



Alton Coal Development, LLC

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Cedar City, Utah 84720

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UTAH DEPARTMENT OF
ENVIRONMENTAL QUALITY

FEB - 4 2019

DIVISION OF AIR QUALITY

January 30, 2019

Catherine Wyffels
Engineer
Major New Source Review Section
Utah Division of Air Quality
195 North 1950 West
Salt Lake City, UT 84114

DAQ-2018-018561

RE: 4th QT 2018 Report - Coal Hollow Mine
Project ID: N14047-0004

Dear Mrs. Wyffels,

Please find enclosed the Summary of PM₁₀ Data Collected at the Coal Hollow Mine, Utah during the Fourth Quarter, 2018 prepare by Alton Coal Development, LLC.

Please do not hesitate to contact me if you have any questions. I can be reached at (435) 867-5331 or (435) 691-1551.

Sincerely,

B. Kirk Nicholes
Environmental Specialist
Alton Coal Development, LLC

FEB - 4 2019

DIVISION OF AIR QUALITY

Alton Coal Development, LLC.

Summary of PM₁₀ Data

Collected at Coal Hollow Mine, Utah

During the Fourth Quarter, 2018

Submitted to:

Utah Division of Environmental Quality

Division of Air Quality

195 North 1950 West

Salt Lake City, Utah

Contact: Catherine Wyffles

Prepared by:

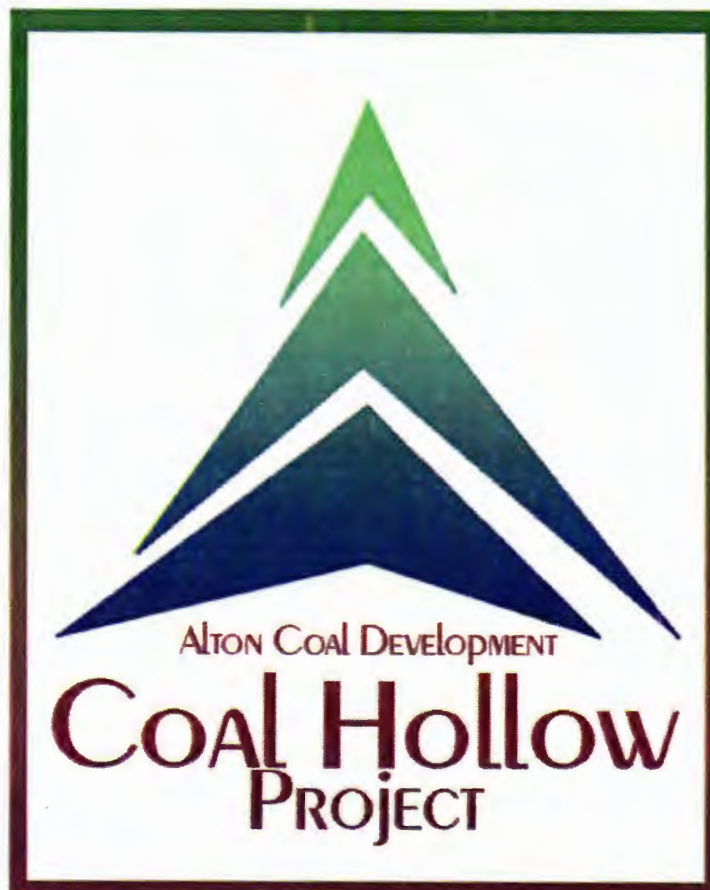
Alton Coal Development, LLC.

463 N 100W, Suite 1

Cedar City, Utah 84721

Contact: Kirk Nicholes

435.867.5331



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1.0 INTRODUCTION

This report summarizes measurements of Particulate Matter less than 10 microns nominal aerodynamic diameter (PM₁₀) collected and processed by Alton Coal Development, LLC, (ACD) from the five monitoring stations located at the Coal Hollow Mine Facility in Alton, Utah. Monitoring for PM₁₀ is a condition of the mines operating permit.

PM₁₀ monitoring at the site consists of five BGI PQ200 PM₁₀ monitors run by solar power. Figure 2 of this report shows the approximate locations of the monitoring locations. The BGI PQ200 monitors are EPA Reference Method monitors and are operated on the National Particulate 1-in-6 Monitoring Schedule. The data summarized herein covers the data collected during the fourth quarter of 2018.

2.0 SITE LOCATION

The Coal Hollow Mine is located in Kane County, Utah, approximately three miles southeast of the town of Alton, Utah. Figure 1 on the following page gives an overview of the site location. Specifically, the Coal Hollow Mine is located in Sections 19, 20, 29, and 30 of Township 39S, Range 5W; with an approximate facility location of:

Northing: 41401699 meters

Easting: 371534 meters

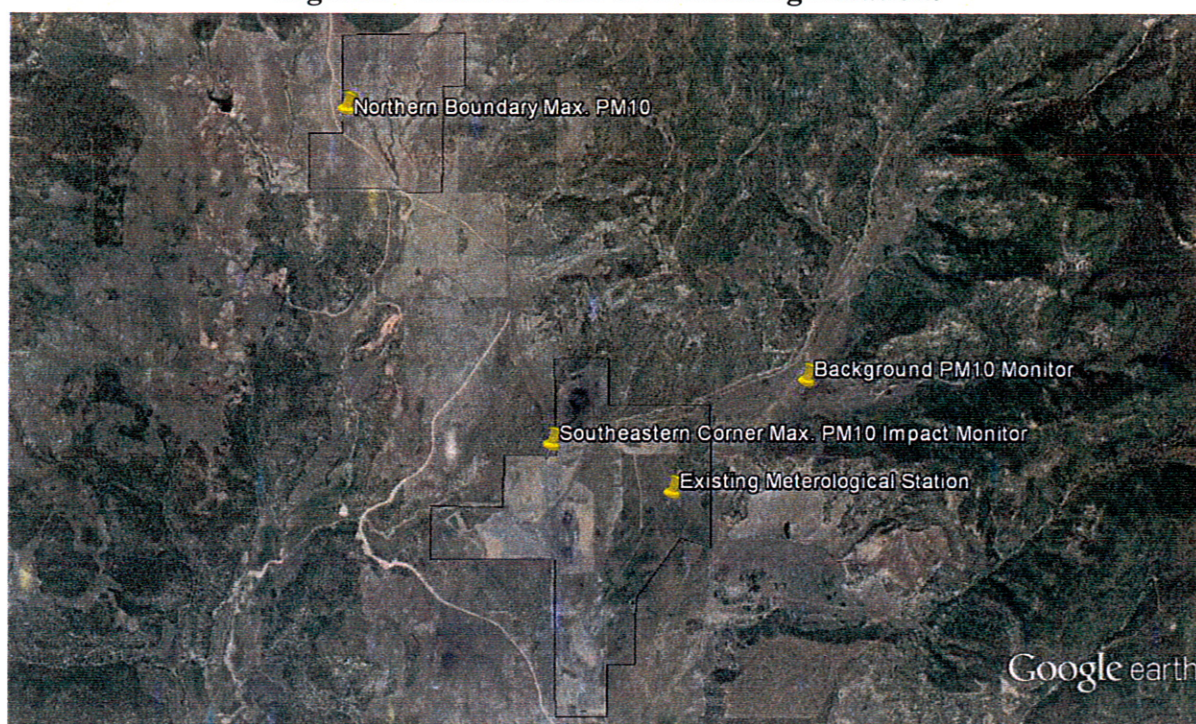
Universal Transverse Mercator (UTM) Datum NAD27, Zone 12

The three monitoring locations as depicted in Figure 2, are located in positions to collect both background and maximum PM₁₀ concentrations. The background monitor has a manufactures serial #962, therefore this monitor will be referred as monitor 962A. The compliance monitor for the Coal Hollow Mine (CHM) has a manufactures serial #963, therefore this monitor will be referred as monitor 963B. The co-located monitor has a manufactures serial #964, therefore this monitor will be referred as monitor 964C. The background monitor coordinates are Northing: 4140856, Easting 373119, (UTM) Datum NAD27, Zone 12. The CHM compliance monitor and the co-located monitor coordinates are Northing: 4140396, Easting 371147, (UTM) Datum NAD27, Zone 12. The North Private Lease area of the CHM is located in Sections 12, 13 of Township 39S, Range 6W and Sections 7, 18 of Township 39S, Range 5W. The compliance monitor for the North Private Lease has a manufactures serial #2366, therefore this monitor will be referred as monitor 2366D. The co-located monitor has a manufactures serial #2398, therefore this monitor will be referred as monitor 2398E. The NPL compliance monitor and the co-located monitor coordinates are Northing: 4141570, Easting 370928, (UTM) Datum NAD27, Zone 12.

This topographic map of the Alton, Tennessee area, includes several key features and annotations:

- Geographic Labels:** The town of **ALTON** is labeled at the top. Other labels include **Gravel Pits**, **Swamp Ranch**, **Valley**, **Wash Creek**, and **Red Lick**.
- Infrastructure:** A network of roads is shown, including **US 18** and **US 29**.
- Topography:** The map features numerous contour lines indicating elevation, with peaks such as 7454, 7490, 7630, 7690, 7783, 7807, 7822, 7851, 7900, 7920, 7940, 7960, 7980, 8074, 8080, 8090, 8100, 8120, 8140, 8160, 8180, 8200, 8220, 8240, 8260, 8280, 8300, 8320, 8340, 8360, 8380, 8400, 8420, 8440, 8460, 8480, 8500, 8520, 8540, 8560, 8580, 8600, 8620, 8640, 8660, 8680, 8700, 8720, 8740, 8760, 8780, 8800, 8820, 8840, 8860, 8880, 8900, 8920, 8940, 8960, 8980, 9000, 9020, 9040, 9060, 9080, 9100, 9120, 9140, 9160, 9180, 9200, 9220, 9240, 9260, 9280, 9300, 9320, 9340, 9360, 9380, 9400, 9420, 9440, 9460, 9480, 9500, 9520, 9540, 9560, 9580, 9600, 9620, 9640, 9660, 9680, 9700, 9720, 9740, 9760, 9780, 9800, 9820, 9840, 9860, 9880, 9900, 9920, 9940, 9960, 9980, 10000.
- Annotations and Boundaries:**
 - A red arrow points to a pink-shaded rectangular area labeled **North Private Lease Mine permit boundary**.
 - A red arrow points to a pink-shaded rectangular area labeled **Coal Hollow Mine permit boundary**.
 - A black arrow points to a pink-shaded rectangular area labeled **Equipment Area**.
 - Two white boxes labeled **Mining Areas (approximate)** are present: one in the upper right and one in the lower right.
 - A scale bar is located in the center of the map.
 - A north arrow is located in the upper right quadrant.

Figure 2 - Satellite View of Monitoring Locations



3.0 AIR QUALITY DATA SUMMARIES

A listing of the measured PM₁₀ concentrations for the quarter are presented in Appendix B (individual data sheets are provided on the enclosed disk in the PDF version of Appendix B) and Field Data Sheets generated during the collection of each sample are presented in Appendix D. Measurements were collected during a 24-hour periods and represent the average PM₁₀ concentration during the midnight to midnight data collection cycle. As required by the operating permit for the CHM, duplicate measurements were made with Sampler #963B (designated as a compliance monitor) and Sampler #964C (designated as a co-located sampler) to the extent possible. The quarterly mean PM₁₀ concentration and the comparison of measured concentrations to standards are based on measurements from the primary Sampler #963B. If a measurement from Sampler #963B was missing or invalid, the measurement from the secondary Sampler #964C would be used. Also, required by the operating permit for the NPL, duplicate measurements were made with Sampler #2366D (designated as a compliance monitor) and Sampler #2398E (designated as a co-located sampler) to the extent possible. The quarterly mean PM₁₀ concentration and the comparison of measured concentrations to standards are based on measurements from the primary Sampler #2366D. If a measurement from Sampler #2366D was missing or invalid, the measurement from the secondary Sampler #2398E would be used.

The highest 24-hour mean PM₁₀ concentrations measured during the quarter from the three monitoring locations are summarized in Table I, Table II, Table III, Table IV and Table V. The three highest concentrations, # of valid samples, and the arithmetic mean concentrations from each of the sites are listed. One day the measured PM₁₀ concentrations exceeded the 24-hour National Ambient Air Quality Standard (NAAQS) of 150 µg/m³. For the November 28th run, both the 2366D and 2398E monitor exceeded the NAAQS. UDOGM requested removal of topsoil from an area of Prime Farmland (44 acres) to be removed and stockpiled all at the same time rather than pit by pit as is typical for ADC. This not only increased the area of disturbance at the NPL, but concentrated traffic near the location of the NPL monitors as several of the stockpiles are in close vicinity of the monitors. The stockpile, where complete and seeded to stabilize from future wind and water erosion.

Table I - Summary of Measured PM₁₀ Concentrations (µg/m³)
Background Monitor - 962A

RANK	DATE	PM ₁₀ CONCENTRATION
Highest	8/7/2018	8.7
2 nd Highest	10/29/2018	7.2
Monthly Mean	10/1/18-10/31/18	4.1
Monthly Mean	11/1/18-11/30/18	5.3
Monthly Mean	12/1/18-12/31/18	2.5
Quarterly Mean	10/1/18-12/31/18 (15 valid samples)	3.9

Table II - Summary of Measured PM₁₀ Concentrations (µg/m³)
Compliance Monitor - 963B

RANK	DATE	PM ₁₀ CONCENTRATION
Highest	10/29/2018	19.2
2 nd Highest	11/10/2018	8.0
Monthly Mean	10/1/18-10/31/18	19.2*
Monthly Mean	11/1/18-11/30/18	9.8

Monthly Mean	12/1/18-12/31/18	4.2
Quarterly Mean	10/1/18-12/31/18 (9 valid samples)	6.7

* Only 1 valid run was completed in October

**Table III - Summary of Measured PM₁₀ Concentrations (µg/m³)
Collocated Monitor – 964C**

RANK	DATE	PM ₁₀ CONCENTRATION
Highest	10/29/2018	24.4
2 nd Highest	11/10/2018	8.4
Monthly Mean	10/1/18-10/31/18	8.8
Monthly Mean	11/1/18-11/30/18	7.1**
Monthly Mean	12/1/18-12/31/18	4.0**
Quarterly Mean	10/1/18-12/31/18 (9 valid samples)	27.0

** Only 2 valid runs were completed in November and December each

**Table IV - Summary of Measured PM₁₀ Concentrations (µg/m³)
Compliance Monitor – 2366D**

RANK	DATE	PM ₁₀ CONCENTRATION
Highest	11/28/2018	191.5
2 nd Highest	10/29/2018	93.1
Monthly Mean	10/1/18-10/31/18	31.2
Monthly Mean	11/1/18-11/30/18	58.9
Monthly Mean	12/1/18-12/31/18	12.3
Quarterly Mean	10/1/18-12/31/18 (14 valid samples)	34.3

**Table V - Summary of Measured PM₁₀ Concentrations (µg/m³)
Collocated Monitor – 2398E**

RANK	DATE	PM ₁₀ CONCENTRATION
Highest	11/28/2018	211.2
2 nd Highest	11/10/2018	48.4
Monthly Mean	10/1/18-10/31/18	8.6
Monthly Mean	11/1/18-11/30/18	61.7
Monthly Mean	12/1/18-12/31/18	11.1
Quarterly Mean	10/1/18-12/31/18 (14 valid samples)	28.5

Table VI – Mean Quarterly and Monthly Wind Speed

	4th Quarter 2018	Oct.	Nov.	Dec.
Mean Wind Speed (m/s)	2.88	3.00	2.91	2.72

4.0 DATA RECOVERY AND QUALITY ASSURANCE

4.1 Data Recovery

Monitor 962A

Monitor 962A collected 15 of the 15 samples during the quarter. The percent recovery for this quarter is 100%.

Monitor 963B

Monitor 963B collected 9 of the 15 samples during the quarter. The percent recovery for this quarter is 60%. For the sample date October 5th, 11th, 17th, 23rd, November 16th, and 22nd the monitor did not run the programed sampling time. After changing several components on the monitor, it was determined that the pump motor needed replaced.

Monitor 964C

Monitor 964C collected 9 of the 15 samples during the quarter. The percent recovery for this quarter is 60%. For the sample dates of November 16th, 22nd, 28th, and December 4th, and 10th the monitor failed to run due to a flow rate excursion $> \pm 5\%$ for > 5 minutes that caused the monitor to shut down. After changing several components on the monitor, it was pump motor quit and was replaced. For the sample date of December 28th, the monitor failed to run due to a flow rate excursion $> \pm 5\%$ for > 5 minutes again that caused the monitor to shut down.

