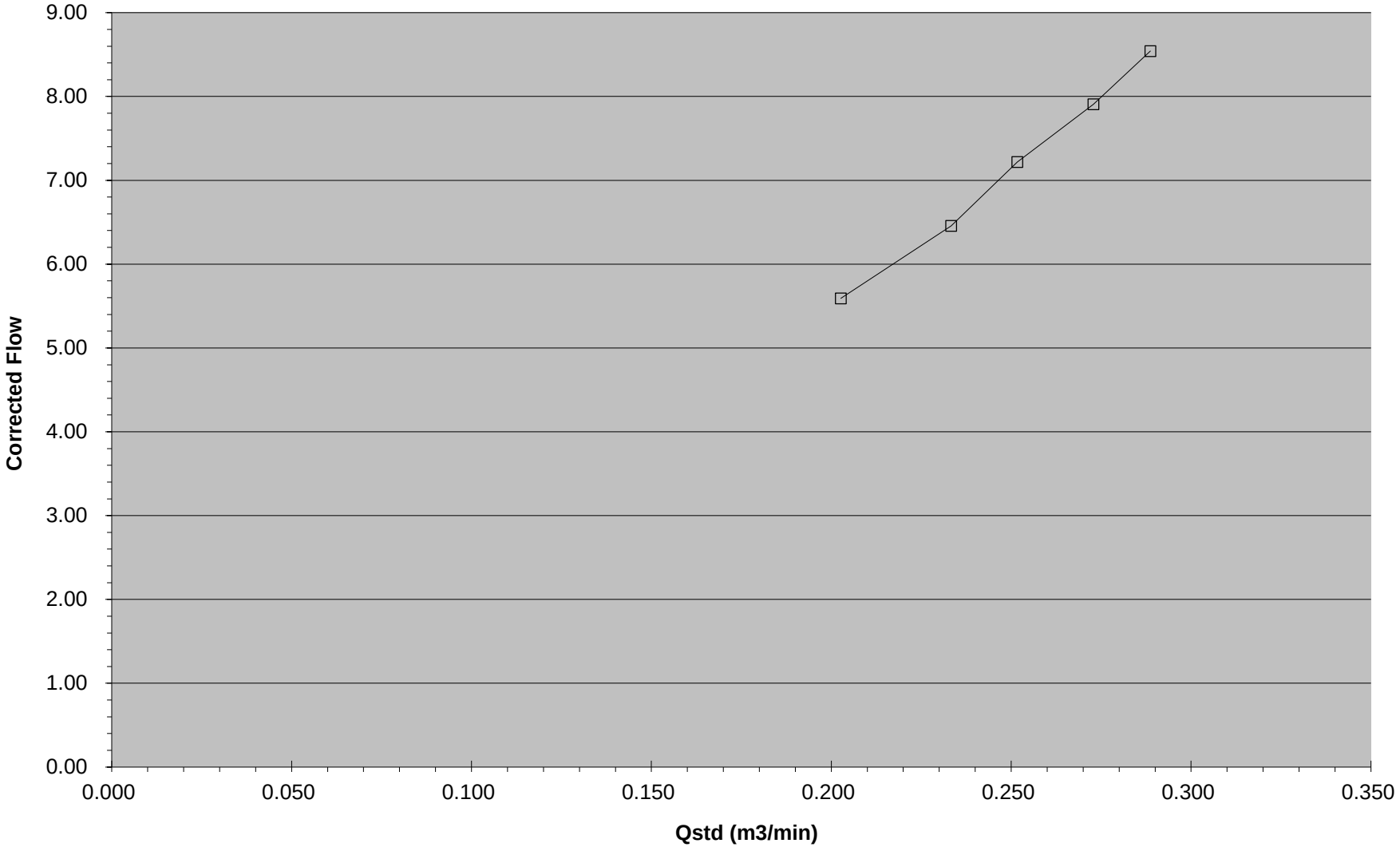
Qstd = standard flow rate
Flow (magn)= reading from magnehelic gauge
Flow (corrected)= corrected flow rate
m = calibrator Qstd slope
b = calibrator Qstd intercept
Ta = actual temperature during calibration (deg K)
Pa = actual pressure during calibration (mm Hg)
Tstd = 298 deg K
Pstd = 760 mm Hg
For subsequent calculation of sampler flow:
Qstd = 1/m[Sqrt((H20)(Pa/760)(298/Ta))-b]

m = sampler slope
b = sampler intercept
(magn) = magnehelic reading
Tav = daily average temperature
Pav = daily average pressure

Set Point	41.2
Average Flow (magn):	37.0
Average Flow Over Sample (m3/min)	
0.221746	
Enter Total Time (hrs):	23.9
Total Flow Over Sample (m3)	
317.9839724	
Total Flow Over Sample (liters)	
317983.9724	

NOTE: Ensure calibration orifice has been certified within 12 months of use

CALIBRATION - CNM1



TE-1000 PUF Calibration Worksheet

Site Information

Location:	San Diego	**Site ID:**	FD07	**Date:**	13-Dec-16
Sampler:	TE-1000	**Serial No:**	FA02868	**Tech:**	LDT, AM

Site Conditions

Barometric Pressure (in Hg):	30.10	**Corrected Pressure (mm Hg):**	764.5
Temperature (deg F):	60.0	**Temperature (deg K):**	288.7
Average Pressure (in Hg):	30.10	**Corrected Average Pressure (mm Hg):**	764.5
Average Temperature (deg F):	64.0	**Average Temperature (deg K):**	290.9

Calibration Orifice

Make:	Tisch	**Qstd Slope:**	9.76687
Model:	TE-5040A	**Qstd Intercept:**	-0.04219
Serial#:	3179	**Calibration Due Date:**	5-Aug-16

Calibration Information

Plate or Test #	delta H	Pressure (in H_20)	Qstd (m3/min)	Flow (magn)	Flow (corrected)	Linear Regression	
1	3.8	7.60	0.292	70.0	8.53	**Slope:**	35.2296
2	3.3	6.60	0.272	60.0	7.89	**Intercept:**	-1.7512
3	2.9	5.80	0.256	50.0	7.21	**Corr. Coeff:**	0.9995
4	2.4	4.80	0.233	40.0	6.44		
5	1.9	3.80	0.208	30.0	5.58	**# of Observations:**	5

Calculating Flow Rate — **Section 11.2.2.24 of TO13-A**

Equation	Set Point = [(Expected Pa)/(Expected Ta) (Tstd/Pstd)] [(M2 (Desired Flow Rate) +B2]^2	
Desired Flow Rate	8	Standard Cubic Feet per Minute (scfm)
	0.225	Cubic Meter per Minute (m^3/min)

Numbers From the 5-pt Calibration

Parameter	Sampler Unit	Units	Definition	Source
Pa	764.5	mm Hg	Expected atmospheric pressure	Average in San Diego for December
Ta	288.7	K	Expected atmospheric temperatu	Avg. Forecast Temp 12/13-12/14 8AM-8AM
M2	35.2296	-	Slope of developed relationship	from calibration
B2	-1.7512	-	Intercept of developed relationsh	from calibration
Tstd	298	K	Temperature standard, 273 + 25	provided in method
Pstd	760	mm Hg	Pressure standard, 760 mm Hg	provided in method

Magnehelic Gage	FD07
Set Point	39.6

Single Point Audit

Single Point Audit		Pressure (in H_20)	Qstd (m3/min)	Flow (magn)	Flow (corrected)	RPD of Flow corrected	Date/Time Recorded
Audit-Before	2	4.00	0.213	38.0	6.28	0.21	12/13/2016 0:00
Audit-After	2	4.00	0.213	36.0	6.11		12/14/2016 0:00

• Samplers are designed to operate at an actual flow rate of 8 scfm, with a maximum acceptable flow-rate fluctuation range of ±10 percent of this value

Calculations

Qstd = 1/m[Sqrt((H20)(Pa/760)(298/Ta))-b]
Flow (corrected)=Sqrt((magn)(Pa/Pstd)(Tstd/Ta))

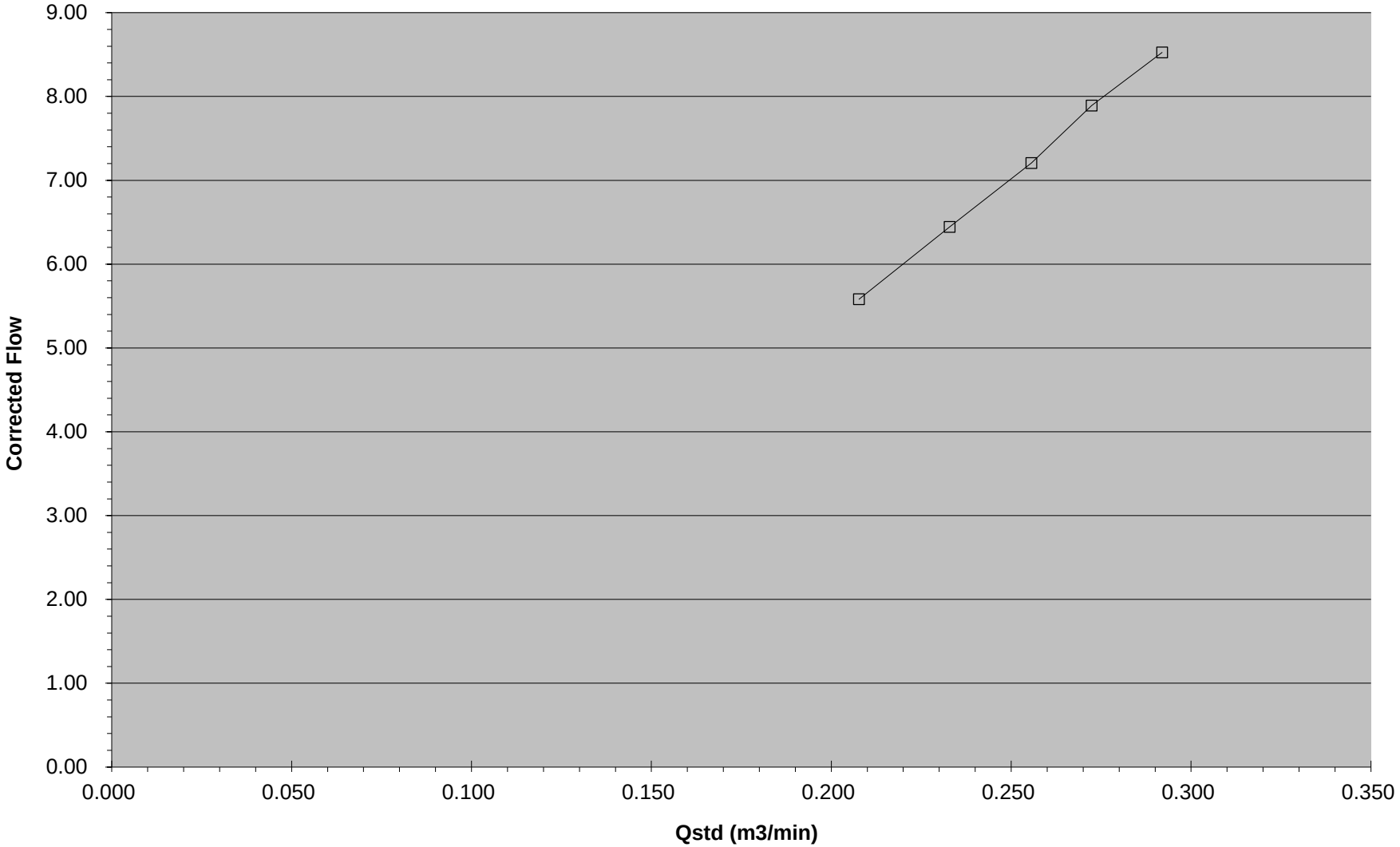
Qstd = standard flow rate
Flow (magn)= reading from magnehelic gauge
Flow (corrected)= corrected flow rate
m = calibrator Qstd slope
b = calibrator Qstd intercept
Ta = actual temperature during calibration (deg K)
Pa = actual pressure during calibration (mm Hg)
Tstd = 298 deg K
Pstd = 760 mm Hg
For subsequent calculation of sampler flow:
Qstd = 1/m[Sqrt((H20)(Pa/760)(298/Ta))-b]

m = sampler slope
b = sampler intercept
(magn) = magnehelic reading
Tav = daily average temperature
Pav = daily average pressure

SAMPLE VOLUME	
Set Point	39.6
Average Flow (magn):	31.0
Average Flow Over Sample (m3/min)	0.210138
Enter Total Time (hrs):	24.0
Total Flow Over Sample (m3)	302.5988499
Total Flow Over Sample (liters)	302598.8499

NOTE: Ensure calibration orifice has been certified within 12 months of use

CALIBRATION - FD07



TE-1000 PUF Calibration Worksheet

Site Information

Location:	San Diego	**Site ID:**	FD11	**Date:**	13-Dec-16
Sampler:	TE-1000	**Serial No:**	FA02869	**Tech:**	LDT, AM

Site Conditions

Barometric Pressure (in Hg):	30.10	**Corrected Pressure (mm Hg):**	764.5
Temperature (deg F):	60.0	**Temperature (deg K):**	288.7
Average Pressure (in Hg):	30.10	**Corrected Average Pressure (mm Hg):**	764.5
Average Temperature (deg F):	64.0	**Average Temperature (deg K):**	290.9

Calibration Orifice

Make:	Tisch	**Qstd Slope:**	9.76687
Model:	TE-5040A	**Qstd Intercept:**	-0.04219
Serial#:	3179	**Calibration Due Date:**	5-Aug-16

Calibration Information

Plate or Test #	delta H	Pressure (in H_20)	Qstd (m3/min)	Flow (magn)	Flow (corrected)	Linear Regression	
1	3.9	7.80	0.296	70.0	8.53	**Slope:**	37.8051
2	3.5	7.00	0.280	60.0	7.89	**Intercept:**	-2.7033
3	3.1	6.20	0.264	50.0	7.21	**Corr. Coeff:**	0.9991
4	2.6	5.20	0.242	40.0	6.44		
5	2.1	4.20	0.218	30.0	5.58	**# of Observations:**	5

Calculating Flow Rate **Section 11.2.2.24 of TO13-A**

Equation	Set Point = [(Expected Pa)/(Expected Ta) (Tstd/Pstd)] [(M2 (Desired Flow Rate) +B2]^2
Pa	Expected atmospheric pressure (Pa), mm Hg
Ta	Expected atmospheric temperature (Ta), K
M2	Slope of developed relationship
B2	Intercept of developed relationship
Tstd	Temperature standard, 273 + 25°C
Pstd	Pressure standard, 760 mm Hg

	Sampler Unit	Units
Desired Flow Rate	8	Standard Cubic Feet per Minute (scfm)
	0.225	Cubic Meter per Minute (m^3/min)

Numbers From the 5-pt Calibration

Parameter	Sampler Unit	Units	
Pa	764.5	mm Hg	Average in San Diego for December
Ta	288.7	K	Avg. Forecast Temp 12/13-12/14 8AM-8AM
M2	37.8051	-	from calibration
B2	-2.7033	-	from calibration
Tstd	298	K	provided in method
Pstd	760	mm Hg	provided in method

Magnehelic Gage	**FD11**
Set Point	35

		Pressure (in H_20)	Qstd (m3/min)	Flow (magn)	Flow (corrected)	RPD	
Audit-Before	2	4.00	0.213	32.0	5.76	0.28	12/13/2016 0:00
Audit-After	2	4.00	0.213	31.0	5.67		12/14/2016 0:00

• Samplers are designed to operate at an actual flow rate of 8 scfm, with a maximum acceptable flow-rate fluctuation range of ±10 percent of this value

Calculations

Qstd = 1/m[Sqrt((H20)(Pa/760)(298/Ta))-b]
Flow (corrected)=Sqrt((magn)(Pa/Pstd)(Tstd/Ta))

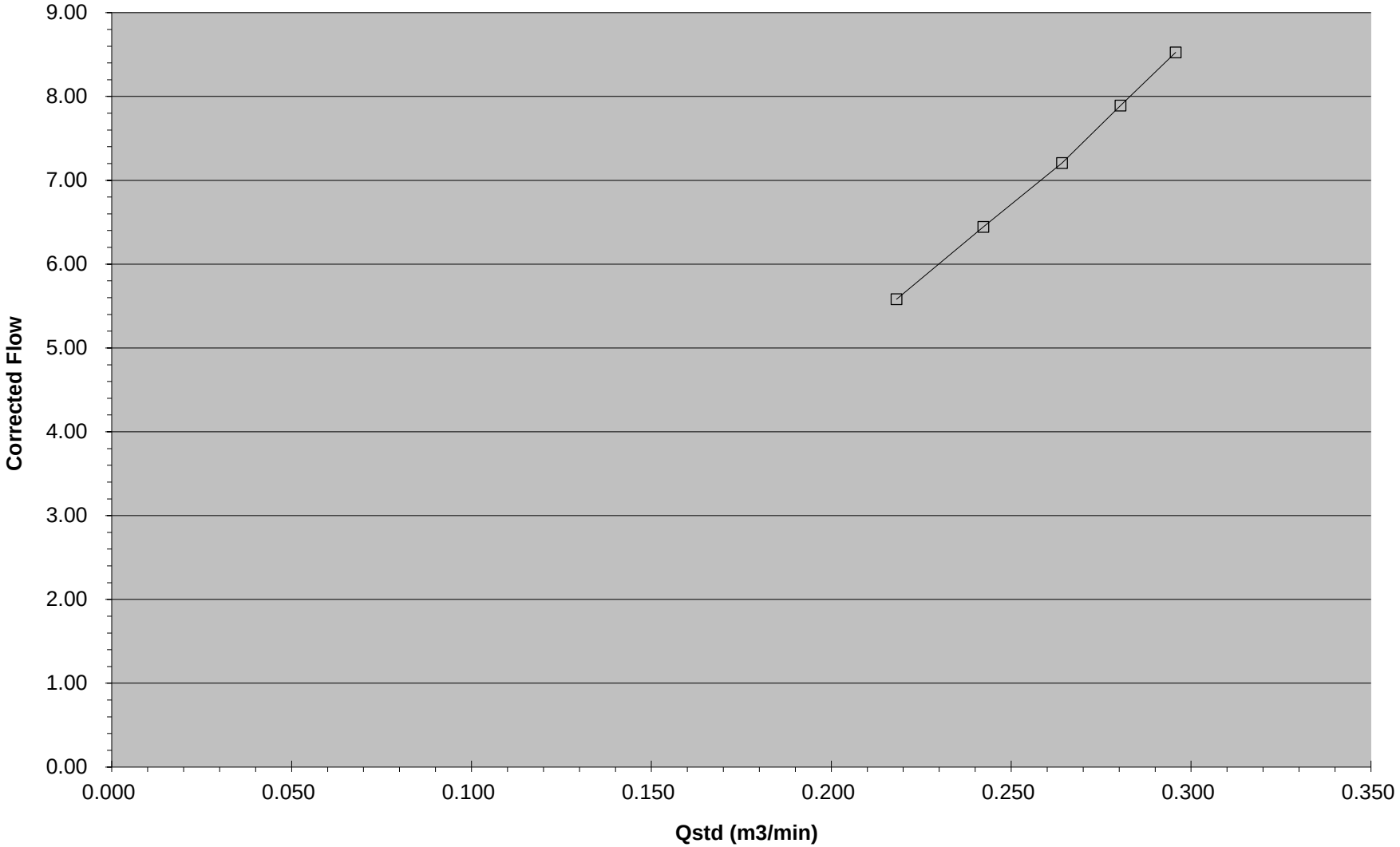
Qstd = standard flow rate
Flow (magn)= reading from magnehelic gauge
Flow (corrected)= corrected flow rate
m = calibrator Qstd slope
b = calibrator Qstd intercept
Ta = actual temperature during calibration (deg K)
Pa = actual pressure during calibration (mm Hg)
Tstd = 298 deg K
Pstd = 760 mm Hg
For subsequent calculation of sampler flow:
Qstd = 1/m[Sqrt((H20)(Pa/760)(298/Ta))-b]

m = sampler slope
b = sampler intercept
(magn) = magnehelic reading
Tav = daily average temperature
Pav = daily average pressure

Set Point	35.0
Average Flow (magn):	32.0
Average Flow Over Sample (m3/min)	
0.223399	
Enter Total Time (hrs):	24.0
Total Flow Over Sample (m3)	
321.6948863	
Total Flow Over Sample (liters)	
321694.8863	

NOTE: Ensure calibration orifice has been certified within 12 months of use

CALIBRATION - FD11



TE-1000 PUF Calibration Worksheet

Site Information

Location:	San Diego	**Site ID:**	FD12	**Date:**	13-Dec-16
Sampler:	TE-1000	**Serial No:**	FA02866	**Tech:**	LDT, AM