Monitor 2366D

Monitor 2366D collected 14 of the 15 samples during the quarter. The percent recovery for this quarter is 93%. For the sample date October 23rd, the monitor had an incomplete run and the data file was corrupt.

Monitor 2398E

Monitor 2398E collected 14 of the 15 samples during the quarter. The percent recovery for this quarter is 93%. For the sample date October 29th, the monitor although programmed correctly, did not run for the sampling period and shut down after 13 hrs. and 29 minutes.

The PM₁₀ data recoveries for the five monitoring stations are presented below:

Table VII - Summary of Data Recovery

SAMPLER	POSSIBLE SAMPLES	VALID SAMPLES	PERCENT DATA RECOVERY
962A	15	15	100%
963B	9	15	60%
964C	9	15	60%
2366D	14	15	93%
2398E	14	15	93%

4.2 Quality Assurance

Quality assurance procedures utilized to verify the integrity of the measured PM₁₀ data included the following:

1. Review of PM₁₀ precision measurements based upon duplicate, collocated measurements.

2. Independent quarterly audits of the PM₁₀ samplers.
3. Monthly zero and single point flow rate checks of the PM₁₀ samplers.

4.2.1 Precision of PM₁₀ Measurements

The precision of the PM₁₀ measurements was determined from the duplicate samples collected from the collocated BGI PQ200 Monitors 963B and 964C at the Coal Hollow Mine and 2366D and 2398E at the North Private Lease. As recommended in *40 CFR, Part 58, Appendix A, Section 5.3.1*, PM₁₀ precision checks are reported for instances when the concentrations for duplicate samples both exceed 3 µg/m³. Duplicate samples that did not meet this condition were omitted for the purposes of the precision checks. Appendix C, of this report summarizes precision calculations between the compliance monitor and the co-located monitor. Monthly flow rate verification data is also summarized in Appendix C.

Precision calculations at the Coal Hollow Mine were developed based on 4 valid pairs of co-located monitoring data during the quarter. Single point precision based on *40 CFR, Part 58, Appendix A Equation 2* results were -23.9% to -1.8%. The aggregate coefficient of variability (CV) calculated in accordance with *40 CFR, Part 58, Appendix A Equation 11* is 15.7%. This value is not within the 10% goal for aggregate CV.

Precision calculations at the North Private Lease were developed based on 13 valid pairs of co-located monitoring data during the quarter. Single point precision based on *40 CFR, Part 58, Appendix A Equation 2* results were -17.5% to 33.4%. The aggregate coefficient of variability (CV) calculated in accordance with *40 CFR, Part 58, Appendix A Equation 11* is 14.1%. This value is not within the 10% goal for aggregate CV.

4.2.2 Audit Results

The accuracy of the PM₁₀ sampler flows was verified by a performance audit conducted by Air Resource Specialist on November 19, 2018. A copy of the audit report is presented in Appendix E and is summarized in Table VI. The audit results indicate that four of the five samplers were operating properly. Sampler 963 B the pump motor would not power up at the time of the audit, replacement of the motor occurred later.

Table VIII- Audit Summary

SAMPLER	AUDIT % DIFFERENCE	LIMIT*	DESIGN % DIFFERENCE	LIMIT*
962A	-2.7	±4%	2.6	± 5%
963B	N/A	±4%	N/A	± 5%
964C	-1.2	±4%	1.3	± 5%
2366D	1.4	±4%	0.1	± 5%
2398E	-1.0	±4%	1.0	± 5%
*Values between ± 7% and ± 10% require recalibration but no data are invalidated.				

4.2.3 Zero and Single Point Flow Rate Checks

Zero and single-point flow rate verifications are performed by a site technician on a monthly basis. The data was then input into a statistical calculator to calculate percent difference and bias between each of the monitors and the monthly single point flow rate measured by a NIST traceable calibration orifice. The calculator used is called the “Data Assessment Statistical Calculator” DASC Tool. DASC was developed for the data user community and can be found in the Precision and Accuracy Reporting System within the Quality Assurance section of EPA’s Ambient Monitoring Technology Information System. This data is presented in Appendix C of this report.

APPENDIX A

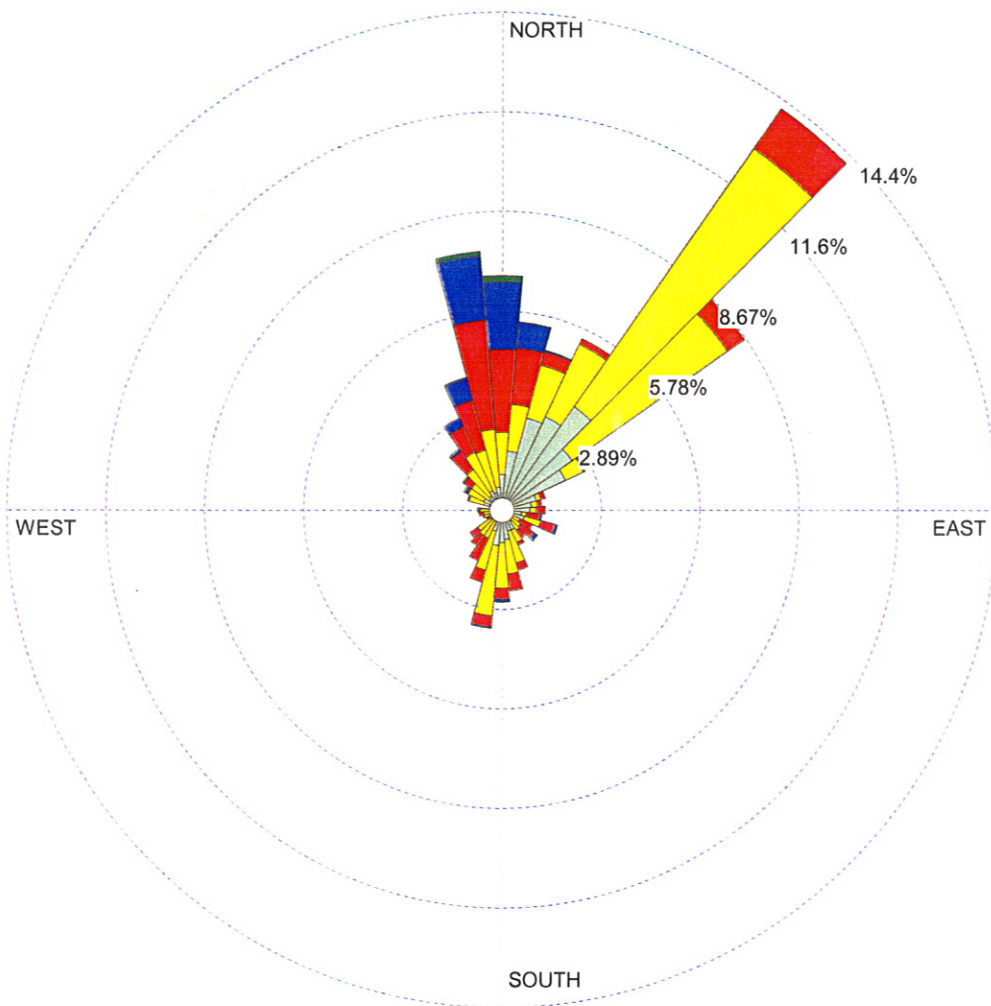
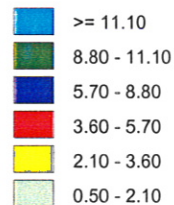
Windrose

WIND ROSE PLOT:

Alton Coal Development, LLC , Alton, Utah
4th QTR 2018

DISPLAY:

Wind Speed
Direction (blowing from)

WIND SPEED
(m/s)

Calms: 1.40%

COMMENTS:

DATA PERIOD:

Start Date: 10/1/2018 - 00:00
End Date: 12/31/2018 - 23:00

COMPANY NAME:

Alton Coal Development, LLC - Coal Hollow Mine

MODELER:

B. Kirk Nicholes

CALM WINDS:

1.40%

TOTAL COUNT:

2208 hrs.

AVG. WIND SPEED:

2.88 m/s

DATE:

1/11/2019

PROJECT NO.:



Station ID: 1
 Start Date: 10/1/2018 - 00:00
 End Date: 12/31/2018 - 23:00

Run ID:

Frequency Distribution
 (Count)

Wind Direction (Blowing From) / Wind Speed (m/s)

	0.50 - 2.10	2.10 - 3.60	3.60 - 5.70	5.70 - 8.80	8.80 - 11.10	>= 11.10	Total
355-5	23	27	53	43	4	0	150
5-15	38	30	36	17	0	0	121
15-25	61	35	9	1	0	0	106
25-35	66	51	4	0	0	0	121
35-45	81	201	31	0	0	0	313
45-55	55	122	13	0	0	0	190
55-65	45	13	1	0	0	0	59
65-75	23	3	3	0	0	0	29
75-85	19	4	3	0	0	0	26
85-95	18	4	6	0	0	0	28
95-105	13	3	9	1	0	0	26
105-115	15	11	9	2	0	0	37
115-125	7	6	9	0	0	0	22
125-135	8	7	10	3	0	0	28
135-145	9	7	6	0	0	0	22
145-155	14	9	2	0	0	0	25
155-165	14	21	5	0	0	0	40
165-175	19	22	11	0	0	0	52
175-185	21	29	7	2	0	0	59
185-195	23	45	7	1	0	0	76
195-205	14	26	8	0	0	0	48
205-215	7	13	16	0	0	0	36
215-225	7	13	8	0	0	0	28
225-235	9	10	6	0	0	0	25
235-245	6	3	2	0	0	0	11
245-255	7	5	1	0	0	0	13
255-265	7	5	3	0	0	0	15
265-275	8	6	1	1	0	0	16
275-285	3	4	0	0	0	0	7
285-295	12	10	1	0	0	0	23
295-305	13	11	1	2	0	0	27
305-315	10	14	6	0	1	0	31
315-325	11	21	14	2	0	0	48
325-335	14	27	18	6	0	0	65
335-345	12	28	33	14	1	0	88
345-355	15	37	70	41	3	0	166
Total	727	883	422	136	9	0	2208

Frequency of Calm Winds: 31
 Average Wind Speed: 2.88 m/s

Station ID: 1
 Start Date: 10/1/2018 - 00:00
 End Date: 12/31/2018 - 23:00

Run ID:

Frequency Distribution
 (Normalized)

Wind Direction (Blowing From) / Wind Speed (m/s)

	0.50 - 2.10	2.10 - 3.60	3.60 - 5.70	5.70 - 8.80	8.80 - 11.10	>= 11.10	Total
355-5	0.010417	0.012228	0.024004	0.019475	0.001812	0.000000	0.067935
5-15	0.017210	0.013587	0.016304	0.007699	0.000000	0.000000	0.054801
15-25	0.027627	0.015851	0.004076	0.000453	0.000000	0.000000	0.048007
25-35	0.029891	0.023098	0.001812	0.000000	0.000000	0.000000	0.054801
35-45	0.036685	0.091033	0.014040	0.000000	0.000000	0.000000	0.141757
45-55	0.024909	0.055254	0.005888	0.000000	0.000000	0.000000	0.086051
55-65	0.020380	0.005888	0.000453	0.000000	0.000000	0.000000	0.026721
65-75	0.010417	0.001359	0.001359	0.000000	0.000000	0.000000	0.013134
75-85	0.008605	0.001812	0.001359	0.000000	0.000000	0.000000	0.011775
85-95	0.008152	0.001812	0.002717	0.000000	0.000000	0.000000	0.012681
95-105	0.005888	0.001359	0.004076	0.000453	0.000000	0.000000	0.011775
105-115	0.006793	0.004982	0.004076	0.000906	0.000000	0.000000	0.016757
115-125	0.003170	0.002717	0.004076	0.000000	0.000000	0.000000	0.009964
125-135	0.003623	0.003170	0.004529	0.001359	0.000000	0.000000	0.012681
135-145	0.004076	0.003170	0.002717	0.000000	0.000000	0.000000	0.009964
145-155	0.006341	0.004076	0.000906	0.000000	0.000000	0.000000	0.011322
155-165	0.006341	0.009511	0.002264	0.000000	0.000000	0.000000	0.018116
165-175	0.008605	0.009964	0.004982	0.000000	0.000000	0.000000	0.023551
175-185	0.009511	0.013134	0.003170	0.000906	0.000000	0.000000	0.026721
185-195	0.010417	0.020380	0.003170	0.000453	0.000000	0.000000	0.034420
195-205	0.006341	0.011775	0.003623	0.000000	0.000000	0.000000	0.021739
205-215	0.003170	0.005888	0.007246	0.000000	0.000000	0.000000	0.016304
215-225	0.003170	0.005888	0.003623	0.000000	0.000000	0.000000	0.012681
225-235	0.004076	0.004529	0.002717	0.000000	0.000000	0.000000	0.011322
235-245	0.002717	0.001359	0.000906	0.000000	0.000000	0.000000	0.004982
245-255	0.003170	0.002264	0.000453	0.000000	0.000000	0.000000	0.005888
255-265	0.003170	0.002264	0.001359	0.000000	0.000000	0.000000	0.006793
265-275	0.003623	0.002717	0.000453	0.000453	0.000000	0.000000	0.007246
275-285	0.001359	0.001812	0.000000	0.000000	0.000000	0.000000	0.003170
285-295	0.005435	0.004529	0.000453	0.000000	0.000000	0.000000	0.010417
295-305	0.005888	0.004982	0.000453	0.000906	0.000000	0.000000	0.012228
305-315	0.004529	0.006341	0.002717	0.000000	0.000453	0.000000	0.014040
315-325	0.004982	0.009511	0.006341	0.000906	0.000000	0.000000	0.021739
325-335	0.006341	0.012228	0.008152	0.002717	0.000000	0.000000	0.029438
335-345	0.005435	0.012681	0.014946	0.006341	0.000453	0.000000	0.039855
345-355	0.006793	0.016757	0.031703	0.018569	0.001359	0.000000	0.075181
Total	0.329257	0.399909	0.191123	0.061594	0.004076	0.000000	0.985960

Frequency of Calm Winds: 1.40%

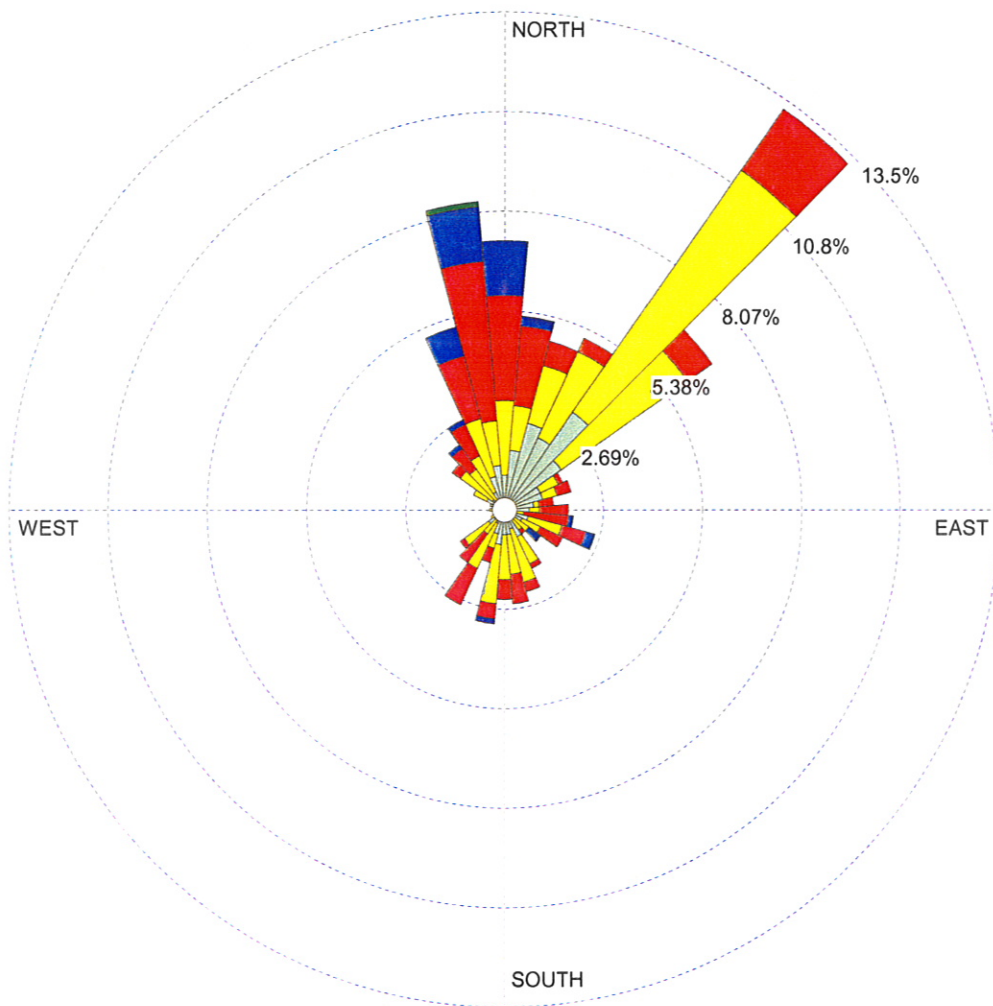
Average Wind Speed: 2.88 m/s

WIND ROSE PLOT:

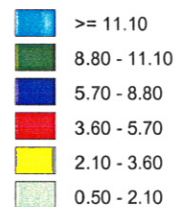
Alton Coal Development, LLC , Alton, Utah
October 2018

DISPLAY:

Wind Speed
Direction (blowing from)



WIND SPEED
(m/s)



Calms: 0.54%

COMMENTS:

DATA PERIOD:

Start Date: 10/1/2018 - 00:00
End Date: 10/31/2018 - 23:00

COMPANY NAME:

Alton Coal Development, LLC - Coal Hollow Mine

MODELER:

B. Kirk Nicholes

CALM WINDS:

0.54%

TOTAL COUNT:

744 hrs.