Site Conditions

Barometric Pressure (in Hg):	30.10	**Corrected Pressure (mm Hg):**	764.5
Temperature (deg F):	60.0	**Temperature (deg K):**	288.7
Average Pressure (in Hg):	30.10	**Corrected Average Pressure (mm Hg):**	764.5
Average Temperature (deg F):	64.0	**Average Temperature (deg K):**	290.9

Calibration Orifice

Make:	Tisch	**Qstd Slope:**	9.76687
Model:	TE-5040A	**Qstd Intercept:**	-0.04219
Serial#:	3179	**Calibration Due Date:**	5-Aug-16

Calibration Information

Plate or Test #	delta H	Pressure (in H_20)	Qstd (m3/min)	Flow (magn)	Flow (corrected)	Linear Regression	
1	3.7	7.40	0.288	70.0	8.53	**Slope:**	30.5236
2	3.2	6.40	0.268	60.0	7.89	**Intercept:**	-0.3012
3	2.7	5.40	0.247	50.0	7.21	**Corr. Coeff:**	0.9992
4	2.2	4.40	0.223	40.0	6.44		
5	1.6	3.20	0.191	30.0	5.58	**# of Observations:**	5

Calculating Flow Rate **Section 11.2.2.24 of TO13-A**

Equation Set Point = [(Expected Pa)/(Expected Ta) (Tstd/Pstd)] [(M2 (Desired Flow Rate) +B2]^2

Pa Expected atmospheric pressure (Pa), mm Hg
Ta Expected atmospheric temperature (Ta), K
M2 Slope of developed relationship
B2 Intercept of developed relationship
Tstd Temperature standard, 273 + 25°C
Pstd Pressure standard, 760 mm Hg

	Sampler Unit	Units
Desired Flow Rate	8	Standard Cubic Feet per Minute (scfm)
	0.225	Cubic Meter per Minute (m^3/min)

Numbers From the 5-pt Calibration

Parameter	Sampler Unit	Units	
Pa	764.5	mm Hg	Average in San Diego for December
Ta	288.7	K	Avg. Forecast Temp 12/13-12/14 8AM-8AM
M2	30.5236	-	from calibration
B2	-0.3012	-	from calibration
Tstd	298	K	provided in method
Pstd	760	mm Hg	provided in method

Magnehelic Gage	**FD12**
Set Point	44.77494561

		Pressure (in H_20)	Qstd (m3/min)	Flow (magn)	Flow (corrected)	RPD	
Audit-Before	2.1	4.20	0.218	40.0	6.44	0.19	12/13/2016 0:00
Audit-After	2	4.00	0.213	40.0	6.44		12/14/2016 0:00

• Samplers are designed to operate at an actual flow rate of 8 scfm, with a maximum acceptable flow-rate fluctuation range of ±10 percent of this value

Calculations

Qstd = 1/m[Sqrt((H20)(Pa/760)(298/Ta))-b]
Flow (corrected)=Sqrt((magn)(Pa/Pstd)(Tstd/Ta))

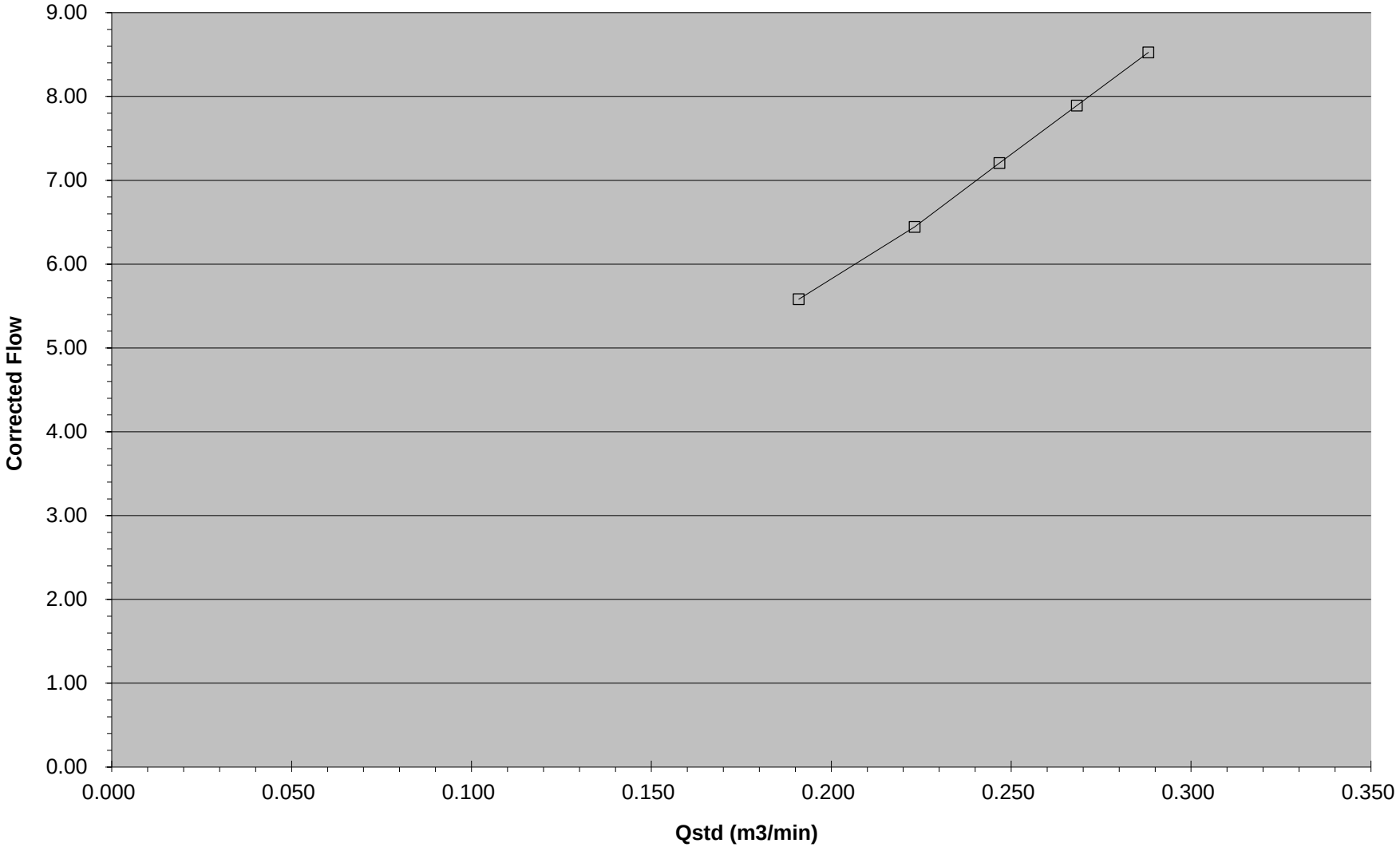
Qstd = standard flow rate
Flow (magn)= reading from magnehelic gauge
Flow (corrected)= corrected flow rate
m = calibrator Qstd slope
b = calibrator Qstd intercept
Ta = actual temperature during calibration (deg K)
Pa = actual pressure during calibration (mm Hg)
Tstd = 298 deg K
Pstd = 760 mm Hg
For subsequent calculation of sampler flow:
Qstd = 1/m[Sqrt((H20)(Pa/760)(298/Ta))-b]

m = sampler slope
b = sampler intercept
(magn) = magnehelic reading
Tav = daily average temperature
Pav = daily average pressure

Set Point	44.8
Average Flow (magn):	35.0
Average Flow Over Sample (m3/min)	
0.206613	
Enter Total Time (hrs):	24.0
Total Flow Over Sample (m3)	
297.5228771	
Total Flow Over Sample (liters)	
297522.8771	

NOTE: Ensure calibration orifice has been certified within 12 months of use

CALIBRATION - FD12



TE-1000 PUF Calibration Worksheet

Site Information

Location:	San Diego	**Site ID:**	CNM1	**Date:**	18-Dec-16
Sampler:	TE-1000	**Serial No:**	FA02867	**Tech:**	AM, LM

Site Conditions

Barometric Pressure (in Hg):	29.97	**Corrected Pressure (mm Hg):**	761.2
Temperature (deg F):	54.0	**Temperature (deg K):**	285.4
Average Pressure (in Hg):	30.10	**Corrected Average Pressure (mm Hg):**	764.5
Average Temperature (deg F):	55.0	**Average Temperature (deg K):**	285.9

Calibration Orifice

Make:	Tisch	**Qstd Slope:**	9.76687
Model:	TE-5040A	**Qstd Intercept:**	-0.04219
Serial#:	3179	**Calibration Due Date:**	5-Aug-16

Calibration Information

Plate or Test #	delta H	Pressure (in H_20)	Qstd (m3/min)	Flow (magn)	Flow (corrected)	Linear Regression	
1	3.9	7.80	0.297	70.0	8.56	**Slope:**	34.0050
2	3.3	6.60	0.273	60.0	7.92	**Intercept:**	-1.4729
3	2.9	5.80	0.257	50.0	7.23	**Corr. Coeff:**	0.9987
4	2.4	4.80	0.234	40.0	6.47		
5	1.9	3.80	0.208	30.0	5.60	**# of Observations:**	5

Calculating Flow Rate **Section 11.2.2.24 of TO13-A**

Equation	Set Point = [(Expected Pa)/(Expected Ta) (Tstd/Pstd)] [(M2 (Desired Flow Rate) +B2]^2
Pa	Expected atmospheric pressure (Pa), mm Hg
Ta	Expected atmospheric temperature (Ta), K
M2	Slope of developed relationship
B2	Intercept of developed relationship
Tstd	Temperature standard, 273 + 25°C
Pstd	Pressure standard, 760 mm Hg

	Sampler Unit	Units
Desired Flow Rate	8	Standard Cubic Feet per Minute (scfm)
	0.225	Cubic Meter per Minute (m^3/min)

Numbers From the 5-pt Calibration

Parameter	Sampler Unit	Units	
Pa	761.2	mm Hg	Average in San Diego for December
Ta	285.4	K	Avg. Forecast Temp 12/13-12/14 8AM-8AM
M2	34.0050	-	from calibration
B2	-1.4729	-	from calibration
Tstd	298	K	provided in method
Pstd	760	mm Hg	provided in method

Magnehelic Gage	**CNM1**
Set Point	39.9

		Pressure (in H_20)	Qstd (m3/min)	Flow (magn)	Flow (corrected)	RPD	
Audit-Before	1.85	3.70	0.206	34.0	5.96	0.25	12/18/2016 0:00
Audit-After	1.3	2.60	0.173	30.0	5.60	0.30	12/19/2016 0:00

• Samplers are designed to operate at an actual flow rate of 8 scfm, with a maximum acceptable flow-rate fluctuation range of ±10 percent of this value

Calculations

Qstd = 1/m[Sqrt((H20)(Pa/760)(298/Ta))-b]
Flow (corrected)=Sqrt((magn)(Pa/Pstd)(Tstd/Ta))

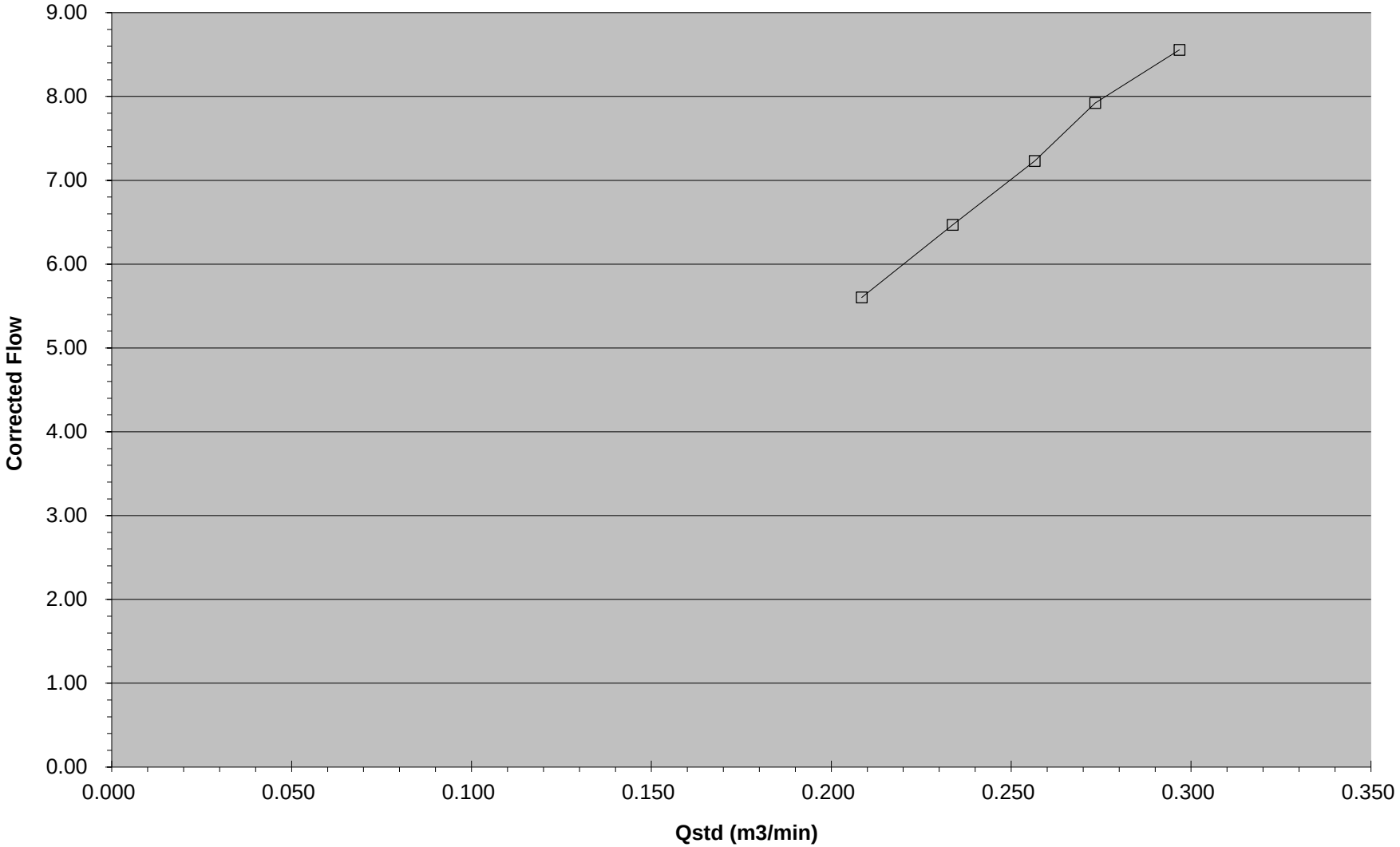
Qstd = standard flow rate
Flow (magn)= reading from magnehelic gauge
Flow (corrected)= corrected flow rate
m = calibrator Qstd slope
b = calibrator Qstd intercept
Ta = actual temperature during calibration (deg K)
Pa = actual pressure during calibration (mm Hg)
Tstd = 298 deg K
Pstd = 760 mm Hg
For subsequent calculation of sampler flow:
Qstd = 1/m[Sqrt((H20)(Pa/760)(298/Ta))-b]

m = sampler slope
b = sampler intercept
(magn) = magnehelic reading
Tav = daily average temperature
Pav = daily average pressure

Set Point	39.9
Average Flow (magn):	37.5
Average Flow Over Sample (m3/min)	
0.227716	
Enter Total Time (hrs):	24.0
Total Flow Over Sample (m3)	
327.9105011	
Total Flow Over Sample (liters)	
327910.5011	

NOTE: Ensure calibration orifice has been certified within 12 months of use

CALIBRATION - CNM1



TE-1000 PUF Calibration Worksheet

Site Information

Location:	San Diego	**Site ID:**	FD07	**Date:**	18-Dec-16
Sampler:	TE-1000	**Serial No:**	FA02868	**Tech:**	AM, LM

Site Conditions

Barometric Pressure (in Hg):	30.30	**Corrected Pressure (mm Hg):**	769.6
Temperature (deg F):	61.0	**Temperature (deg K):**	289.3
Average Pressure (in Hg):	30.10	**Corrected Average Pressure (mm Hg):**	764.5
Average Temperature (deg F):	53.8	**Average Temperature (deg K):**	285.2

Calibration Orifice

Make:	Tisch	**Qstd Slope:**	9.76687
Model:	TE-5040A	**Qstd Intercept:**	-0.04219
Serial#:	3179	**Calibration Due Date:**	5-Aug-16

Calibration Information

Plate or Test #	delta H	Pressure (in H_20)	Qstd (m3/min)	Flow (magn)	Flow (corrected)	Linear Regression	
1	3.6	7.20	0.285	70.0	8.55	**Slope:**	37.8521
2	3.3	6.60	0.273	60.0	7.91	**Intercept:**	-2.3263
3	2.8	5.60	0.252	50.0	7.22	**Corr. Coeff:**	0.9981
4	2.4	4.80	0.233	40.0	6.46		
5	1.9	3.80	0.208	30.0	5.59	**# of Observations:**	5

Calculating Flow Rate — **Section 11.2.2.24 of TO13-A**

Equation	Set Point = [(Expected Pa)/(Expected Ta) (Tstd/Pstd)] [(M2 (Desired Flow Rate) +B2]^2	
Desired Flow Rate	8	Standard Cubic Feet per Minute (scfm)
	0.225	Cubic Meter per Minute (m^3/min)

Numbers From the 5-pt Calibration

Parameter	Sampler Unit	Units	Definition	Source
Pa	769.6	mm Hg	Expected atmospheric pressure	Average in San Diego for December
Ta	289.3	K	Expected atmospheric temperatu	Avg. Forecast Temp 12/13-12/14 8AM-8AM
M2	37.8521	-	Slope of developed relationship	from calibration
B2	-2.3263	-	Intercept of developed relationsh	from calibration
Tstd	298	K	Temperature standard, 273 + 25	provided in method
Pstd	760	mm Hg	Pressure standard, 760 mm Hg	provided in method

Magnehelic Gage	FD07
Set Point	40.0

Single Point Audit

Single Point Audit		Pressure (in H_20)	Qstd (m3/min)	Flow (magn)	Flow (corrected)	RPD of Flow corrected	Date/Time Recorded
Audit-Before	2	4.00	0.213	32.0	5.78	0.28	12/18/2016 0:00
Audit-After	1.9	3.80	0.208	32.0	5.78	0.28	12/19/2016 0:00

• Samplers are designed to operate at an actual flow rate of 8 scfm, with a maximum acceptable flow-rate fluctuation range of ±10 percent of this value

Calculations

Qstd = 1/m[Sqrt((H20)(Pa/760)(298/Ta))-b]
Flow (corrected)=Sqrt((magn)(Pa/Pstd)(Tstd/Ta))