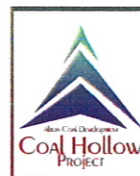
AVG. WIND SPEED:

3.00 m/s

DATE:

1/11/2019

PROJECT NO.:



Station ID: 1
 Start Date: 10/1/2018 - 00:00
 End Date: 10/31/2018 - 23:00

Run ID:

Frequency Distribution
 (Count)

	Wind Direction (Blowing From) / Wind Speed (m/s)						
	0.50 - 2.10	2.10 - 3.60	3.60 - 5.70	5.70 - 8.80	8.80 - 11.10	>= 11.10	Total
355-5	7	15	21	11	0	0	54
5-15	12	9	16	2	0	0	39
15-25	18	12	5	0	0	0	35
25-35	16	19	3	0	0	0	38
35-45	24	59	15	0	0	0	98
45-55	14	31	6	0	0	0	51
55-65	8	4	1	0	0	0	13
65-75	8	3	3	0	0	0	14
75-85	6	1	3	0	0	0	10
85-95	5	2	6	0	0	0	13
95-105	1	3	9	1	0	0	14
105-115	5	7	5	2	0	0	19
115-125	4	4	5	0	0	0	13
125-135	2	4	0	3	0	0	9
135-145	2	3	1	0	0	0	6
145-155	6	6	1	0	0	0	13
155-165	4	11	2	0	0	0	17
165-175	5	8	6	0	0	0	19
175-185	5	9	4	0	0	0	18
185-195	7	12	3	1	0	0	23
195-205	5	3	3	0	0	0	11
205-215	3	10	8	0	0	0	21
215-225	0	6	7	0	0	0	13
225-235	4	6	1	0	0	0	11
235-245	2	1	0	0	0	0	3
245-255	1	1	0	0	0	0	2
255-265	0	1	0	0	0	0	1
265-275	2	1	0	0	0	0	3
275-285	0	0	0	0	0	0	0
285-295	3	0	0	0	0	0	3
295-305	4	3	0	0	0	0	7
305-315	3	8	2	0	0	0	13
315-325	2	8	5	1	0	0	16
325-335	4	8	7	1	0	0	20
335-345	7	12	13	6	0	0	38
345-355	9	9	32	11	1	0	62
Total	208	299	193	39	1	0	744

Frequency of Calm Winds: 4
 Average Wind Speed: 3.00 m/s

Station ID: 1
 Start Date: 10/1/2018 - 00:00
 End Date: 10/31/2018 - 23:00

Run ID:

Frequency Distribution (Normalized)

Wind Direction (Blowing From) / Wind Speed (m/s)

	0.50 - 2.10	2.10 - 3.60	3.60 - 5.70	5.70 - 8.80	8.80 - 11.10	>= 11.10	Total
355-5	0.009409	0.020161	0.028226	0.014785	0.000000	0.000000	0.072581
5-15	0.016129	0.012097	0.021505	0.002688	0.000000	0.000000	0.052419
15-25	0.024194	0.016129	0.006720	0.000000	0.000000	0.000000	0.047043
25-35	0.021505	0.025538	0.004032	0.000000	0.000000	0.000000	0.051075
35-45	0.032258	0.079301	0.020161	0.000000	0.000000	0.000000	0.131720
45-55	0.018817	0.041667	0.008065	0.000000	0.000000	0.000000	0.068548
55-65	0.010753	0.005376	0.001344	0.000000	0.000000	0.000000	0.017473
65-75	0.010753	0.004032	0.004032	0.000000	0.000000	0.000000	0.018817
75-85	0.008065	0.001344	0.004032	0.000000	0.000000	0.000000	0.013441
85-95	0.006720	0.002688	0.008065	0.000000	0.000000	0.000000	0.017473
95-105	0.001344	0.004032	0.012097	0.001344	0.000000	0.000000	0.018817
105-115	0.006720	0.009409	0.006720	0.002688	0.000000	0.000000	0.025538
115-125	0.005376	0.005376	0.006720	0.000000	0.000000	0.000000	0.017473
125-135	0.002688	0.005376	0.000000	0.004032	0.000000	0.000000	0.012097
135-145	0.002688	0.004032	0.001344	0.000000	0.000000	0.000000	0.008065
145-155	0.008065	0.008065	0.001344	0.000000	0.000000	0.000000	0.017473
155-165	0.005376	0.014785	0.002688	0.000000	0.000000	0.000000	0.022849
165-175	0.006720	0.010753	0.008065	0.000000	0.000000	0.000000	0.025538
175-185	0.006720	0.012097	0.005376	0.000000	0.000000	0.000000	0.024194
185-195	0.009409	0.016129	0.004032	0.001344	0.000000	0.000000	0.030914
195-205	0.006720	0.004032	0.004032	0.000000	0.000000	0.000000	0.014785
205-215	0.004032	0.013441	0.010753	0.000000	0.000000	0.000000	0.028226
215-225	0.000000	0.008065	0.009409	0.000000	0.000000	0.000000	0.017473
225-235	0.005376	0.008065	0.001344	0.000000	0.000000	0.000000	0.014785
235-245	0.002688	0.001344	0.000000	0.000000	0.000000	0.000000	0.004032
245-255	0.001344	0.001344	0.000000	0.000000	0.000000	0.000000	0.002688
255-265	0.000000	0.001344	0.000000	0.000000	0.000000	0.000000	0.001344
265-275	0.002688	0.001344	0.000000	0.000000	0.000000	0.000000	0.004032
275-285	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
285-295	0.004032	0.000000	0.000000	0.000000	0.000000	0.000000	0.004032
295-305	0.005376	0.004032	0.000000	0.000000	0.000000	0.000000	0.009409
305-315	0.004032	0.010753	0.002688	0.000000	0.000000	0.000000	0.017473
315-325	0.002688	0.010753	0.006720	0.001344	0.000000	0.000000	0.021505
325-335	0.005376	0.010753	0.009409	0.001344	0.000000	0.000000	0.026882
335-345	0.009409	0.016129	0.017473	0.008065	0.000000	0.000000	0.051075
345-355	0.012097	0.012097	0.043011	0.014785	0.001344	0.000000	0.083333
Total	0.279570	0.401882	0.259409	0.052419	0.001344	0.000000	0.994624

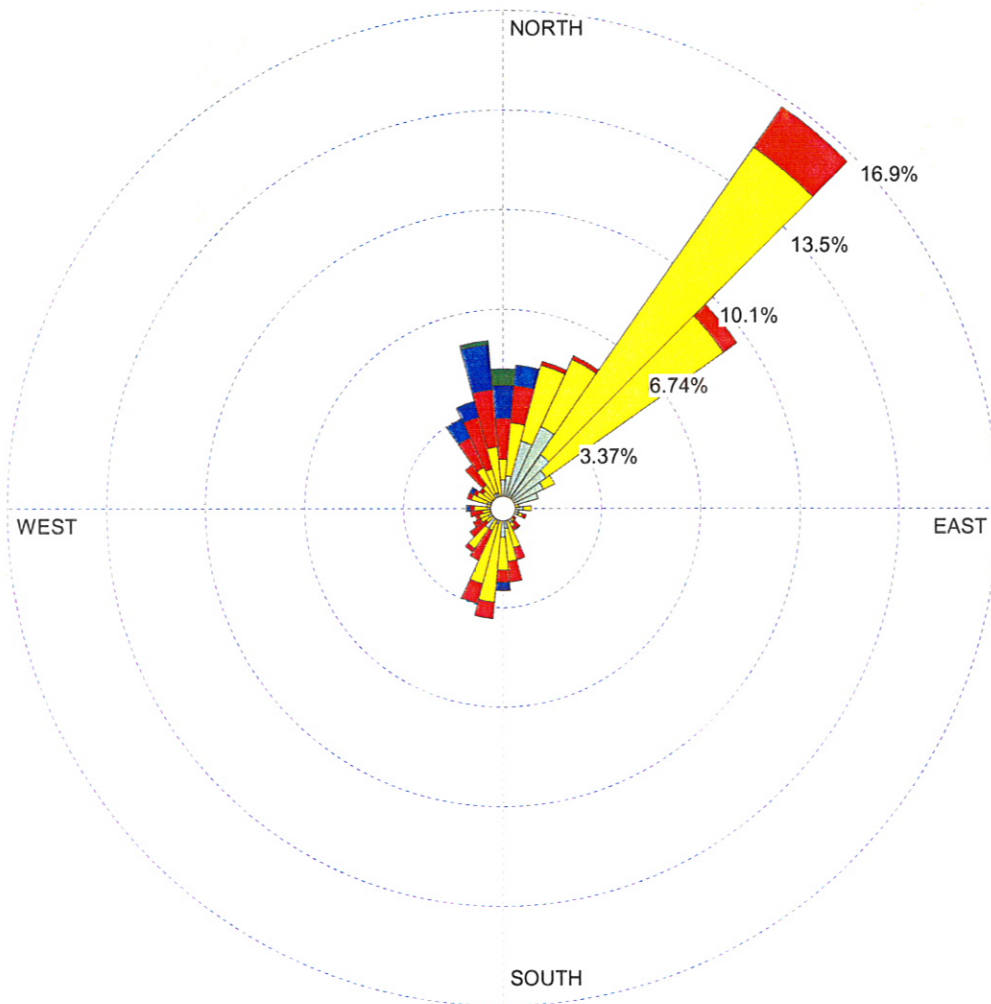
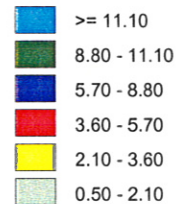
Frequency of Calm Winds: 0.54%
 Average Wind Speed: 3.00 m/s

WIND ROSE PLOT:

Alton Coal Development, LLC , Alton, Utah
November 2018

DISPLAY:

Wind Speed
Direction (blowing from)

WIND SPEED
(m/s)

Calms: 2.50%

COMMENTS:

DATA PERIOD:

Start Date: 11/1/2018 - 00:00
End Date: 11/30/2018 - 23:00

COMPANY NAME:

Alton Coal Development, LLC - Coal Hollow Mine

MODELER:

B. Kirk Nicholes

CALM WINDS:

2.50%

TOTAL COUNT:

720 hrs.

AVG. WIND SPEED:

2.91 m/s

DATE:

1/11/2019

PROJECT NO.:



Station ID: 1
 Start Date: 11/1/2018 - 00:00
 End Date: 11/30/2018 - 23:00

Run ID:

Frequency Distribution
 (Count)

Wind Direction (Blowing From) / Wind Speed (m/s)

	0.50 - 2.10	2.10 - 3.60	3.60 - 5.70	5.70 - 8.80	8.80 - 11.10	>= 11.10	Total
355-5	7	5	10	8	4	0	34
5-15	8	13	9	5	0	0	35
15-25	17	19	1	0	0	0	37
25-35	22	18	1	0	0	0	41
35-45	16	91	12	0	0	0	119
45-55	13	53	4	0	0	0	70
55-65	11	3	0	0	0	0	14
65-75	9	0	0	0	0	0	9
75-85	3	1	0	0	0	0	4
85-95	5	2	0	0	0	0	7
95-105	4	0	0	0	0	0	4
105-115	4	1	1	0	0	0	6
115-125	0	1	0	0	0	0	1
125-135	1	1	2	0	0	0	4
135-145	2	2	2	0	0	0	6
145-155	4	1	1	0	0	0	6
155-165	3	7	3	0	0	0	13
165-175	5	8	5	0	0	0	18
175-185	7	8	3	2	0	0	20
185-195	3	20	4	0	0	0	27
195-205	4	15	5	0	0	0	24
205-215	3	3	8	0	0	0	14
215-225	6	6	1	0	0	0	13
225-235	3	2	5	0	0	0	10
235-245	4	2	2	0	0	0	8
245-255	3	3	1	0	0	0	7
255-265	3	2	3	0	0	0	8
265-275	4	3	1	1	0	0	9
275-285	1	3	0	0	0	0	4
285-295	4	4	1	0	0	0	9
295-305	3	4	1	1	0	0	9
305-315	3	3	1	0	0	0	7
315-325	3	4	6	0	0	0	13
325-335	4	7	8	5	0	0	24
335-345	4	6	13	4	0	0	27
345-355	1	14	14	11	1	0	41
Total	197	335	128	37	5	0	720

Frequency of Calm Winds: 18
 Average Wind Speed: 2.91 m/s

Station ID: 1
 Start Date: 11/1/2018 - 00:00
 End Date: 11/30/2018 - 23:00

Run ID:

Frequency Distribution
 (Normalized)

Wind Direction (Blowing From) / Wind Speed (m/s)

	0.50 - 2.10	2.10 - 3.60	3.60 - 5.70	5.70 - 8.80	8.80 - 11.10	>= 11.10	Total
355-5	0.009722	0.006944	0.013889	0.011111	0.005556	0.000000	0.047222
5-15	0.011111	0.018056	0.012500	0.006944	0.000000	0.000000	0.048611
15-25	0.023611	0.026389	0.001389	0.000000	0.000000	0.000000	0.051389
25-35	0.030556	0.025000	0.001389	0.000000	0.000000	0.000000	0.056944
35-45	0.022222	0.126389	0.016667	0.000000	0.000000	0.000000	0.165278
45-55	0.018056	0.073611	0.005556	0.000000	0.000000	0.000000	0.097222
55-65	0.015278	0.004167	0.000000	0.000000	0.000000	0.000000	0.019444
65-75	0.012500	0.000000	0.000000	0.000000	0.000000	0.000000	0.012500
75-85	0.004167	0.001389	0.000000	0.000000	0.000000	0.000000	0.005556
85-95	0.006944	0.002778	0.000000	0.000000	0.000000	0.000000	0.009722
95-105	0.005556	0.000000	0.000000	0.000000	0.000000	0.000000	0.005556
105-115	0.005556	0.001389	0.001389	0.000000	0.000000	0.000000	0.008333
115-125	0.000000	0.001389	0.000000	0.000000	0.000000	0.000000	0.001389
125-135	0.001389	0.001389	0.002778	0.000000	0.000000	0.000000	0.005556
135-145	0.002778	0.002778	0.002778	0.000000	0.000000	0.000000	0.008333
145-155	0.005556	0.001389	0.001389	0.000000	0.000000	0.000000	0.008333
155-165	0.004167	0.009722	0.004167	0.000000	0.000000	0.000000	0.018056
165-175	0.006944	0.011111	0.006944	0.000000	0.000000	0.000000	0.025000
175-185	0.009722	0.011111	0.004167	0.002778	0.000000	0.000000	0.027778
185-195	0.004167	0.027778	0.005556	0.000000	0.000000	0.000000	0.037500
195-205	0.005556	0.020833	0.006944	0.000000	0.000000	0.000000	0.033333
205-215	0.004167	0.004167	0.011111	0.000000	0.000000	0.000000	0.019444
215-225	0.008333	0.008333	0.001389	0.000000	0.000000	0.000000	0.018056
225-235	0.004167	0.002778	0.006944	0.000000	0.000000	0.000000	0.013889
235-245	0.005556	0.002778	0.002778	0.000000	0.000000	0.000000	0.011111
245-255	0.004167	0.004167	0.001389	0.000000	0.000000	0.000000	0.009722
255-265	0.004167	0.002778	0.004167	0.000000	0.000000	0.000000	0.011111
265-275	0.005556	0.004167	0.001389	0.001389	0.000000	0.000000	0.012500
275-285	0.001389	0.004167	0.000000	0.000000	0.000000	0.000000	0.005556
285-295	0.005556	0.005556	0.001389	0.000000	0.000000	0.000000	0.012500
295-305	0.004167	0.005556	0.001389	0.001389	0.000000	0.000000	0.012500
305-315	0.004167	0.004167	0.001389	0.000000	0.000000	0.000000	0.009722
315-325	0.004167	0.005556	0.008333	0.000000	0.000000	0.000000	0.018056
325-335	0.005556	0.009722	0.011111	0.006944	0.000000	0.000000	0.033333
335-345	0.005556	0.008333	0.018056	0.005556	0.000000	0.000000	0.037500
345-355	0.001389	0.019444	0.019444	0.015278	0.001389	0.000000	0.056944
Total	0.273611	0.465278	0.177778	0.051389	0.006944	0.000000	0.975000