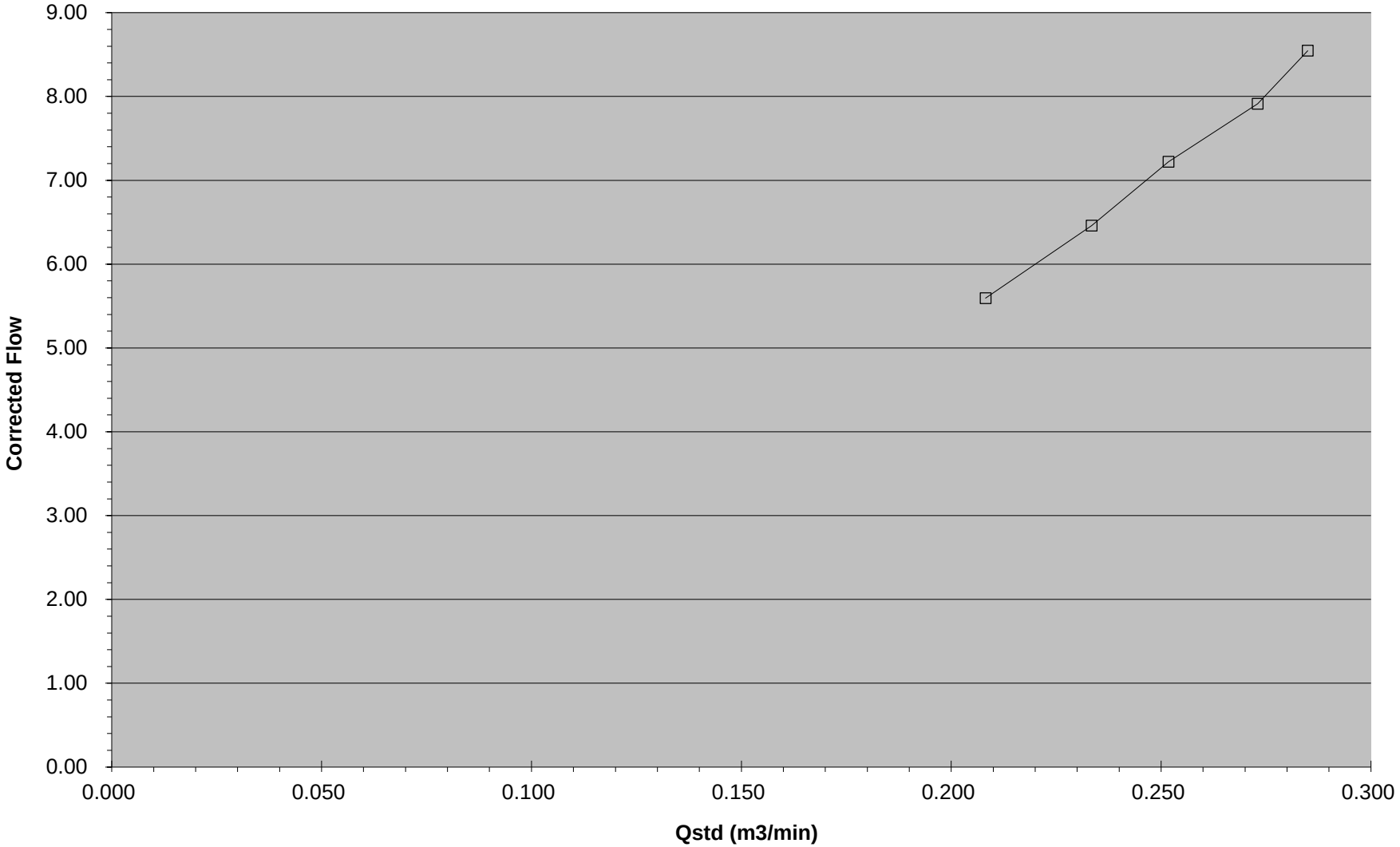
Qstd = standard flow rate
Flow (magn)= reading from magnehelic gauge
Flow (corrected)= corrected flow rate
m = calibrator Qstd slope
b = calibrator Qstd intercept
Ta = actual temperature during calibration (deg K)
Pa = actual pressure during calibration (mm Hg)
Tstd = 298 deg K
Pstd = 760 mm Hg
For subsequent calculation of sampler flow:
Qstd = 1/m[Sqrt((H20)(Pa/760)(298/Ta))-b]

m = sampler slope
b = sampler intercept
(magn) = magnehelic reading
Tav = daily average temperature
Pav = daily average pressure

SAMPLE VOLUME	
Set Point	40.0
Average Flow (magn):	35.0
Average Flow Over Sample (m3/min)	
0.221688	
Enter Total Time (hrs):	24.0
Total Flow Over Sample (m3)	
319.2303831	
Total Flow Over Sample (liters)	
319230.3831	

NOTE: Ensure calibration orifice has been certified within 12 months of use

CALIBRATION - FD07



TE-1000 PUF Calibration Worksheet

Site Information

Location:	San Diego	**Site ID:**	FD11	**Date:**	18-Dec-16
Sampler:	TE-1000	**Serial No:**	FA02869	**Tech:**	AM, LM

Site Conditions

Barometric Pressure (in Hg):	29.88	**Corrected Pressure (mm Hg):**	759.0
Temperature (deg F):	60.0	**Temperature (deg K):**	288.7
Average Pressure (in Hg):	30.10	**Corrected Average Pressure (mm Hg):**	764.5
Average Temperature (deg F):	53.8	**Average Temperature (deg K):**	285.3

Calibration Orifice

Make:	Tisch	**Qstd Slope:**	9.76687
Model:	TE-5040A	**Qstd Intercept:**	-0.04219
Serial#:	3179	**Calibration Due Date:**	5-Aug-16

Calibration Information

Plate or Test #	delta H	Pressure (in H_20)	Qstd (m3/min)	Flow (magn)	Flow (corrected)	Linear Regression	
1	4	8.00	0.298	70.0	8.49	**Slope:**	36.5142
2	3.5	7.00	0.279	60.0	7.86	**Intercept:**	-2.3865
3	3.1	6.20	0.263	50.0	7.18	**Corr. Coeff:**	0.9996
4	2.6	5.20	0.241	40.0	6.42		
5	2.1	4.20	0.217	30.0	5.56	**# of Observations:**	5

Calculating Flow Rate **Section 11.2.2.24 of TO13-A**

Equation	Set Point = [(Expected Pa)/(Expected Ta) (Tstd/Pstd)] [(M2 (Desired Flow Rate) +B2]^2
Pa	Expected atmospheric pressure (Pa), mm Hg
Ta	Expected atmospheric temperature (Ta), K
M2	Slope of developed relationship
B2	Intercept of developed relationship
Tstd	Temperature standard, 273 + 25°C
Pstd	Pressure standard, 760 mm Hg

	Sampler Unit	Units
Desired Flow Rate	8	Standard Cubic Feet per Minute (scfm)
	0.225	Cubic Meter per Minute (m^3/min)

Numbers From the 5-pt Calibration

Parameter	Sampler Unit	Units	
Pa	759.0	mm Hg	Average in San Diego for December
Ta	288.7	K	Avg. Forecast Temp 12/13-12/14 8AM-8AM
M2	36.5142	-	from calibration
B2	-2.3865	-	from calibration
Tstd	298	K	provided in method
Pstd	760	mm Hg	provided in method

Magnehelic Gage	**FD11**
Set Point	35

		Pressure (in H_20)	Qstd (m3/min)	Flow (magn)	Flow (corrected)	RPD	
Audit-Before	1.95	3.90	0.210	28.0	5.37	0.33	12/18/2016 0:00
Audit-After	1.6	3.20	0.190	24.0	4.97	0.38	12/19/2016 0:00

• Samplers are designed to operate at an actual flow rate of 8 scfm, with a maximum acceptable flow-rate fluctuation range of ±10 percent of this value

Calculations

Qstd = 1/m[Sqrt((H20)(Pa/760)(298/Ta))-b]
Flow (corrected)=Sqrt((magn)(Pa/Pstd)(Tstd/Ta))

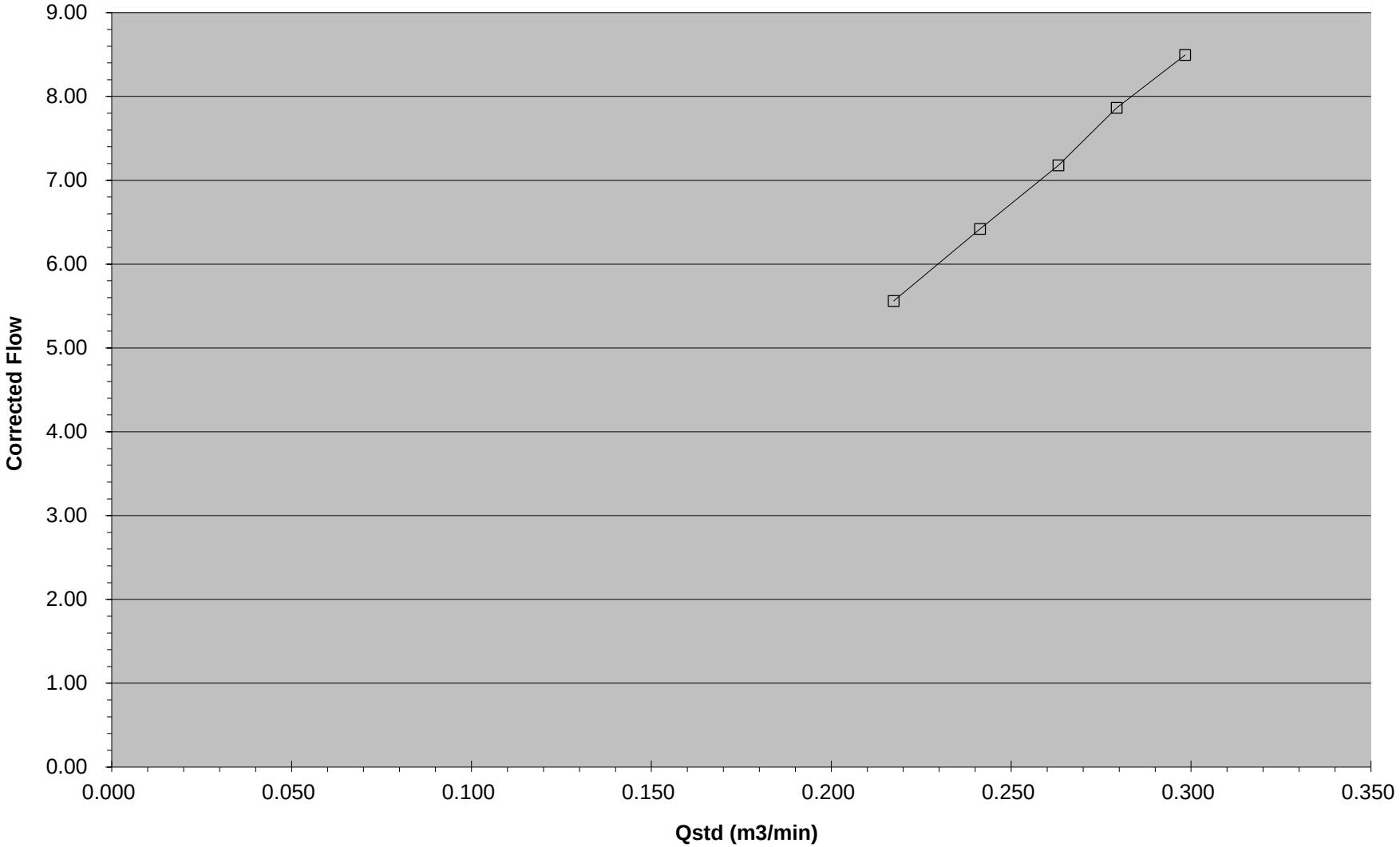
Qstd = standard flow rate
Flow (magn)= reading from magnehelic gauge
Flow (corrected)= corrected flow rate
m = calibrator Qstd slope
b = calibrator Qstd intercept
Ta = actual temperature during calibration (deg K)
Pa = actual pressure during calibration (mm Hg)
Tstd = 298 deg K
Pstd = 760 mm Hg
For subsequent calculation of sampler flow:
Qstd = 1/m[Sqrt((H20)(Pa/760)(298/Ta))-b]

m = sampler slope
b = sampler intercept
(magn) = magnehelic reading
Tav = daily average temperature
Pav = daily average pressure

Set Point	35.0
Average Flow (magn):	30.5
Average Flow Over Sample (m3/min)	0.220407
Enter Total Time (hrs):	24.0
Total Flow Over Sample (m3)	317.386082
Total Flow Over Sample (liters)	317386.082

NOTE: Ensure calibration orifice has been certified within 12 months of use

CALIBRATION - FD11



TE-1000 PUF Calibration Worksheet

Site Information

Location:	San Diego	**Site ID:**	FD12	**Date:**	18-Dec-16
Sampler:	TE-1000	**Serial No:**	FA02866	**Tech:**	AM, LM

Site Conditions

Barometric Pressure (in Hg):	30.14	**Corrected Pressure (mm Hg):**	765.6
Temperature (deg F):	58.0	**Temperature (deg K):**	287.6
Average Pressure (in Hg):	30.10	**Corrected Average Pressure (mm Hg):**	764.5
Average Temperature (deg F):	53.8	**Average Temperature (deg K):**	285.2

Calibration Orifice

Make:	Tisch	**Qstd Slope:**	9.76687
Model:	TE-5040A	**Qstd Intercept:**	-0.04219
Serial#:	3179	**Calibration Due Date:**	5-Aug-16

Calibration Information

Plate or Test #	delta H	Pressure (in H_20)	Qstd (m3/min)	Flow (magn)	Flow (corrected)	Linear Regression	
1	3.6	7.20	0.285	70.0	8.55	**Slope:**	30.8081
2	3.2	6.40	0.269	60.0	7.91	**Intercept:**	-0.3161
3	2.7	5.40	0.247	50.0	7.22	**Corr. Coeff:**	0.9983
4	2.1	4.20	0.219	40.0	6.46		
5	1.6	3.20	0.191	30.0	5.60	**# of Observations:**	5

Calculating Flow Rate **Section 11.2.2.24 of TO13-A**

Equation Set Point = $[(\text{Expected Pa})/(\text{Expected Ta})\ (\text{Tstd}/\text{Pstd})]\ [(\text{M2}\ (\text{Desired Flow Rate}) + \text{B2}]^2$

Pa Expected atmospheric pressure (Pa), mm Hg
Ta Expected atmospheric temperature (Ta), K
M2 Slope of developed relationship
B2 Intercept of developed relationship
Tstd Temperature standard, 273 + 25°C
Pstd Pressure standard, 760 mm Hg

	Sampler Unit	Units
Desired Flow Rate	8	Standard Cubic Feet per Minute (scfm)
	0.225	Cubic Meter per Minute (m^3/min)

Numbers From the 5-pt Calibration

Parameter	Sampler Unit	Units	
Pa	765.6	mm Hg	Average in San Diego for December
Ta	287.6	K	Avg. Forecast Temp 12/18-12/19 8AM-8AM
M2	30.8081	-	from calibration
B2	-0.3161	-	from calibration
Tstd	298	K	provided in method
Pstd	760	mm Hg	provided in method

Magnehelic Gage	**FD12**
Set Point	45.68285348

		Pressure (in H_20)	Qstd (m3/min)	Flow (magn)	Flow (corrected)	RPD	
Audit-Before	2	4.00	0.214	40.0	6.46	0.19	12/18/2016 0:00
Audit-After	1.7	3.40	0.197	36.0	6.13	0.23	12/19/2016 0:00

• Samplers are designed to operate at an actual flow rate of 8 scfm, with a maximum acceptable flow-rate fluctuation range of ±10 percent of this value

Calculations

Qstd = 1/m[Sqrt((H20)(Pa/760)(298/Ta))-b]
Flow (corrected)=Sqrt((magn)(Pa/Pstd)(Tstd/Ta))

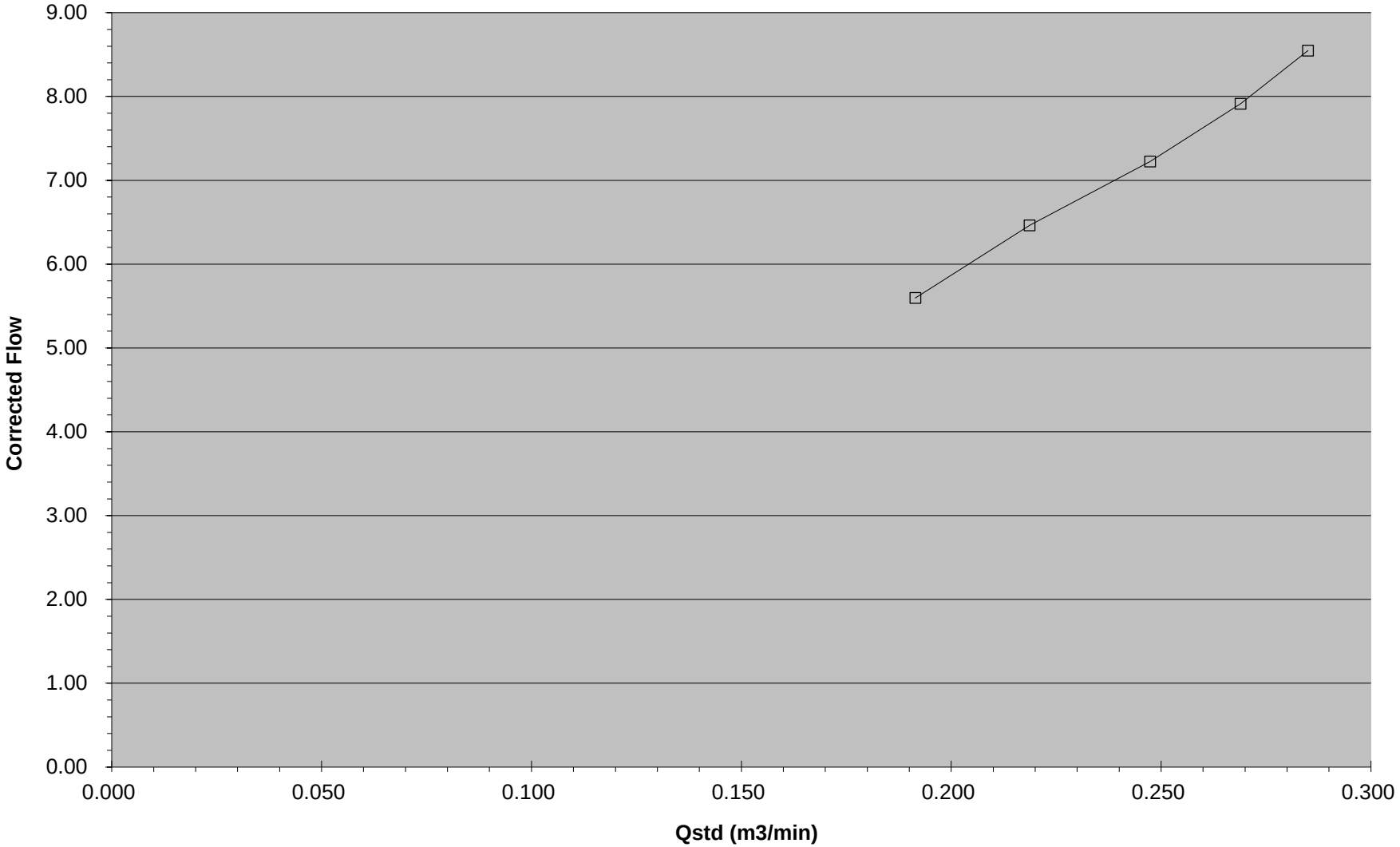
Qstd = standard flow rate
Flow (magn)= reading from magnehelic gauge
Flow (corrected)= corrected flow rate
m = calibrator Qstd slope
b = calibrator Qstd intercept
Ta = actual temperature during calibration (deg K)
Pa = actual pressure during calibration (mm Hg)
Tstd = 298 deg K
Pstd = 760 mm Hg
For subsequent calculation of sampler flow:
Qstd = 1/m[Sqrt((H20)(Pa/760)(298/Ta))-b]

m = sampler slope
b = sampler intercept
(magn) = magnehelic reading
Tav = daily average temperature
Pav = daily average pressure

Set Point	45.7
Average Flow (magn):	42.0
Average Flow Over Sample (m3/min)	
0.226059	
Enter Total Time (hrs):	24.0
Total Flow Over Sample (m3)	
325.5255333	
Total Flow Over Sample (liters)	
325525.5333	

NOTE: Ensure calibration orifice has been certified within 12 months of use

CALIBRATION - FD12



TISCH Environmental

TISCH ENVIRONMENTAL, INC.
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ORIFICE TRANSFER STANDARD CERTIFICATION WORKSHEET TE-5040A

Date - Aug 05, 2016 Rootsmeter S/N 0438320 Ta (K) - 293
Operator Jim Tisch Orifice I.D. - 3179 Pa (mm) - 751.84

PLATE OR VDC #	VOLUME START (m3)	VOLUME STOP (m3)	DIFF VOLUME (m3)	DIFF TIME (min)	METER DIFF Hg (mm)	ORFICE DIFF H2O (in.)
1	NA	NA	1.00	6.6590	3.6	2.00
2	NA	NA	1.00	4.0700	10.0	5.50
3	NA	NA	1.00	3.2470	15.5	8.50
4	NA	NA	1.00	2.7720	21.0	11.50
5	NA	NA	1.00	2.4500	26.5	14.50
6	NA	NA	1.00	2.2930	30.2	16.50

DATA TABULATION

Vstd	(x axis) Qstd	(y axis)		Va	(x axis) Qa	(y axis)
1.0012	0.1503	1.4186		0.9951	0.1494	0.8828
0.9927	0.2439	2.3524		0.9867	0.2424	1.4640
0.9854	0.3034	2.9244		0.9793	0.3016	1.8200
0.9780	0.3528	3.4016		0.9720	0.3506	2.1170
0.9706	0.3961	3.8196		0.9647	0.3937	2.3771
0.9657	0.4211	4.0745	-	-0.9598	0.4186	2.5358
Qstd slope (m) =		9.76687		Qa slope (m) =		6.11585
intercept (b) =		-0.04219		intercept (b) =		-0.02626
coefficient (r) =		0.99994		coefficient (r) =		0.99994
y axis = SQRT[H2O(Pa/760)(298/Ta)]				y axis = SQRT[H2O(Ta/Pa)]		

CALCULATIONS

Vstd = Diff. Vol[(Pa-Diff. Hg)/760](298/Ta)
Qstd = Vstd/Time

Va = Diff Vol [(Pa-Diff Hg)/Pa]
Qa = Va/Time

For subsequent flow rate calculations:

Qstd = 1/m{[SQRT(H2O(Pa/760)(298/Ta))]- b}
Qa = 1/m{[SQRT H2O(Ta/Pa)]- b}

TE-1000 PUF Calibration Worksheet

Site Information

Location:	San Diego	**Site ID:**	CNM1	**Date:**	7-Jan-16
Sampler:	TE-1000	**Serial No:**	FA02867	**Tech:**	KG, KH

Site Conditions

Barometric Pressure (in Hg):	29.97	**Corrected Pressure (mm Hg):**	761.2
Temperature (deg F):	54.0	**Temperature (deg K):**	285.4
Average Pressure (in Hg):	30.10	**Corrected Average Pressure (mm Hg):**	764.5
Average Temperature (deg F):	61.0	**Average Temperature (deg K):**	289.3

Calibration Orifice

Make:	Tisch	**Qstd Slope:**	9.76687
Model:	TE-5040A	**Qstd Intercept:**	-0.04219
Serial#:	3179	**Calibration Due Date:**	5-Aug-16

Calibration Information

Plate or Test #	delta H	Pressure (in H_20)	Qstd (m3/min)	Flow (magn)	Flow (corrected)	Linear Regression	
1	3.6	7.2	0.285	70.0	8.56	**Slope:**	32.2961
2	3.3	6.6	0.273	60.0	7.92	**Intercept:**	-0.8024
3	2.8	5.6	0.252	50.0	7.23	**Corr. Coeff:**	0.9958
4	2.2	4.4	0.224	40.0	6.47		
5	1.7	3.4	0.197	30.0	5.60	**# of Observations:**	5

Calculating Flow Rate **Section 11.2.2.24 of TO13-A**

Equation	Set Point = [(Expected Pa)/(Expected Ta) (Tstd/Pstd)] [(M2 (Desired Flow Rate) +B2]^2
Pa	Expected atmospheric pressure (Pa), mm Hg
Ta	Expected atmospheric temperature (Ta), K
M2	Slope of developed relationship
B2	Intercept of developed relationship
Tstd	Temperature standard, 273 + 25°C
Pstd	Pressure standard, 760 mm Hg

	Sampler Unit	Units
Desired Flow Rate	8	Standard Cubic Feet per Minute (scfm)
	0.225	Cubic Meter per Minute (m^3/min)

Numbers From the 5-pt Calibration

Parameter	Sampler Unit	Units	
Pa	761.2	mm Hg	Average in San Diego for December
Ta	289.3	K	Avg. Forecast Temp 01/07-01/08 8AM-8AM
M2	32.2961	-	from calibration
B2	-0.8024	-	from calibration
Tstd	298	K	provided in method
Pstd	760	mm Hg	provided in method

Magnehelic Gage	CNM1
Set Point	43.1

TE-1000 PUF Calibration Worksheet

Site Information

Location:	San Diego	**Site ID:**	FD07	**Date:**	7-Jan-17
Sampler:	TE-1000	**Serial No:**	FA02868	**Tech:**	KG, KS

Site Conditions

Barometric Pressure (in Hg):	30.30	**Corrected Pressure (mm Hg):**	769.6
Temperature (deg F):	61.0	**Temperature (deg K):**	289.3
Average Pressure (in Hg):	30.10	**Corrected Average Pressure (mm Hg):**	764.5
Average Temperature (deg F):	61.0	**Average Temperature (deg K):**	289.3

Calibration Orifice

Make:	Tisch	**Qstd Slope:**	9.76687
Model:	TE-5040A	**Qstd Intercept:**	-0.04219
Serial#:	3179	**Calibration Due Date:**	5-Aug-16

Calibration Information

Plate or Test #	delta H	Pressure (in H_20)	Qstd (m3/min)	Flow (magn)	Flow (corrected)	Linear Regression	
1	3.7	7.4	0.289	70.0	8.55	**Slope:**	35.7273
2	3.3	6.6	0.273	60.0	7.91	**Intercept:**	-1.7877
3	2.8	5.6	0.252	50.0	7.22	**Corr. Coeff:**	0.9988
4	2.3	4.6	0.229	40.0	6.46		
5	1.9	3.8	0.208	30.0	5.59	**# of Observations:**	5

Calculating Flow Rate **Section 11.2.2.24 of TO13-A**

Equation	Set Point = [(Expected Pa)/(Expected Ta) (Tstd/Pstd)] [(M2 (Desired Flow Rate) +B2]^2
Pa	Expected atmospheric pressure (Pa), mm Hg
Ta	Expected atmospheric temperature (Ta), K
M2	Slope of developed relationship
B2	Intercept of developed relationship
Tstd	Temperature standard, 273 + 25°C
Pstd	Pressure standard, 760 mm Hg

Desired Flow Rate	8	Standard Cubic Feet per Minute (scfm)
	0.225	Cubic Meter per Minute (m^3/min)

Numbers From the 5-pt Calibration

Parameter	Sampler Unit	Units	Definition	Source
Pa	769.6	mm Hg	Expected atmospheric pressure (	Average in San Diego for December
Ta	289.3	K	Expected atmospheric temperatu	Avg. Forecast Temp 01/07-01/08 8AM-8AM
M2	35.7273	-	Slope of developed relationship	from calibration
B2	-1.7877	-	Intercept of developed relationsh	from calibration
Tstd	298	K	Temperature standard, 273 + 25	provided in method
Pstd	760	mm Hg	Pressure standard, 760 mm Hg	provided in method

Magnehelic Gage	FD07
Set Point	40.8

TE-1000 PUF Calibration Worksheet

Site Information

Location:	San Diego	**Site ID:**	FD11	**Date:**	7-Jan-17
Sampler:	TE-1000	**Serial No:**	FA02869	**Tech:**	KG, KS

Site Conditions

Barometric Pressure (in Hg):	29.88	**Corrected Pressure (mm Hg):**	759.0
Temperature (deg F):	60.0	**Temperature (deg K):**	288.7
Average Pressure (in Hg):	30.10	**Corrected Average Pressure (mm Hg):**	764.5
Average Temperature (deg F):	61.0	**Average Temperature (deg K):**	289.3

Calibration Orifice

Make:	Tisch	**Qstd Slope:**	9.76687
Model:	TE-5040A	**Qstd Intercept:**	-0.04219
Serial#:	3179	**Calibration Due Date:**	5-Aug-16

Calibration Information

Plate or Test #	delta H	Pressure (in H_20)	Qstd (m3/min)	Flow (magn)	Flow (corrected)	Linear Regression	
1	3.8	7.6	0.291	70.0	8.49	**Slope:**	37.1366
2	3.4	6.8	0.275	60.0	7.86	**Intercept:**	-2.3600
3	3	6	0.259	50.0	7.18	**Corr. Coeff:**	0.9990
4	2.5	5	0.237	40.0	6.42		
5	2	4	0.212	30.0	5.56	**# of Observations:**	5

Calculating Flow Rate **Section 11.2.2.24 of TO13-A**

Equation	Set Point = [(Expected Pa)/(Expected Ta) (Tstd/Pstd)] [(M2 (Desired Flow Rate) +B2]^2
Pa	Expected atmospheric pressure (Pa), mm Hg
Ta	Expected atmospheric temperature (Ta), K
M2	Slope of developed relationship
B2	Intercept of developed relationship
Tstd	Temperature standard, 273 + 25°C
Pstd	Pressure standard, 760 mm Hg

	Sampler Unit	Units
Desired Flow Rate	8	Standard Cubic Feet per Minute (scfm)
	0.225	Cubic Meter per Minute (m^3/min)

Numbers From the 5-pt Calibration

Parameter	Sampler Unit	Units	
Pa	759.0	mm Hg	Average in San Diego for December
Ta	289.3	K	Avg. Forecast Temp 01/07-01/08 8AM-8AM
M2	37.1366	-	from calibration
B2	-2.3600	-	from calibration
Tstd	298	K	provided in method
Pstd	760	mm Hg	provided in method

Magnehelic Gage	FD11
Set Point	37

TE-1000 PUF Calibration Worksheet

Site Information

Location:	San Diego	**Site ID:**	FD12	**Date:**	7-Jan-17
Sampler:	TE-1000	**Serial No:**	FA02866	**Tech:**	KG, KS

Site Conditions

Barometric Pressure (in Hg):	30.14	**Corrected Pressure (mm Hg):**	765.6
Temperature (deg F):	56.0	**Temperature (deg K):**	286.5
Average Pressure (in Hg):	30.10	**Corrected Average Pressure (mm Hg):**	764.5
Average Temperature (deg F):	61.0	**Average Temperature (deg K):**	289.3

Calibration Orifice

Make:	Tisch	**Qstd Slope:**	9.76687
Model:	TE-5040A	**Qstd Intercept:**	-0.04219
Serial#:	3179	**Calibration Due Date:**	5-Aug-16

Calibration Information

Plate or Test #	delta H	Pressure (in H_20)	Qstd (m3/min)	Flow (magn)	Flow (corrected)	Linear Regression	
1	3.5	7	0.282	70.0	8.56	**Slope:**	31.3035
2	3	6	0.261	60.0	7.93	**Intercept:**	-0.2936
3	2.6	5.2	0.243	50.0	7.24	**Corr. Coeff:**	0.9975
4	2.1	4.2	0.219	40.0	6.47		
5	1.5	3	0.186	30.0	5.61	**# of Observations:**	5

Calculating Flow Rate **Section 11.2.2.24 of TO13-A**

Equation	Set Point = [(Expected Pa)/(Expected Ta) (Tstd/Pstd)] [(M2 (Desired Flow Rate) +B2]^2
Pa	Expected atmospheric pressure (Pa), mm Hg
Ta	Expected atmospheric temperature (Ta), K
M2	Slope of developed relationship
B2	Intercept of developed relationship
Tstd	Temperature standard, 273 + 25°C
Pstd	Pressure standard, 760 mm Hg

	Sampler Unit	Units
Desired Flow Rate	8	Standard Cubic Feet per Minute (scfm)
	0.225	Cubic Meter per Minute (m^3/min)

Numbers From the 5-pt Calibration

Parameter	Sampler Unit	Units	
Pa	765.6	mm Hg	Average in San Diego for December
Ta	289.3	K	Avg. Forecast Temp 01/07-01/08 8AM-8AM
M2	31.3035	-	from calibration
B2	-0.2936	-	from calibration
Tstd	298	K	provided in method
Pstd	760	mm Hg	provided in method

Magnehelic Gage	FD12
Set Point	47.2776469

TE-1000 PUF Calibration Worksheet

Site Information

Location:	San Diego	**Site ID:**	CNM1	**Date:**	17-Jan-17
Sampler:	TE-1000	**Serial No:**	FA02867	**Tech:**	AM, LD

Site Conditions

Barometric Pressure (in Hg):	30.10	**Corrected Pressure (mm Hg):**	764.5
Temperature (deg F):	54.0	**Temperature (deg K):**	285.4
Average Pressure (in Hg):	30.10	**Corrected Average Pressure (mm Hg):**	764.5
Average Temperature (deg F):	54.4	**Average Temperature (deg K):**	285.6

Calibration Orifice

Make:	Tisch	**Qstd Slope:**	9.76687
Model:	TE-5040A	**Qstd Intercept:**	-0.04219
Serial#:	3179	**Calibration Due Date:**	5-Aug-16

Calibration Information

Plate or Test #	delta H	Pressure (in H_20)	Qstd (m3/min)	Flow (magn)	Flow (corrected)	Linear Regression	
1	3.7	7.4	0.290	70.0	8.58	**Slope:**	32.0428
2	3.2	6.4	0.270	60.0	7.94	**Intercept:**	-0.7398
3	2.8	5.6	0.253	50.0	7.25	**Corr. Coeff:**	0.9986
4	2.2	4.4	0.224	40.0	6.48		
5	1.7	3.4	0.198	30.0	5.61	**# of Observations:**	5

Calculating Flow Rate **Section 11.2.2.24 of TO13-A**

Equation	Set Point = [(Expected Pa)/(Expected Ta) (Tstd/Pstd)] [(M2 (Desired Flow Rate) +B2]^2
Pa	Expected atmospheric pressure (Pa), mm Hg
Ta	Expected atmospheric temperature (Ta), K
M2	Slope of developed relationship
B2	Intercept of developed relationship
Tstd	Temperature standard, 273 + 25°C
Pstd	Pressure standard, 760 mm Hg

	Sampler Unit	Units
Desired Flow Rate	8	Standard Cubic Feet per Minute (scfm)
	0.225	Cubic Meter per Minute (m^3/min)

Numbers From the 5-pt Calibration

Parameter	Sampler Unit	Units	
Pa	764.5	mm Hg	Average in San Diego for Jan
Ta	285.4	K	Avg. Forecast Temp 1/17-1/18 8AM-8AM
M2	32.0428	-	from calibration
B2	-0.7398	-	from calibration
Tstd	298	K	provided in method
Pstd	760	mm Hg	provided in method

Magnehelic Gage	CNM1
Set Point	44.0

TE-1000 PUF Calibration Worksheet

Site Information

Location:	San Diego	**Site ID:**	FD07	**Date:**	17-Jan-17
Sampler:	TE-1000	**Serial No:**	FA02868	**Tech:**	AM, LD

Site Conditions

Barometric Pressure (in Hg):	30.10	**Corrected Pressure (mm Hg):**	764.5
Temperature (deg F):	54.4	**Temperature (deg K):**	285.6
Average Pressure (in Hg):	30.10	**Corrected Average Pressure (mm Hg):**	764.5
Average Temperature (deg F):	54.4	**Average Temperature (deg K):**	285.6

Calibration Orifice

Make:	Tisch	**Qstd Slope:**	9.76687
Model:	TE-5040A	**Qstd Intercept:**	-0.04219
Serial#:	3179	**Calibration Due Date:**	5-Aug-16

Calibration Information

Plate or Test #	delta H	Pressure (in H_20)	Qstd (m3/min)	Flow (magn)	Flow (corrected)	Linear Regression	
1	3.8	7.60	0.294	70.0	8.57	**Slope:**	36.3897
2	3.4	6.80	0.278	60.0	7.94	**Intercept:**	-2.1221
3	2.9	5.80	0.257	50.0	7.24	**Corr. Coeff:**	0.9988
4	2.4	4.80	0.234	40.0	6.48		
5	2	4.00	0.214	30.0	5.61	**# of Observations:**	5

Calculating Flow Rate **Section 11.2.2.24 of TO13-A**

Equation	Set Point = [(Expected Pa)/(Expected Ta) (Tstd/Pstd)] [(M2 (Desired Flow Rate) +B2]^2
Pa	Expected atmospheric pressure (Pa), mm Hg
Ta	Expected atmospheric temperature (Ta), K
M2	Slope of developed relationship
B2	Intercept of developed relationship
Tstd	Temperature standard, 273 + 25°C
Pstd	Pressure standard, 760 mm Hg

Desired Flow Rate	8	Standard Cubic Feet per Minute (scfm)
	0.225	Cubic Meter per Minute (m^3/min)

Numbers From the 5-pt Calibration

Parameter	Sampler Unit	Units	Definition	Source
Pa	764.5	mm Hg	Expected atmospheric pressure (	Average in San Diego for Jan
Ta	285.6	K	Expected atmospheric temperatu	Avg. Forecast Temp 1/17-1/18 8AM-8AM
M2	36.3897	-	Slope of developed relationship	from calibration
B2	-2.1221	-	Intercept of developed relationsh	from calibration
Tstd	298	K	Temperature standard, 273 + 25	provided in method
Pstd	760	mm Hg	Pressure standard, 760 mm Hg	provided in method

Magnehelic Gage	FD07
Set Point	38.6

TE-1000 PUF Calibration Worksheet

Site Information

Location:	San Diego	**Site ID:**	FD11	**Date:**	17-Jan-17
Sampler:	TE-1000	**Serial No:**	FA02869	**Tech:**	AM,LD

Site Conditions

Barometric Pressure (in Hg):	30.10	**Corrected Pressure (mm Hg):**	764.5
Temperature (deg F):	54.4	**Temperature (deg K):**	285.6
Average Pressure (in Hg):	30.10	**Corrected Average Pressure (mm Hg):**	764.5
Average Temperature (deg F):	54.4	**Average Temperature (deg K):**	285.6

Calibration Orifice

Make:	Tisch	**Qstd Slope:**	9.76687
Model:	TE-5040A	**Qstd Intercept:**	-0.04219
Serial#:	3179	**Calibration Due Date:**	5-Aug-16

Calibration Information

Plate or Test #	delta H	Pressure (in H_20)	Qstd (m3/min)	Flow (magn)	Flow (corrected)	Linear Regression	
1	3.9	7.80	0.297	70.0	8.57	**Slope:**	37.9166
2	3.5	7.00	0.282	60.0	7.94	**Intercept:**	-2.7141
3	3	6.00	0.261	50.0	7.24	**Corr. Coeff:**	0.9995
4	2.6	5.20	0.244	40.0	6.48		
5	2.1	4.20	0.219	30.0	5.61	**# of Observations:**	5

Calculating Flow Rate **Section 11.2.2.24 of TO13-A**

Equation	Set Point = [(Expected Pa)/(Expected Ta) (Tstd/Pstd)] [(M2 (Desired Flow Rate) +B2]^2
Pa	Expected atmospheric pressure (Pa), mm Hg
Ta	Expected atmospheric temperature (Ta), K
M2	Slope of developed relationship
B2	Intercept of developed relationship
Tstd	Temperature standard, 273 + 25°C
Pstd	Pressure standard, 760 mm Hg

	Sampler Unit	Units
Desired Flow Rate	8	Standard Cubic Feet per Minute (scfm)
	0.225	Cubic Meter per Minute (m^3/min)

Numbers From the 5-pt Calibration

Parameter	Sampler Unit	Units	
Pa	764.5	mm Hg	Average in San Diego for Jan
Ta	285.6	K	Avg. Forecast Temp 1/17-1/18 8AM-8AM
M2	37.9166	-	from calibration
B2	-2.7141	-	from calibration
Tstd	298	K	provided in method
Pstd	760	mm Hg	provided in method

Magnehelic Gage	**FD11**
Set Point	36

TE-1000 PUF Calibration Worksheet

Site Information

Location:	San Diego	**Site ID:**	FD12	**Date:**	17-Jan-17
Sampler:	TE-1000	**Serial No:**	FA02866	**Tech:**	AM, LM

Site Conditions

Barometric Pressure (in Hg):	30.10	**Corrected Pressure (mm Hg):**	764.5
Temperature (deg F):	54.4	**Temperature (deg K):**	285.6
Average Pressure (in Hg):	30.10	**Corrected Average Pressure (mm Hg):**	764.5
Average Temperature (deg F):	54.4	**Average Temperature (deg K):**	285.6

Calibration Orifice

Make:	Tisch	**Qstd Slope:**	9.76687
Model:	TE-5040A	**Qstd Intercept:**	-0.04219
Serial#:	3179	**Calibration Due Date:**	5-Aug-16

Calibration Information

Plate or Test #	delta H	Pressure (in H_20)	Qstd (m3/min)	Flow (magn)	Flow (corrected)	Linear Regression	
1	3.6	7.2	0.286	70.0	8.57	**Slope:**	31.3993
2	3.2	6.4	0.270	60.0	7.94	**Intercept:**	-0.4920
3	2.7	5.4	0.248	50.0	7.24	**Corr. Coeff:**	0.9978
4	2.2	4.4	0.224	40.0	6.48		
5	1.6	3.2	0.192	30.0	5.61	**# of Observations:**	5

Calculating Flow Rate **Section 11.2.2.24 of TO13-A**

Equation	Set Point = [(Expected Pa)/(Expected Ta) (Tstd/Pstd)] [(M2 (Desired Flow Rate) +B2]^2
Pa	Expected atmospheric pressure (Pa), mm Hg
Ta	Expected atmospheric temperature (Ta), K
M2	Slope of developed relationship
B2	Intercept of developed relationship
Tstd	Temperature standard, 273 + 25°C
Pstd	Pressure standard, 760 mm Hg

	Sampler Unit	Units
Desired Flow Rate	8	Standard Cubic Feet per Minute (scfm)
	0.225	Cubic Meter per Minute (m^3/min)

Numbers From the 5-pt Calibration

Parameter	Sampler Unit	Units	
Pa	764.5	mm Hg	Average in San Diego for Jan
Ta	285.6	K	Avg. Forecast Temp 1/17-1/18 8AM-8AM
M2	31.3993	-	from calibration
B2	-0.4920	-	from calibration
Tstd	298	K	provided in method
Pstd	760	mm Hg	provided in method

Magnehelic Gage	FD12
Set Point	45.3476807

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