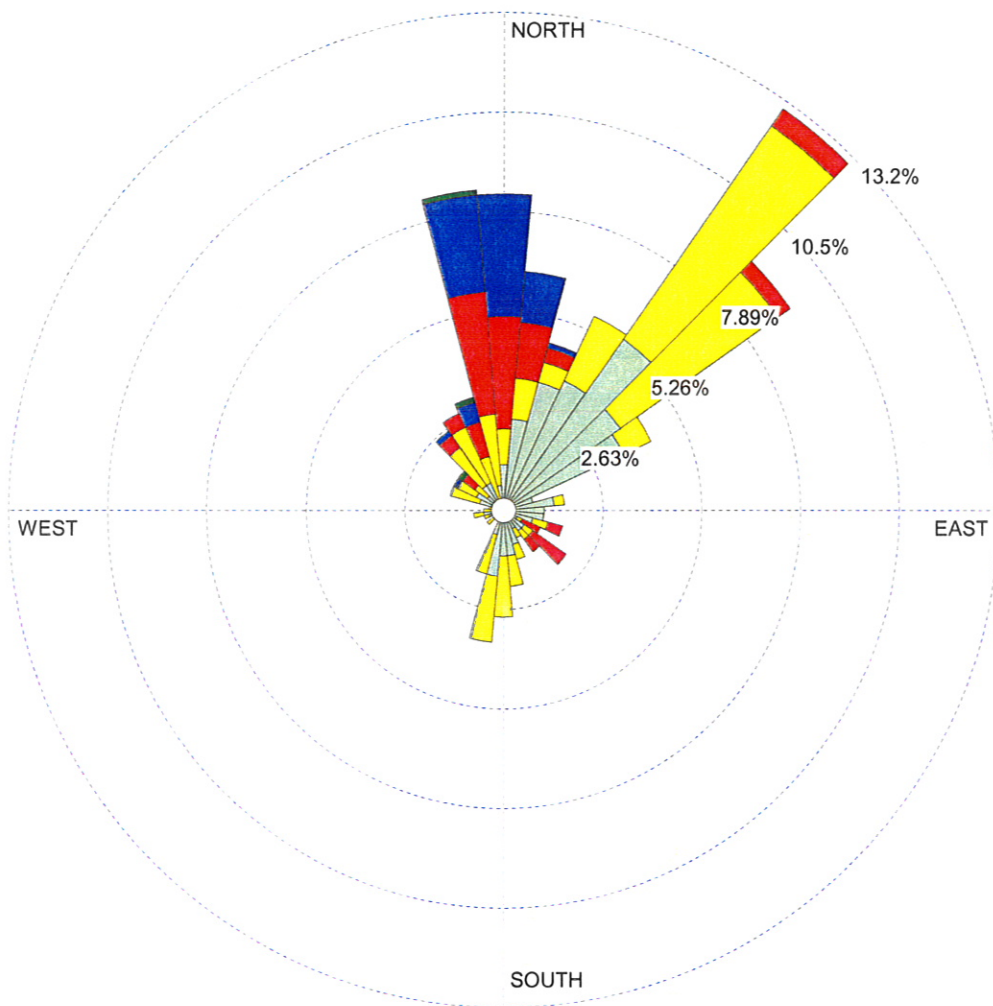
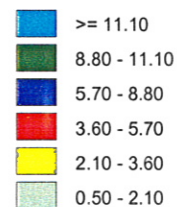
Frequency of Calm Winds: 2.50%
 Average Wind Speed: 2.91 m/s

WIND ROSE PLOT:

Alton Coal Development, LLC , Alton, Utah
December 2018

DISPLAY:

Wind Speed
Direction (blowing from)

WIND SPEED
(m/s)

Calms: 1.21%

COMMENTS:

DATA PERIOD:

Start Date: 12/1/2018 - 00:00
End Date: 12/31/2018 - 23:00

COMPANY NAME:

Alton Coal Development, LLC - Coal Hollow Mine

MODELER:

B. Kirk Nicholes

CALM WINDS:

1.21%

TOTAL COUNT:

744 hrs.

AVG. WIND SPEED:

2.72 m/s

DATE:

1/11/2019

PROJECT NO.:



Station ID: 1
 Start Date: 12/1/2018 - 00:00
 End Date: 12/31/2018 - 23:00

Run ID:

Frequency Distribution
 (Count)

	Wind Direction (Blowing From) / Wind Speed (m/s)						
	0.50 - 2.10	2.10 - 3.60	3.60 - 5.70	5.70 - 8.80	8.80 - 11.10	>= 11.10	Total
355-5	9	7	22	24	0	0	62
5-15	18	8	11	10	0	0	47
15-25	26	4	3	1	0	0	34
25-35	28	14	0	0	0	0	42
35-45	41	51	4	0	0	0	96
45-55	28	38	3	0	0	0	69
55-65	26	6	0	0	0	0	32
65-75	6	0	0	0	0	0	6
75-85	10	2	0	0	0	0	12
85-95	8	0	0	0	0	0	8
95-105	8	0	0	0	0	0	8
105-115	6	3	3	0	0	0	12
115-125	3	1	4	0	0	0	8
125-135	5	2	8	0	0	0	15
135-145	5	2	3	0	0	0	10
145-155	4	2	0	0	0	0	6
155-165	7	3	0	0	0	0	10
165-175	9	6	0	0	0	0	15
175-185	9	12	0	0	0	0	21
185-195	13	13	0	0	0	0	26
195-205	5	8	0	0	0	0	13
205-215	1	0	0	0	0	0	1
215-225	1	1	0	0	0	0	2
225-235	2	2	0	0	0	0	4
235-245	0	0	0	0	0	0	0
245-255	3	1	0	0	0	0	4
255-265	4	2	0	0	0	0	6
265-275	2	2	0	0	0	0	4
275-285	2	1	0	0	0	0	3
285-295	5	6	0	0	0	0	11
295-305	6	4	0	1	0	0	11
305-315	4	3	3	0	1	0	11
315-325	6	9	3	1	0	0	19
325-335	6	12	3	0	0	0	21
335-345	1	10	7	4	1	0	23
345-355	5	14	24	19	1	0	63
Total	322	249	101	60	3	0	744

Frequency of Calm Winds: 9
 Average Wind Speed: 2.72 m/s

Station ID: 1
 Start Date: 12/1/2018 - 00:00
 End Date: 12/31/2018 - 23:00

Run ID:

Frequency Distribution (Normalized)

Wind Direction (Blowing From) / Wind Speed (m/s)

	0.50 - 2.10	2.10 - 3.60	3.60 - 5.70	5.70 - 8.80	8.80 - 11.10	>= 11.10	Total
355-5	0.012097	0.009409	0.029570	0.032258	0.000000	0.000000	0.083333
5-15	0.024194	0.010753	0.014785	0.013441	0.000000	0.000000	0.063172
15-25	0.034946	0.005376	0.004032	0.001344	0.000000	0.000000	0.045699
25-35	0.037634	0.018817	0.000000	0.000000	0.000000	0.000000	0.056452
35-45	0.055108	0.068548	0.005376	0.000000	0.000000	0.000000	0.129032
45-55	0.037634	0.051075	0.004032	0.000000	0.000000	0.000000	0.092742
55-65	0.034946	0.008065	0.000000	0.000000	0.000000	0.000000	0.043011
65-75	0.008065	0.000000	0.000000	0.000000	0.000000	0.000000	0.008065
75-85	0.013441	0.002688	0.000000	0.000000	0.000000	0.000000	0.016129
85-95	0.010753	0.000000	0.000000	0.000000	0.000000	0.000000	0.010753
95-105	0.010753	0.000000	0.000000	0.000000	0.000000	0.000000	0.010753
105-115	0.008065	0.004032	0.004032	0.000000	0.000000	0.000000	0.016129
115-125	0.004032	0.001344	0.005376	0.000000	0.000000	0.000000	0.010753
125-135	0.006720	0.002688	0.010753	0.000000	0.000000	0.000000	0.020161
135-145	0.006720	0.002688	0.004032	0.000000	0.000000	0.000000	0.013441
145-155	0.005376	0.002688	0.000000	0.000000	0.000000	0.000000	0.008065
155-165	0.009409	0.004032	0.000000	0.000000	0.000000	0.000000	0.013441
165-175	0.012097	0.008065	0.000000	0.000000	0.000000	0.000000	0.020161
175-185	0.012097	0.016129	0.000000	0.000000	0.000000	0.000000	0.028226
185-195	0.017473	0.017473	0.000000	0.000000	0.000000	0.000000	0.034946
195-205	0.006720	0.010753	0.000000	0.000000	0.000000	0.000000	0.017473
205-215	0.001344	0.000000	0.000000	0.000000	0.000000	0.000000	0.001344
215-225	0.001344	0.001344	0.000000	0.000000	0.000000	0.000000	0.002688
225-235	0.002688	0.002688	0.000000	0.000000	0.000000	0.000000	0.005376
235-245	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
245-255	0.004032	0.001344	0.000000	0.000000	0.000000	0.000000	0.005376
255-265	0.005376	0.002688	0.000000	0.000000	0.000000	0.000000	0.008065
265-275	0.002688	0.002688	0.000000	0.000000	0.000000	0.000000	0.005376
275-285	0.002688	0.001344	0.000000	0.000000	0.000000	0.000000	0.004032
285-295	0.006720	0.008065	0.000000	0.000000	0.000000	0.000000	0.014785
295-305	0.008065	0.005376	0.000000	0.001344	0.000000	0.000000	0.014785
305-315	0.005376	0.004032	0.004032	0.000000	0.001344	0.000000	0.014785
315-325	0.008065	0.012097	0.004032	0.001344	0.000000	0.000000	0.025538
325-335	0.008065	0.016129	0.004032	0.000000	0.000000	0.000000	0.028226
335-345	0.001344	0.013441	0.009409	0.005376	0.001344	0.000000	0.030914
345-355	0.006720	0.018817	0.032258	0.025538	0.001344	0.000000	0.084677
Total	0.432796	0.334677	0.135753	0.080645	0.004032	0.000000	0.987903

Frequency of Calm Winds: 1.21%
 Average Wind Speed: 2.72 m/s

APPENDIX B

Listing of PM₁₀ Concentrations

Background Monitor 962A

PM₁₀ Sampler Summary

October 1, 2018 - December 31, 2018

Network: Alton Coal Development

Site: Coal Hollow

Sampler ID: Coal Hollow-A

AQS ID:

Sampler Type: BGI FRM Single

Date	Filter ID	Concentration (µg/m ³)	Concentration (µg/m ³)	Sample Period (hr:min)	Sample Volume (m ³)	Std Volume (m ³)	Tare (mg)	Mass	Net (mg)	Flag	Comments
		LTP	STP					Gross (mg)			
10/05/18	P2950123	2.8	3.4	23:59	24.0	19.5	394.1833	394.2507	0.0674		
10/11/18	P2950417	2.9	3.6	23:59	24.0	19.7	394.5398	394.6116	0.0718		
10/17/18	P2950422	2.2	2.6	23:59	24.0	20.0	394.4949	394.5481	0.0532		
10/23/18	P2951628	3.0	3.6	23:59	24.0	19.7	402.2977	402.3699	0.0722		
10/29/18	P2951633	5.8	7.2	23:59	24.0	19.6	389.0833	389.2247	0.1414		
11/04/18	P2951916	4.8	5.8	23:59	24.0	19.8	395.8603	395.9760	0.1157		
11/10/18	P2951921	4.0	4.8	23:59	24.0	20.1	393.7945	393.8927	0.0982		
11/16/18	P2951926	2.7	3.3	23:59	24.0	19.9	396.2521	396.3179	0.0658	TD	
11/22/18	P2952180	7.3	8.7	23:59	24.0	20.0	391.2868	391.4629	0.1761		
11/28/18	P2952185	3.1	3.8	23:59	24.0	19.9	396.4885	396.5648	0.0763		
12/04/18	P2952454	1.8	2.0	23:59	24.0	20.9	396.4934	396.5370	0.0436		
12/10/18	P2952461	2.5	3.0	23:59	24.0	20.3	397.5821	397.6438	0.0617		
12/16/18	P2952666	1.3	1.6	24:00	24.0	20.1	389.9435	389.9768	0.0333		
12/22/18	P2952671	1.0	1.2	23:59	24.0	20.2	387.4469	387.4718	0.0249		
12/28/18	P2952676	3.9	4.5	23:59	24.0	20.6	394.9915	395.0854	0.0939		
# Valid		Recovery	Average	St. Dev.	Max	Min					
15		100%	3.9	2.0	8.7	1.2					

Inter-Mountain Laboratories' (IML) data validation is limited by the provided information. Data have been validated based on laboratory QC, field observations and other information available to IML. Additional data validation based on information not provided to IML may be required. According to 40 CFR 58.15 final responsibilities for data review and validation lies with each agency submitting data to AQS.

BGI PQ200 Air Sampling System

Downloaded 2018 02 oct 12:09:58

Job Details:

Job Name: 18Oct02A.JOB
Version: 5.62
Serial No: 962
Pump Time: :955:57
Flags:

Job Code:
Site Name:
Station Code:
Operators:
User1:
User2:

	Max	Min	Avg	Units
BP	586	583	584	mmHg
TA	24.4	6.9	15.2	°C
Q	---	---	16.71	Lpm

QCV 0.54 %

Max overheat 3.7 °C

occured 01-oct 15:46:40

Timer Information:

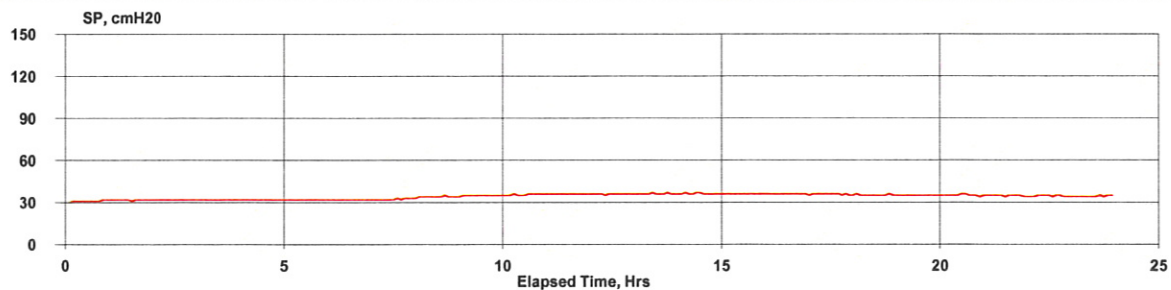
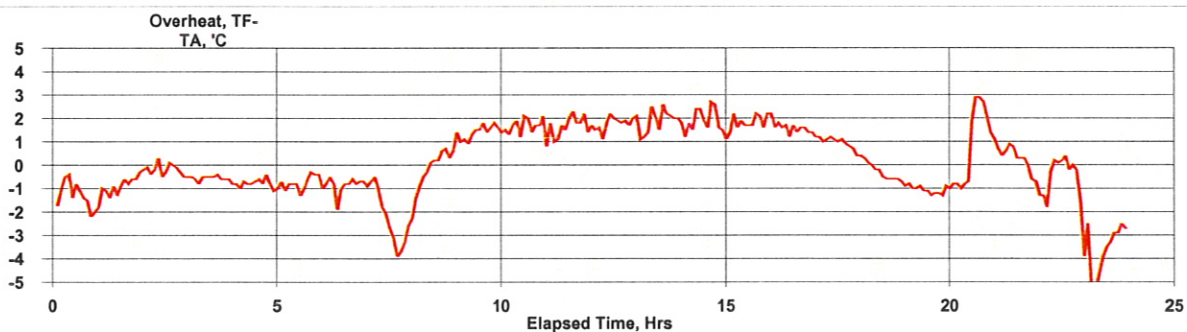
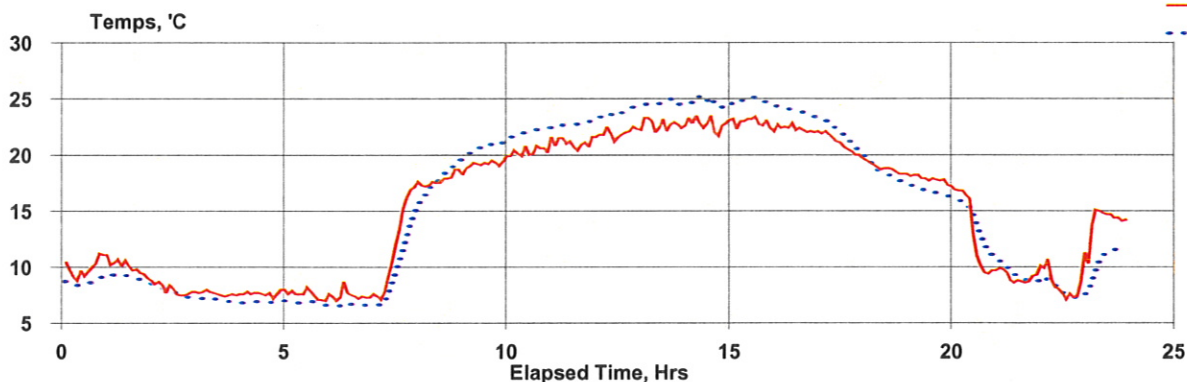
	Date	Time
	dd-mmm	hh:mm:ss
Start:	18-29-sep	0:00:08
Stop:	18-30-sep	0:00:04
ET:	23:59	

Mass Concentration Data:

Filter ID:	10	
Final Wt:		mg
Initial Wt:		mg
Delta Wt:	0.000	mg
Total Vol:	24.042	m ³
Mass Conc:	0	µg/m ³

Notes 1:

Notes 2:



Hourly

18-29-sep	0:05:08	585	10.0	8.7	-1.3	31	16.71
18-29-sep	1:05:08	585	9.9	9.1	-0.8	32	16.71
18-29-sep	2:05:08	585	8.0	7.8	-0.2	32	16.71
18-29-sep	3:05:08	585	7.6	7.1	-0.6	32	16.71
18-29-sep	4:05:08	585	7.7	6.9	-0.8	32	16.71
18-29-sep	5:05:08	585	7.6	6.8	-0.8	32	16.70
18-29-sep	6:05:08	585	7.5	6.6	-0.9	32	16.71
18-29-sep	7:05:08	585	12.5	10.2	-2.3	32	16.72
18-29-sep	8:05:08	586	17.8	17.9	0.1	34	16.72
18-29-sep	9:05:08	586	19.3	20.7	1.4	35	16.72
18-29-sep	10:05:08	586	20.4	22.0	1.6	36	16.73
18-29-sep	11:05:08	586	21.1	22.8	1.7	36	16.72
18-29-sep	12:05:08	585	22.0	23.8	1.8	36	16.72
18-29-sep	13:05:08	585	22.7	24.6	1.9	36	16.72
18-29-sep	14:05:08	584	22.8	24.6	1.9	36	16.73
18-29-sep	15:05:08	584	22.9	24.7	1.9	36	16.71
18-29-sep	16:05:08	584	22.3	23.8	1.5	36	16.71
18-29-sep	17:05:08	584	20.9	21.8	0.9	36	16.72
18-29-sep	18:05:08	584	18.8	18.4	-0.4	35	16.72
18-29-sep	19:05:08	584	17.8	16.7	-1.1	35	16.71
18-29-sep	20:05:08	584	12.9	13.9	0.9	35	16.71
18-29-sep	21:05:08	584	9.2	9.3	0.1	35	16.71
18-29-sep	22:05:08	585	8.6	7.9	-0.7	35	16.71
18-29-sep	23:05:08	585	14.1	10.5	-3.6	34	16.72

BGI PQ200 Air Sampling System

Downloaded 2018 08 oct 14:10:48

Job Details:

Job Name: 18Oct08A.JOB
Version: 5.62
Serial No: 962
Pump Time: :979:56
Flags:

Job Code:
Site Name:
Station Code:
Operators:
User1:
User2:

	Max	Min	Avg	Units
BP	584	581	583	mmHg
TA	15	2.4	8.3	°C
Q	---	---	16.71	Lpm

QCV 0.56 %
Max overheat 4.1 °C
occured 05-oct 15:07:29

Timer Information:

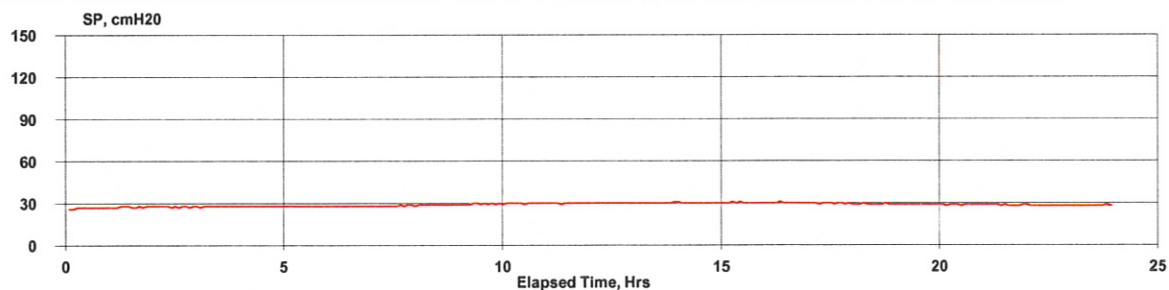
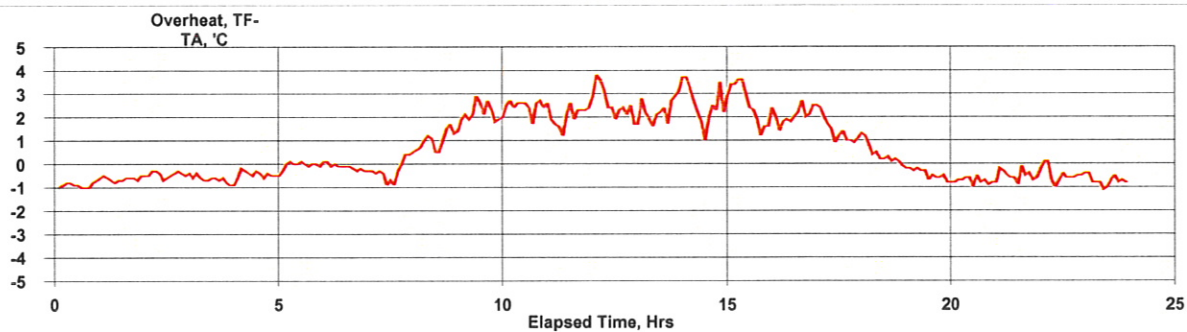
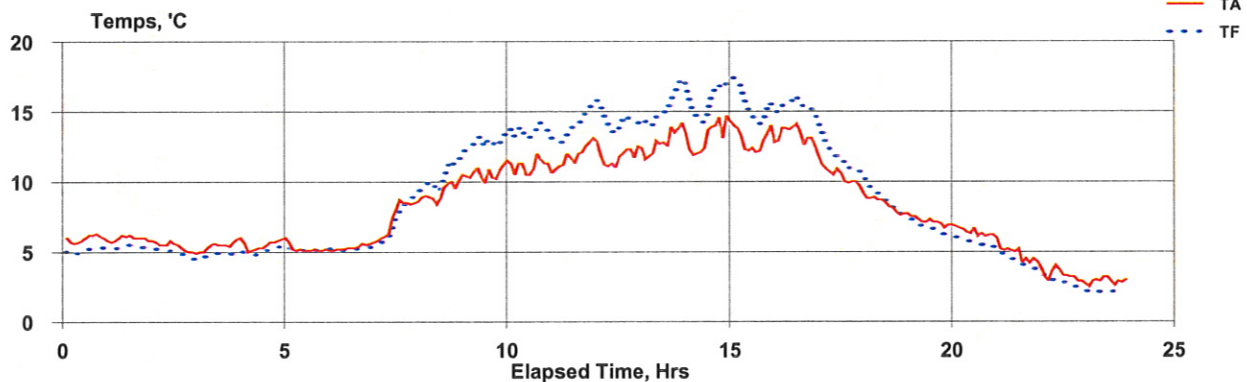
Date	Time
dd-mmm	hh:mm:ss
Start: 18-05-oct	0:00:08
Stop: 18-06-oct	0:00:05
ET: 23:59	

Mass Concentration Data:

Filter ID:	21
Final Wt:	mg
Initial Wt:	mg
Delta Wt:	0.000 mg
Total Vol:	24.043 m ³
Mass Conc:	0 µg/m ³

Notes 1:

Notes 2:



Hourly

18-05-oct	0:05:08	583	6.0	5.1	-0.9	27	16.71
18-05-oct	1:05:08	583	6.0	5.3	-0.6	28	16.71
18-05-oct	2:05:08	583	5.4	4.9	-0.4	28	16.71
18-05-oct	3:05:08	583	5.5	4.8	-0.7	28	16.71
18-05-oct	4:05:08	583	5.5	5.1	-0.4	28	16.71
18-05-oct	5:05:08	583	5.2	5.2	0.0	28	16.71
18-05-oct	6:05:08	583	5.4	5.2	-0.1	28	16.71
18-05-oct	7:05:08	584	7.6	7.3	-0.2	28	16.72
18-05-oct	8:05:08	584	9.4	10.4	1.0	29	16.71
18-05-oct	9:05:08	584	10.6	12.8	2.2	29	16.71
18-05-oct	10:05:08	584	11.1	13.6	2.5	30	16.74
18-05-oct	11:05:08	584	12.0	14.1	2.1	30	16.71
18-05-oct	12:05:08	584	11.8	14.3	2.5	30	16.71
18-05-oct	13:05:08	583	12.9	15.4	2.4	30	16.71
18-05-oct	14:05:08	583	13.3	15.8	2.5	30	16.71
18-05-oct	15:05:08	583	13.0	15.5	2.5	30	16.73
18-05-oct	16:05:08	583	13.2	15.3	2.1	30	16.72
18-05-oct	17:05:08	583	10.3	11.7	1.4	30	16.72
18-05-oct	18:05:08	583	8.3	8.6	0.3	29	16.72
18-05-oct	19:05:08	583	7.1	6.6	-0.5	29	16.72
18-05-oct	20:05:08	583	6.4	5.6	-0.7	29	16.72
18-05-oct	21:05:08	583	4.7	4.2	-0.5	29	16.71
18-05-oct	22:05:08	583	3.2	2.8	-0.5	28	16.72
18-05-oct	23:05:08	582	2.9	2.1	-0.8	28	16.72

BGI PQ200 Air Sampling System

Downloaded 2018 13 oct 11:13:39

Job Details:

Job Name: 18Oct13A.JOB
Version: 5.62
Serial No: 962
Pump Time: ;003:55
Flags:

Job Code:
Site Name: 962A
Station Code:
Operators: KN
User1:
User2:

	Max	Min	Avg	Units
BP	584	579	581	mmHg
TA	11.3	-0.1	4.4	°C
Q	---	---	16.71	Lpm

QCV 0.58 %
Max overheat 4.4 °C
occured 11-oct 14:14:33

Timer Information:

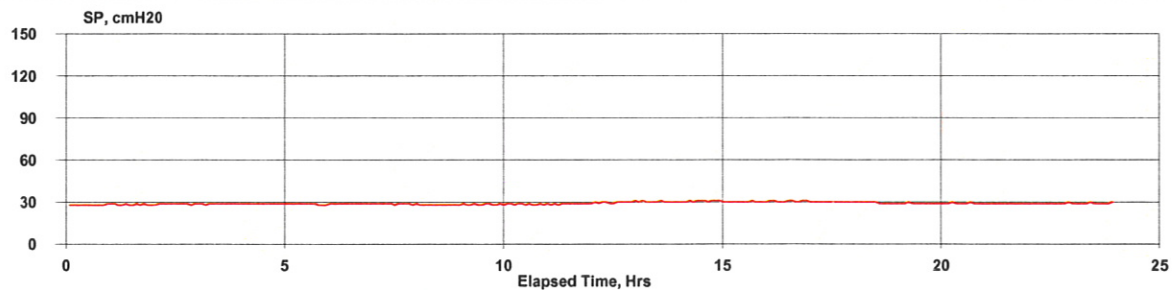
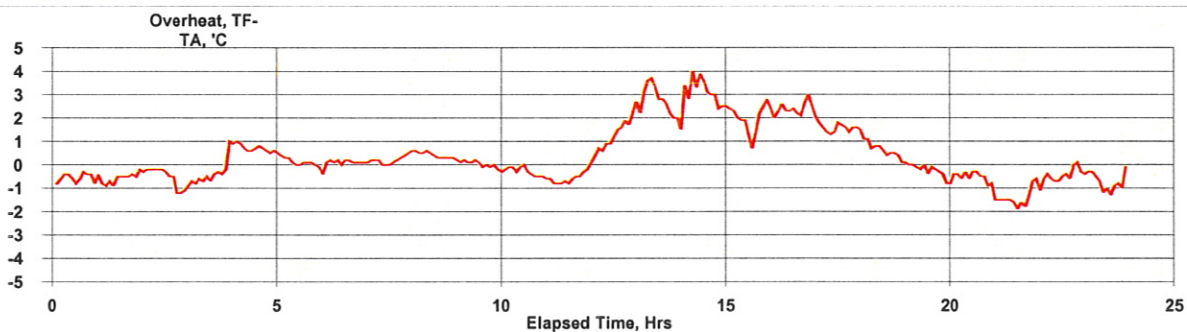
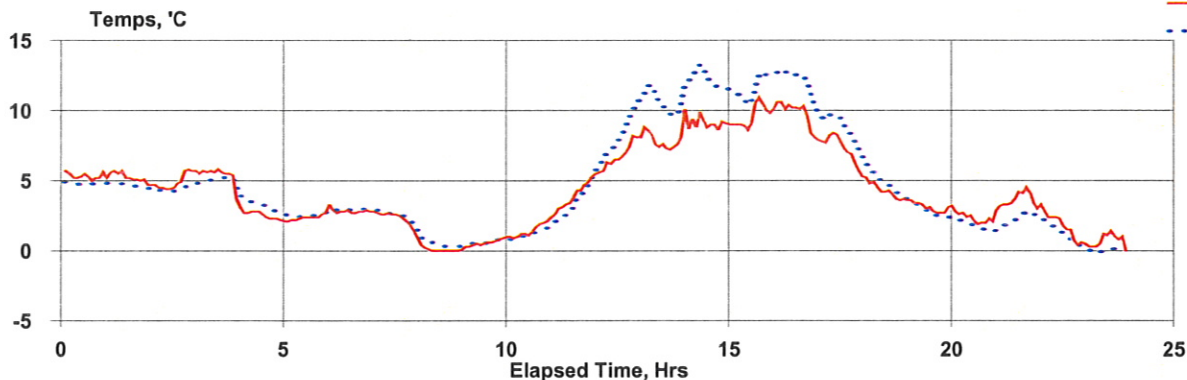
	Date	Time
	dd-mmm	hh:mm:ss
Start:	18-11-oct	0:00:08
Stop:	18-12-oct	0:00:05
ET:	23:59	

Mass Concentration Data:

Filter ID:	4	
Final Wt:		mg
Initial Wt:		mg
Delta Wt:	0.000	mg
Total Vol:	24.045	m ³
Mass Conc:	0	µg/m ³

Notes 1:

Notes 2:



Hourly

18-11-oct	0:05:08	581	5.3	4.8	-0.5	28	16.70
18-11-oct	1:05:08	580	5.2	4.7	-0.6	28	16.71
18-11-oct	2:05:08	580	5.0	4.4	-0.6	29	16.73
18-11-oct	3:05:08	580	5.2	4.9	-0.3	29	16.71
18-11-oct	4:05:08	581	2.5	3.2	0.7	29	16.72
18-11-oct	5:05:08	580	2.5	2.5	0.1	29	16.71
18-11-oct	6:05:08	581	2.8	2.9	0.1	29	16.71
18-11-oct	7:05:08	581	2.2	2.5	0.2	29	16.70
18-11-oct	8:05:08	582	0.1	0.5	0.4	28	16.71
18-11-oct	9:05:08	582	0.6	0.6	0.0	28	16.71
18-11-oct	10:05:08	582	1.5	1.2	-0.3	29	16.72
18-11-oct	11:05:08	582	4.0	3.5	-0.5	29	16.71
18-11-oct	12:05:08	582	6.9	8.2	1.4	30	16.72
18-11-oct	13:05:08	582	8.0	10.6	2.7	30	16.72
18-11-oct	14:05:08	581	9.1	12.2	3.1	31	16.71
18-11-oct	15:05:08	581	9.6	11.6	2.0	30	16.72
18-11-oct	16:05:08	582	9.7	12.1	2.4	31	16.73
18-11-oct	17:05:08	582	7.2	8.8	1.6	30	16.71
18-11-oct	18:05:08	582	4.2	4.8	0.6	30	16.72
18-11-oct	19:05:08	583	3.1	2.8	-0.3	29	16.71
18-11-oct	20:05:08	583	2.4	1.8	-0.6	29	16.71
18-11-oct	21:05:08	583	3.6	2.2	-1.4	29	16.72
18-11-oct	22:05:08	583	1.6	1.2	-0.4	29	16.71
18-11-oct	23:05:08	584	0.7	0.0	-0.7	29	16.71

BGI PQ200 Air Sampling System Downloaded 2018 18 oct 10:01:41

Job Details:

Job Name: 18Oct18A.JOB
Version: 5.62
Serial No: 962
Pump Time: ;027:54
Flags:

Job Code:
Site Name: 162a
Station Code:
Operators:
User1:
User2:

	Max	Min	Avg	Units
BP	588	585	586	mmHg
TA	7.2	-3	2.6	°C
Q	---	---	16.71	Lpm

QCV 0.56 %
Max overheat 4.3 °C
occured 17-oct 15:05:31

Timer Information:

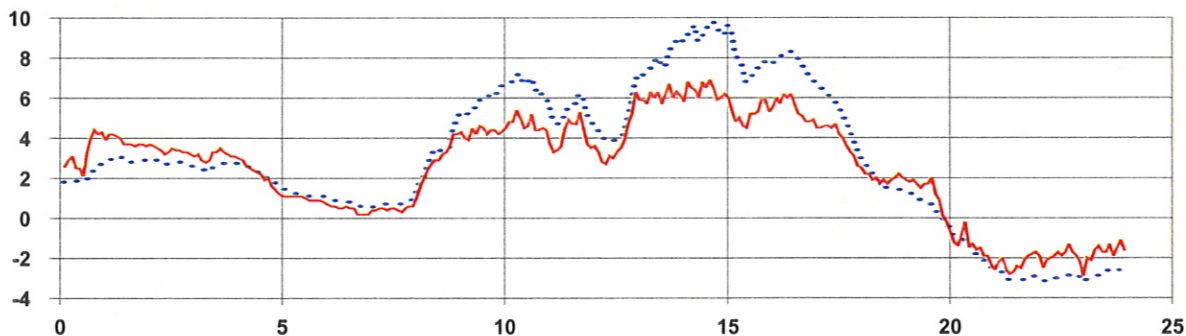
Date	Time
dd-mmm	hh:mm:ss
Start: 18-17-oct	0:00:08
Stop: 18-18-oct	0:00:05
ET: 23:59	

Mass Concentration Data:

Filter ID:	9
Final Wt:	mg
Initial Wt:	mg
Delta Wt:	0.000 mg
Total Vol:	24.044 m ³
Mass Conc:	0 µg/m ³

Notes 1:

Notes 2:



Hourly

18-17-oct	0:05:08	586	3.3	2.1	-1.2	27	16.71
18-17-oct	1:05:08	586	3.8	2.9	-0.9	28	16.71
18-17-oct	2:05:08	586	3.4	2.8	-0.6	28	16.72
18-17-oct	3:05:08	586	3.1	2.6	-0.5	28	16.72
18-17-oct	4:05:08	586	2.0	2.2	0.2	28	16.71
18-17-oct	5:05:08	587	1.0	1.2	0.2	29	16.73
18-17-oct	6:05:08	587	0.4	0.7	0.3	28	16.72
18-17-oct	7:05:08	587	0.5	0.8	0.2	28	16.71
18-17-oct	8:05:08	587	3.1	3.4	0.3	29	16.72
18-17-oct	9:05:08	588	4.3	5.9	1.6	29	16.71
18-17-oct	10:05:08	587	4.6	6.6	1.9	30	16.71
18-17-oct	11:05:08	588	4.1	5.3	1.1	29	16.73
18-17-oct	12:05:08	587	4.0	4.7	0.8	29	16.71
18-17-oct	13:05:08	587	6.1	8.0	1.9	30	16.71
18-17-oct	14:05:08	587	6.4	9.3	3.0	30	16.72
18-17-oct	15:05:08	587	5.2	7.7	2.5	30	16.71
18-17-oct	16:05:08	587	5.4	7.7	2.3	30	16.71
18-17-oct	17:05:08	587	3.9	5.1	1.3	29	16.72
18-17-oct	18:05:08	587	2.0	1.8	-0.2	29	16.71
18-17-oct	19:05:08	587	1.1	0.5	-0.6	29	16.72
18-17-oct	20:05:08	587	-1.5	-1.7	-0.2	28	16.71
18-17-oct	21:05:08	587	-2.2	-3.0	-0.8	28	16.71
18-17-oct	22:05:08	587	-2.0	-3.0	-1.0	28	16.71
18-17-oct	23:05:08	587	-1.6	-2.8	-1.2	28	16.71

BGI PQ200 Air Sampling System

Downloaded 2018 24 oct 13:02:23

Job Details:

Job Name: 18Oct24A.JOB
Version: 5.62
Serial No: 962
Pump Time: ;051:53
Flags:

Job Code:
Site Name:
Station Code:
Operators:
User1:
User2:

	Max	Min	Avg	Units
BP	586	583	584	mmHg
TA	14.1	0.4	5.9	°C
Q	---	---	16.71	Lpm

QCV 0.56 %

Max overheat 3.6 °C
occured 23-oct 14:52:44

Timer Information:

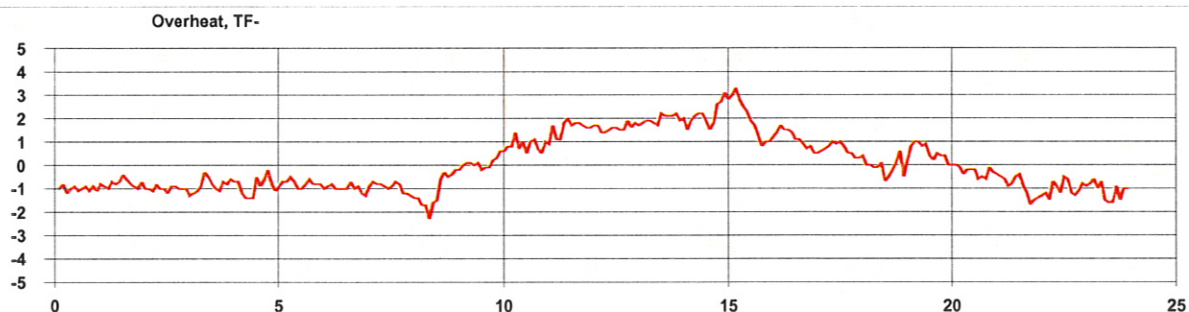
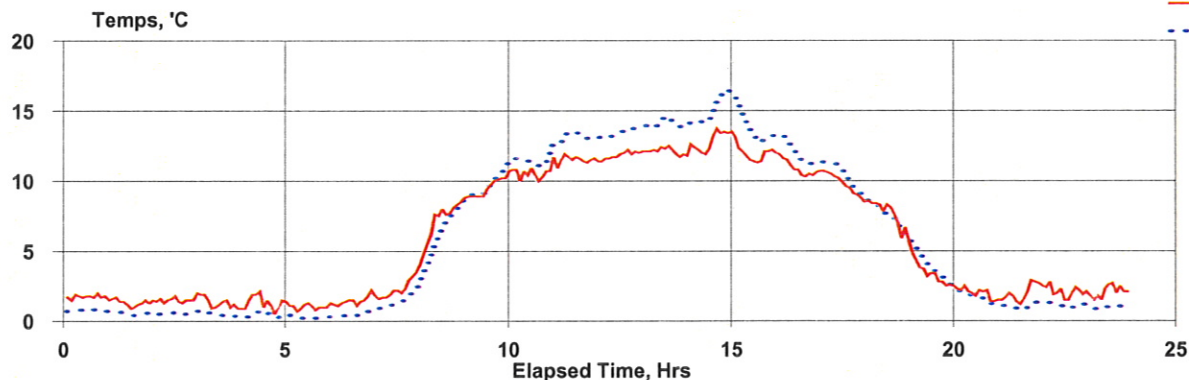
	Date	Time
	dd-mmm	hh:mm:ss
Start:	18-23-oct	0:00:08
Stop:	18-24-oct	0:00:04
ET:	23:59	

Mass Concentration Data:

Filter ID:	26	
Final Wt:		mg
Initial Wt:		mg
Delta Wt:	0.000	mg
Total Vol:	24.04	m^3
Mass Conc:	0	µg/m3

Notes 1:

Notes 2:



BGI PQ200 Air Sampling System

Downloaded 2018 30 oct 13:13:40

Job Details:

Job Name: 18Oct30A.JOB

Version: 5.62

Serial No: 962

Pump Time: ;075:52

Flags:

Job Code:

Site Name:

Station Code:

Operators:

User1:

User2:

	Max	Min	Avg	Units
BP	587	582	584	mmHg
TA	17.3	2.2	8.3	°C
Q	---	---	16.71	Lpm

QCV 0.58 %

Max overheat 3.9 °C

occured 29-oct 17:37:06

Timer Information:

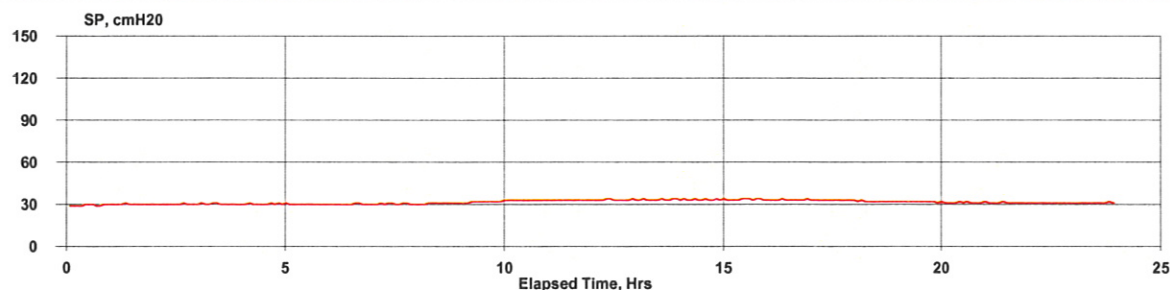
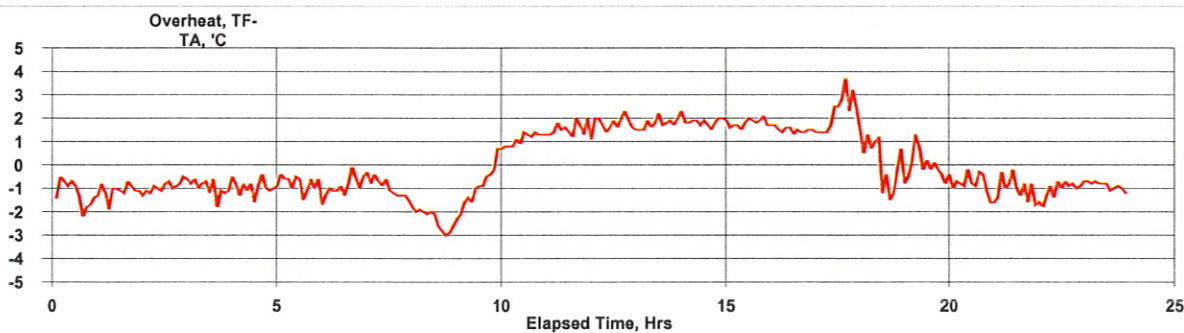
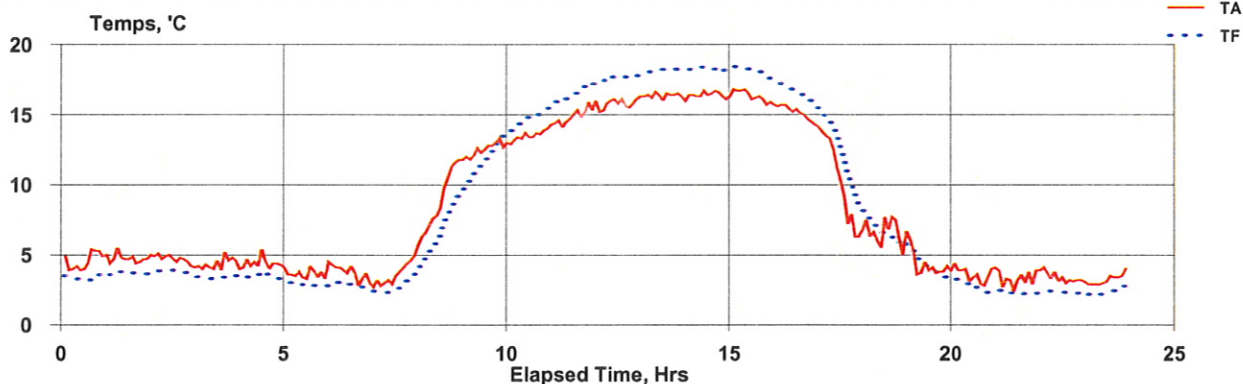
Date	Time
dd-mmm	hh:mm:ss
Start: 18-29-oct	0:00:08
Stop: 18-30-oct	0:00:05
ET: 23:59	

Mass Concentration Data:

Filter ID:	34
Final Wt:	mg
Initial Wt:	mg
Delta Wt:	0.000 mg
Total Vol:	24.042 m ³
Mass Conc:	0 µg/m ³

Notes 1:

Notes 2:



Hourly

18-29-oct	0:05:08	586	4.6	3.4	-1.2	30	16.71
18-29-oct	1:05:08	586	4.8	3.6	-1.1	30	16.72
18-29-oct	2:05:08	586	4.7	3.8	-0.9	30	16.72
18-29-oct	3:05:08	585	4.4	3.4	-1.0	30	16.72
18-29-oct	4:05:08	585	4.4	3.4	-1.0	30	16.71
18-29-oct	5:05:08	585	3.7	2.8	-0.9	30	16.72
18-29-oct	6:05:08	585	3.6	2.8	-0.8	30	16.72
18-29-oct	7:05:08	585	3.9	2.8	-1.1	30	16.71
18-29-oct	8:05:08	585	9.2	6.9	-2.4	31	16.71
18-29-oct	9:05:08	586	12.6	11.8	-0.8	32	16.72
18-29-oct	10:05:08	585	13.6	14.7	1.1	33	16.71
18-29-oct	11:05:08	585	15.0	16.5	1.5	33	16.72
18-29-oct	12:05:08	584	15.8	17.6	1.8	33	16.72
18-29-oct	13:05:08	584	16.3	18.2	1.8	33	16.73
18-29-oct	14:05:08	584	16.4	18.2	1.8	33	16.72
18-29-oct	15:05:08	583	16.3	18.1	1.8	33	16.72
18-29-oct	16:05:08	583	15.1	16.5	1.5	33	16.71
18-29-oct	17:05:08	583	9.9	12.1	2.2	33	16.72
18-29-oct	18:05:08	583	6.6	6.6	0.0	32	16.71
18-29-oct	19:05:08	583	4.2	4.2	0.0	32	16.73
18-29-oct	20:05:08	583	3.6	2.8	-0.9	31	16.70
18-29-oct	21:05:08	583	3.3	2.3	-1.0	31	16.71
18-29-oct	22:05:08	583	3.4	2.3	-1.0	31	16.71
18-29-oct	23:05:08	583	3.2	2.3	-0.9	31	16.71

BGI PQ200 Air Sampling System

Downloaded 2018 05 nov 10:58:50

Job Details:

Job Name: 18Nov05A.JOB
Version: 5.62
Serial No: 962
Pump Time: ;099:51
Flags:

Job Code:
Site Name:
Station Code:
Operators:
User1:
User2:

	Max	Min	Avg	Units
BP	586	580	582	mmHg
TA	12.9	-3.8	4	°C
Q	---	---	16.71	Lpm

QCV 0.58 %

Max overheat 3.6 °C

occured 04-nov 14:33:35

Timer Information:

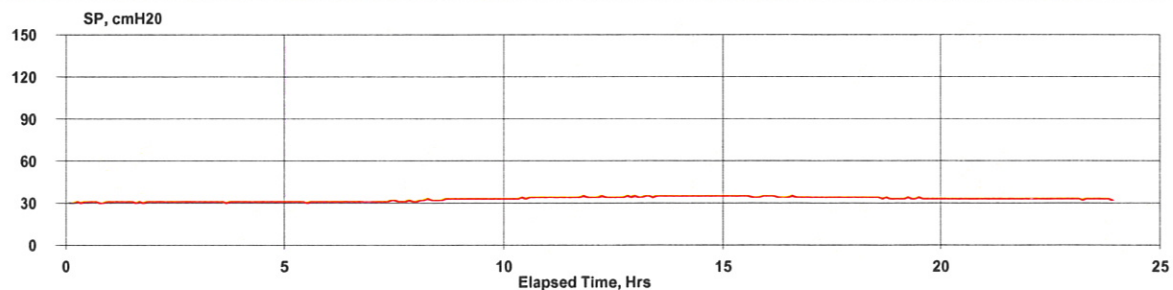
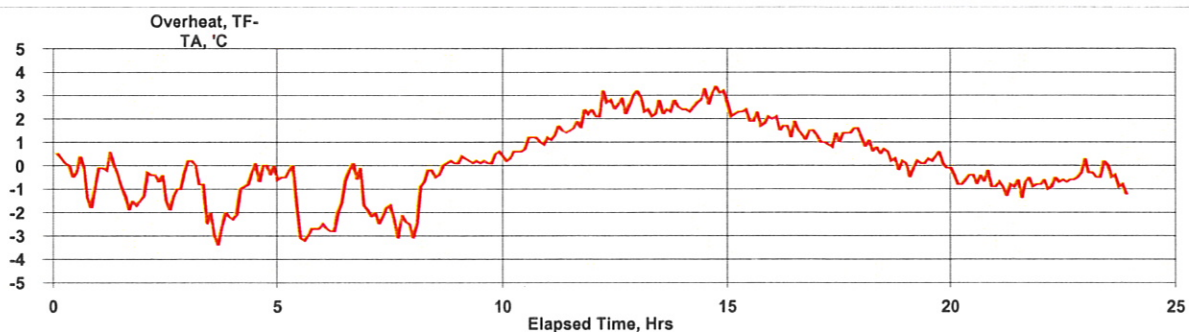
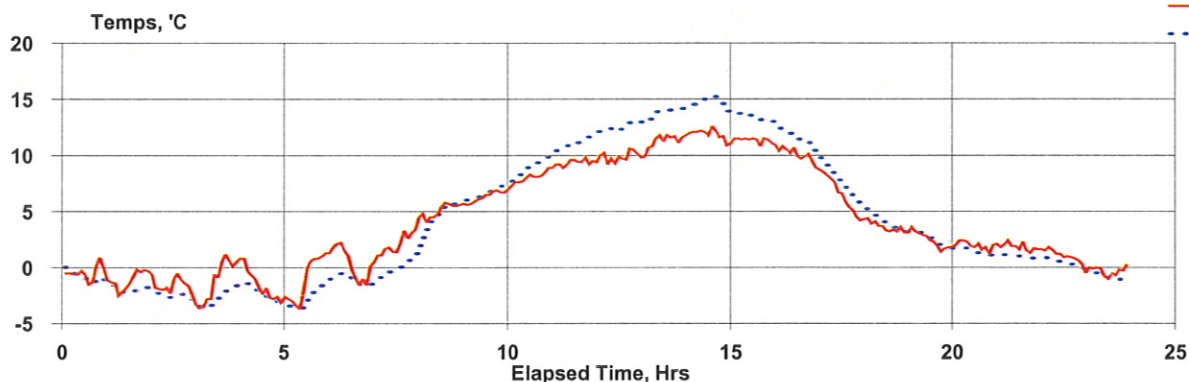
	Date	Time
	dd-mmm	hh:mm:ss
Start:	18-04-nov	0:00:08
Stop:	18-05-nov	0:00:05
ET:	23:59	

Mass Concentration Data:

Filter ID:	10
Final Wt:	mg
Initial Wt:	mg
Delta Wt:	0.000 mg
Total Vol:	24.042 m ³
Mass Conc:	0 µg/m ³

Notes 1:

Notes 2:



Hourly

18-04-nov	0:05:08	585	-0.5	-0.8	-0.3	31	16.70
18-04-nov	1:05:08	585	-1.1	-1.9	-0.9	31	16.71
18-04-nov	2:05:08	585	-1.8	-2.5	-0.8	31	16.71
18-04-nov	3:05:08	585	-0.9	-2.7	-1.8	31	16.74
18-04-nov	4:05:08	585	-1.8	-2.3	-0.6	31	16.72
18-04-nov	5:05:08	584	-0.8	-2.7	-1.9	31	16.71
18-04-nov	6:05:08	584	0.3	-1.1	-1.4	31	16.72
18-04-nov	7:05:08	584	2.3	0.0	-2.3	31	16.72
18-04-nov	8:05:08	584	5.2	4.7	-0.4	33	16.71
18-04-nov	9:05:08	584	6.4	6.7	0.3	33	16.71
18-04-nov	10:05:08	584	8.1	8.9	0.8	34	16.71
18-04-nov	11:05:08	584	9.4	11.1	1.7	34	16.72
18-04-nov	12:05:08	583	9.9	12.5	2.7	34	16.71
18-04-nov	13:05:08	582	11.3	13.7	2.4	35	16.72
18-04-nov	14:05:08	582	11.9	14.7	2.8	35	16.72
18-04-nov	15:05:08	582	11.3	13.4	2.1	35	16.71
18-04-nov	16:05:08	581	9.9	11.5	1.5	34	16.71
18-04-nov	17:05:08	581	6.2	7.5	1.2	34	16.71
18-04-nov	18:05:08	581	3.6	4.0	0.5	34	16.72
18-04-nov	19:05:08	581	2.4	2.5	0.1	33	16.72
18-04-nov	20:05:08	581	2.0	1.4	-0.6	33	16.71
18-04-nov	21:05:08	581	1.8	0.9	-0.9	33	16.71
18-04-nov	22:05:08	581	0.9	0.4	-0.6	33	16.72
18-04-nov	23:05:08	581	-0.3	-0.8	-0.5	33	16.71

BGI PQ200 Air Sampling System

Downloaded 2018 12 nov 12:46:13

Job Details:

Job Name: 18Nov12A.JOB
Version: 5.62
Serial No: 962
Pump Time: ;123:50
Flags:

Job Code:
Site Name: 962A
Station Code:
Operators: KN
User1:
User2:

	Max	Min	Avg	Units
BP	585	580	582	mmHg
TA	10.3	-8.2	0	°C
Q	---	---	16.71	Lpm

QCV 0.6 %

Max overheat 3.1 °C
occured 10-nov 17:33:24

Timer Information:

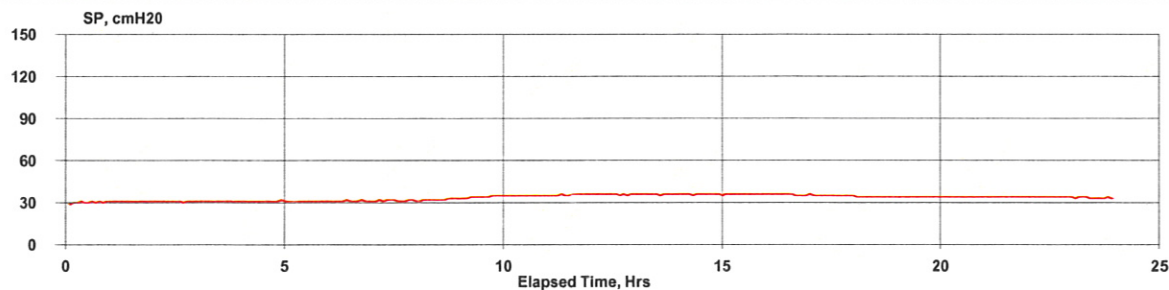
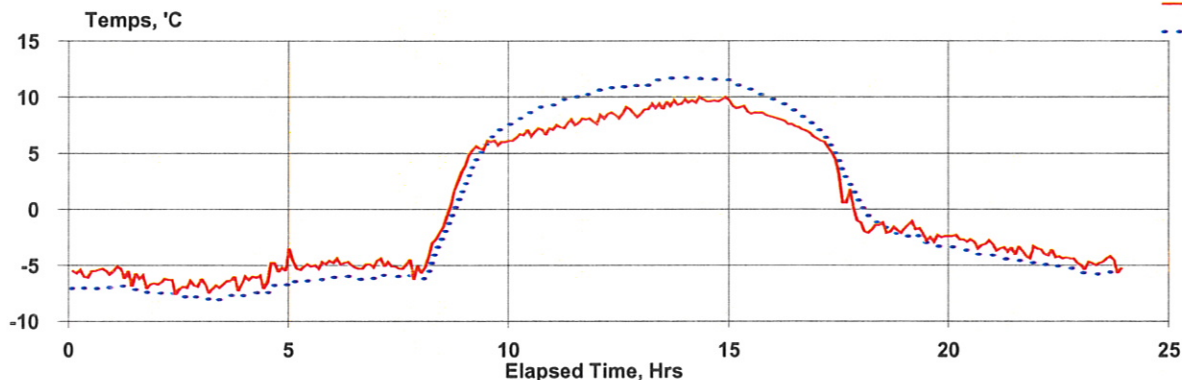
	Date	Time
	dd-mmm	hh:mm:ss
Start:	18-10-nov	0:00:08
Stop:	18-11-nov	0:00:05
ET:	23:59	

Mass Concentration Data:

Filter ID:	16	
Final Wt:		mg
Initial Wt:		mg
Delta Wt:	0.000	mg
Total Vol:	24.044	m^3
Mass Conc:	0	µg/m3

Notes 1:

Notes 2:



Hourly

18-10-nov	0:05:08	585	-5.6	-7.1	-1.5	30	16.71
18-10-nov	1:05:08	585	-6.2	-7.2	-1.0	31	16.71
18-10-nov	2:05:08	584	-6.7	-7.7	-1.0	31	16.72
18-10-nov	3:05:08	584	-6.7	-7.9	-1.2	31	16.71
18-10-nov	4:05:08	583	-5.6	-7.2	-1.6	31	16.72
18-10-nov	5:05:08	583	-5.0	-6.4	-1.4	31	16.71
18-10-nov	6:05:08	583	-4.9	-6.1	-1.2	31	16.71
18-10-nov	7:05:08	583	-5.1	-6.0	-0.9	32	16.71
18-10-nov	8:05:08	583	-0.7	-2.2	-1.6	32	16.71
18-10-nov	9:05:08	583	5.7	5.7	0.0	34	16.72
18-10-nov	10:05:08	583	6.8	8.6	1.8	35	16.71
18-10-nov	11:05:08	583	7.7	10.0	2.3	36	16.73
18-10-nov	12:05:08	582	8.5	10.8	2.3	36	16.71
18-10-nov	13:05:08	581	9.3	11.5	2.2	36	16.70
18-10-nov	14:05:08	581	9.7	11.6	1.9	36	16.72
18-10-nov	15:05:08	581	8.7	10.6	1.9	36	16.72
18-10-nov	16:05:08	581	7.3	8.6	1.3	36	16.71
18-10-nov	17:05:08	581	2.6	4.0	1.4	35	16.72
18-10-nov	18:05:08	581	-1.8	-1.5	0.3	34	16.71
18-10-nov	19:05:08	581	-2.2	-2.9	-0.8	34	16.71
18-10-nov	20:05:08	581	-2.9	-3.8	-0.9	34	16.70
18-10-nov	21:05:08	581	-3.7	-4.6	-0.9	34	16.71
18-10-nov	22:05:08	581	-4.3	-5.1	-0.9	34	16.72
18-10-nov	23:05:08	580	-4.9	-5.8	-0.9	33	16.71

BGI PQ200 Air Sampling System Downloaded 2018 19 nov 09:35:48

Job Details:

Job Name: 18Nov19A.JOB
Version: 5.62
Serial No: 962
Pump Time: ;147:49
Flags: F

Job Code:
Site Name: 962A
Station Code:
Operators: KN
User1:
User2:

	Max	Min	Avg	Units
BP	586	583	584	mmHg
TA	13.7	-3	3.4	°C
Q	---	---	16.71	Lpm

QCV 0.54 %

Max overheat 7.9 °C
occured 18-nov 17:28:00

Timer Information:

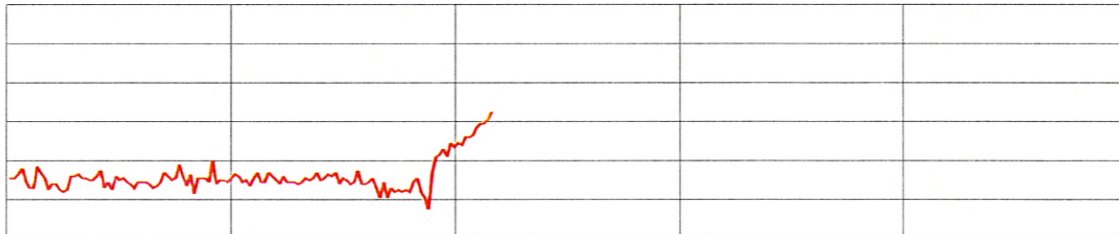
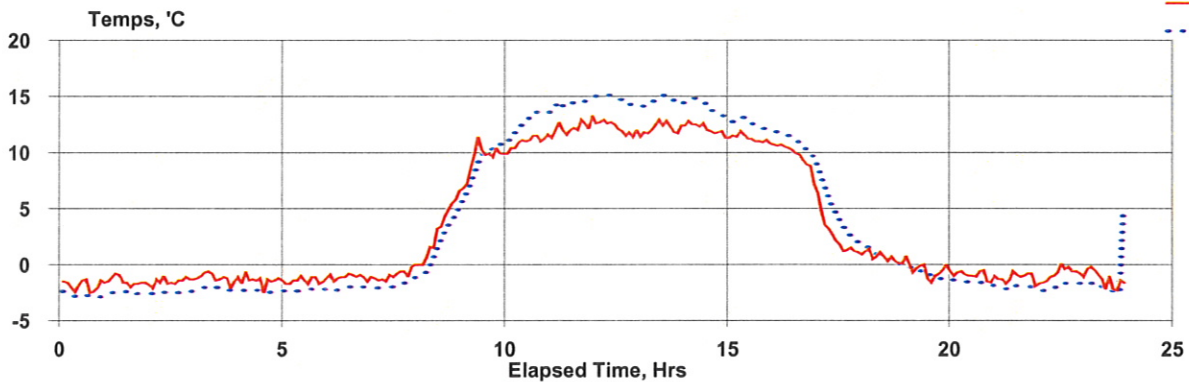
	Date	Time
	dd-mmm	hh:mm:ss
Start:	18-16-nov	0:00:08
Stop:	18-17-nov	0:00:05
ET:	23:59	

Mass Concentration Data:

Filter ID:	36
Final Wt:	mg
Initial Wt:	mg
Delta Wt:	0.000 mg
Total Vol:	24.042 m ³
Mass Conc:	0 µg/m ³

Notes 1:

Notes 2:



Hourly

18-16-nov	0:05:08	586	-1.8	-2.8	-0.9	25	16.71
18-16-nov	1:05:08	585	-1.5	-2.6	-1.1	25	16.71
18-16-nov	2:05:08	585	-1.5	-2.6	-1.1	25	16.71
18-16-nov	3:05:08	585	-1.2	-2.1	-1.0	25	16.71
18-16-nov	4:05:08	585	-1.4	-2.4	-1.0	25	16.70
18-16-nov	5:05:08	585	-1.4	-2.3	-0.9	25	16.71
18-16-nov	6:05:08	585	-1.1	-2.1	-1.0	25	16.70
18-16-nov	7:05:08	585	-0.9	-1.8	-0.9	25	16.70
18-16-nov	8:05:08	585	3.1	1.7	-1.5	26	16.72
18-16-nov	9:05:08	585	9.5	9.0	-0.5	27	16.71
18-16-nov	10:05:08	585	11.0	12.6	1.6	28	16.72
18-16-nov	11:05:08	584	12.2	14.3	2.1	29	16.71
18-16-nov	12:05:08	584	12.2	14.8	2.5	29	16.72
18-16-nov	13:05:08	584	12.1	14.6	2.4	29	16.72
18-16-nov	14:05:08	583	12.1	14.1	2.0	29	16.71
18-16-nov	15:05:08	583	11.2	12.6	1.3	29	16.72
18-16-nov	16:05:08	583	9.8	11.0	1.3	28	16.71
18-16-nov	17:05:08	583	2.6	4.8	2.2	28	16.71
18-16-nov	18:05:08	583	0.7	0.8	0.2	27	16.72
18-16-nov	19:05:08	583	-0.5	-0.8	-0.3	26	16.72
18-16-nov	20:05:08	583	-0.9	-1.6	-0.6	26	16.71
18-16-nov	21:05:08	583	-1.2	-2.0	-0.9	26	16.71
18-16-nov	22:05:08	583	-0.8	-2.0	-1.1	26	16.71
18-16-nov	23:05:08	583	-1.2	-2.0	-0.8	26	16.71
18-18-nov	17:40:09	585	-1.6	4.9	6.5		0.00

BGI PQ200 Air Sampling System Downloaded 2018 26 nov 10:35:10

Job Details:

Job Name: 18Nov26A.JOB
Version: 5.62
Serial No: 962
Pump Time: ;171:48
Flags:

Job Code:
Site Name:
Station Code: 962A
Operators: KN
User1:
User2:

	Max	Min	Avg	Units
BP	585	581	583	mmHg
TA	6.2	-4.2	1.5	°C
Q	---	---	16.71	Lpm

Timer Information:

	Date dd-mmm	Time hh:mm:ss
Start:	18-22-nov	0:00:08
Stop:	18-23-nov	0:00:05
ET:	23:59	

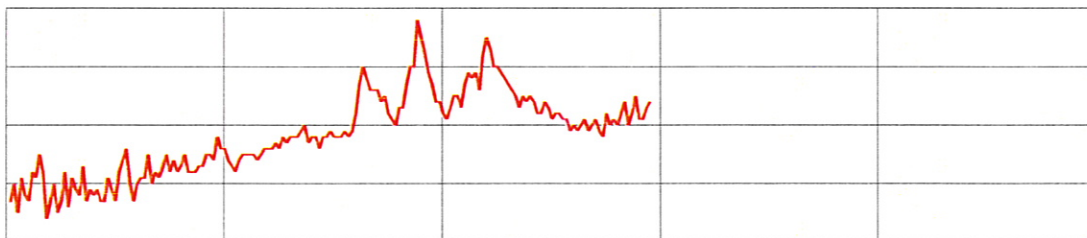
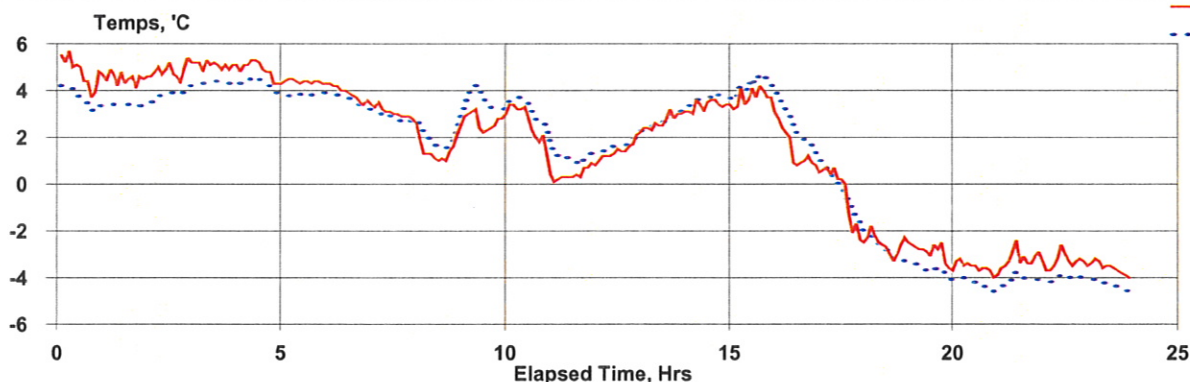
Mass Concentration Data:

Filter ID:	21
Final Wt:	mg
Initial Wt:	mg
Delta Wt:	0.000 mg
Total Vol:	24.045 m ³
Mass Conc:	0 µg/m ³

QCV 0.57 %
Max overheat 6.7 °C
occured 23-nov 17:29:31

Notes 1:

Notes 2:



Hourly

18-22-nov	0:05:08	585	4.8	3.7	-1.1	29	16.71
18-22-nov	1:05:08	585	4.5	3.4	-1.1	29	16.72
18-22-nov	2:05:08	584	4.9	3.9	-1.0	29	16.71
18-22-nov	3:05:08	583	5.1	4.3	-0.8	29	16.71
18-22-nov	4:05:08	583	4.9	4.3	-0.6	29	16.72
18-22-nov	5:05:08	583	4.4	3.8	-0.6	30	16.71
18-22-nov	6:05:08	583	3.8	3.6	-0.2	30	16.71
18-22-nov	7:05:08	583	3.0	2.9	-0.2	30	16.72
18-22-nov	8:05:08	583	1.5	2.0	0.5	30	16.72
18-22-nov	9:05:08	583	2.7	3.6	0.8	30	16.71
18-22-nov	10:05:08	583	2.4	3.1	0.7	30	16.71
18-22-nov	11:05:08	583	0.4	1.2	0.7	30	16.71
18-22-nov	12:05:08	582	1.5	1.7	0.2	30	16.72
18-22-nov	13:05:08	582	2.7	2.7	0.0	30	16.72
18-22-nov	14:05:08	582	3.4	3.6	0.3	30	16.73
18-22-nov	15:05:08	582	3.7	4.2	0.5	30	16.72
18-22-nov	16:05:08	582	1.4	2.4	1.0	30	16.71
18-22-nov	17:05:08	582	-0.6	-0.4	0.2	30	16.71
18-22-nov	18:05:08	583	-2.6	-2.8	-0.3	30	16.72
18-22-nov	19:05:08	583	-3.0	-3.7	-0.7	30	16.72
18-22-nov	20:05:08	583	-3.6	-4.3	-0.7	30	16.71
18-22-nov	21:05:08	584	-3.2	-4.1	-0.9	30	16.71
18-22-nov	22:05:08	584	-3.3	-4.0	-0.7	30	16.71
18-22-nov	23:05:08	584	-3.6	-4.3	-0.7	30	16.73

BGI PQ200 Air Sampling System

Downloaded 2018 06 dec 13:23:28

Job Details:

Job Name: 18Dec06A.JOB
Version: 5.62
Serial No: 962
Pump Time: ;219:46
Flags:

Job Code:
Site Name:
Station Code: 962A
Operators:
User1:
User2:

	Max	Min	Avg	Units
BP	587	584	585	mmHg
TA	1	-16.7	-8.9	°C
Q	---	---	16.71	Lpm

QCV 0.58 %

Max overheat 4.4 °C
occured 04-dec 14:52:35

Timer Information:

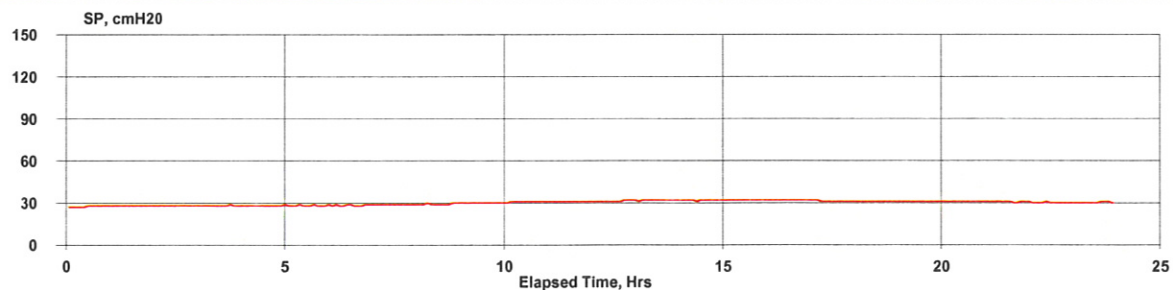
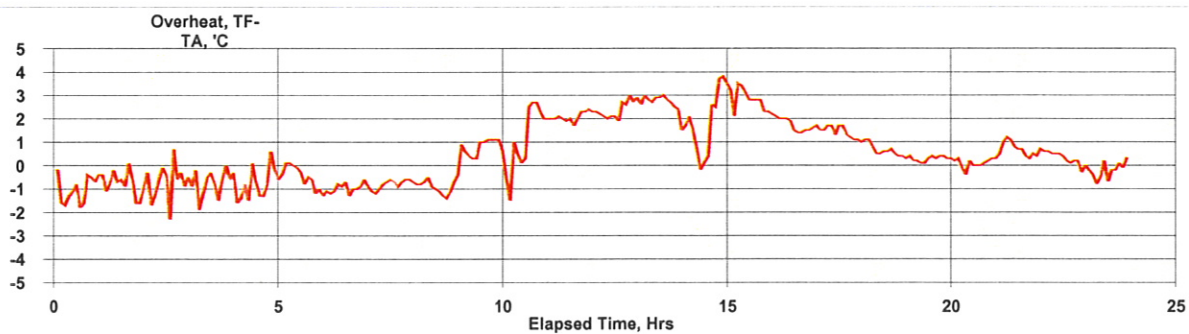
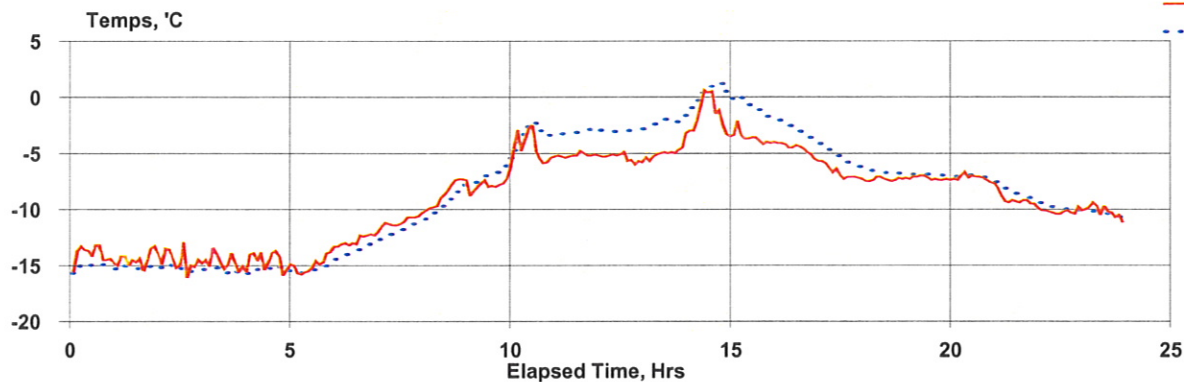
	Date	Time
	dd-mmm	hh:mm:ss
Start:	18-04-dec	0:00:08
Stop:	18-05-dec	0:00:04
ET:	23:59	

Mass Concentration Data:

Filter ID:	9
Final Wt:	mg
Initial Wt:	mg
Delta Wt:	0.000 mg
Total Vol:	24.045 m ³
Mass Conc:	0 µg/m ³

Notes 1:

Notes 2:



Hourly

18-04-dec	0:05:08	585	-14.1	-15.1	-1.0	28	16.71
18-04-dec	1:05:08	585	-14.4	-15.2	-0.8	28	16.71
18-04-dec	2:05:08	585	-14.6	-15.3	-0.7	28	16.73
18-04-dec	3:05:08	585	-14.8	-15.5	-0.7	28	16.71
18-04-dec	4:05:08	585	-14.5	-15.3	-0.8	28	16.73
18-04-dec	5:05:08	585	-14.8	-15.3	-0.5	28	16.71
18-04-dec	6:05:08	585	-12.7	-13.6	-1.0	29	16.71
18-04-dec	7:05:08	586	-11.0	-11.8	-0.8	29	16.71
18-04-dec	8:05:08	586	-8.6	-9.5	-0.9	29	16.72
18-04-dec	9:05:08	587	-7.8	-7.0	0.8	30	16.70
18-04-dec	10:05:08	587	-4.5	-3.3	1.2	31	16.71
18-04-dec	11:05:08	587	-5.2	-3.1	2.1	31	16.71
18-04-dec	12:05:08	587	-5.4	-3.0	2.4	31	16.71
18-04-dec	13:05:08	586	-4.9	-2.2	2.7	32	16.72
18-04-dec	14:05:08	586	-1.6	0.3	1.9	32	16.71
18-04-dec	15:05:08	585	-3.6	-0.9	2.8	32	16.71
18-04-dec	16:05:08	586	-4.7	-2.9	1.7	32	16.71
18-04-dec	17:05:08	585	-6.8	-5.4	1.4	31	16.72
18-04-dec	18:05:08	585	-7.3	-6.7	0.6	31	16.70
18-04-dec	19:05:08	585	-7.2	-7.0	0.3	31	16.72
18-04-dec	20:05:08	585	-7.2	-7.1	0.1	31	16.71
18-04-dec	21:05:08	585	-9.2	-8.5	0.7	31	16.72
18-04-dec	22:05:08	585	-10.2	-9.9	0.3	30	16.71
18-04-dec	23:05:08	585	-10.2	-10.4	-0.2	30	16.71

BGI PQ200 Air Sampling System

Downloaded 2018 11 dec 14:35:22

Job Details:

Job Name: 18Dec11A.JOB
Version: 5.62
Serial No: 962
Pump Time: ;243:45
Flags:

Job Code:
Site Name:
Station Code: 962A
Operators:
User1:
User2:

	Max	Min	Avg	Units
BP	589	584	586	mmHg
TA	9.3	-7.3	-1	°C
Q	---	---	16.71	Lpm

QCV 0.54 %
Max overheat 4.2 °C
occured 10-dec 12:44:18

Timer Information:

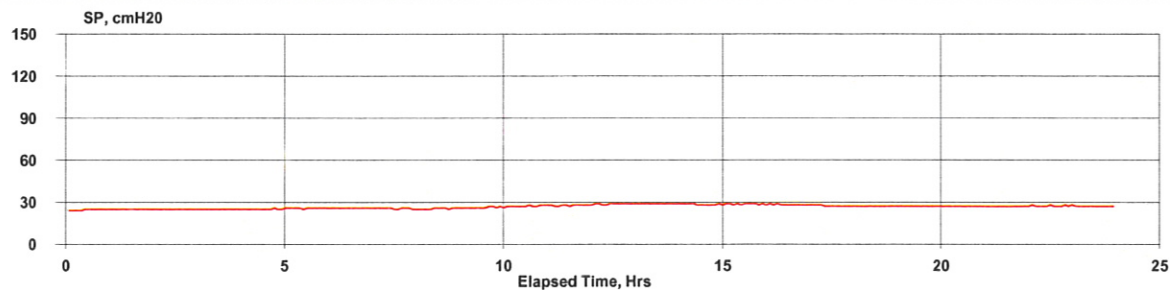
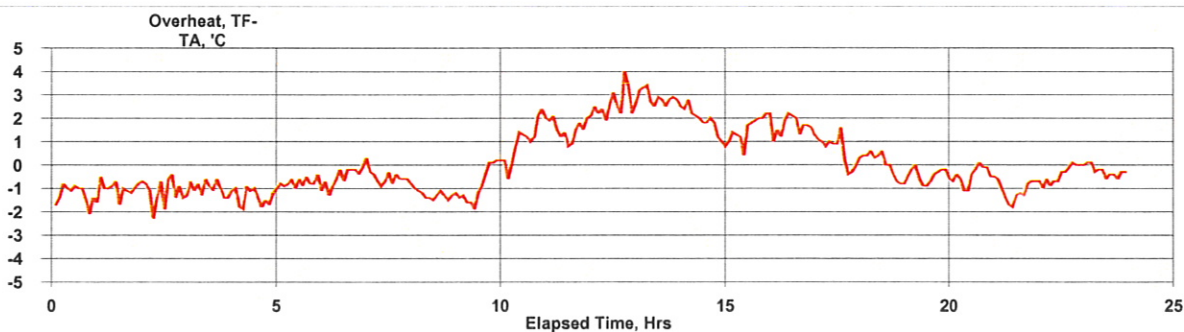
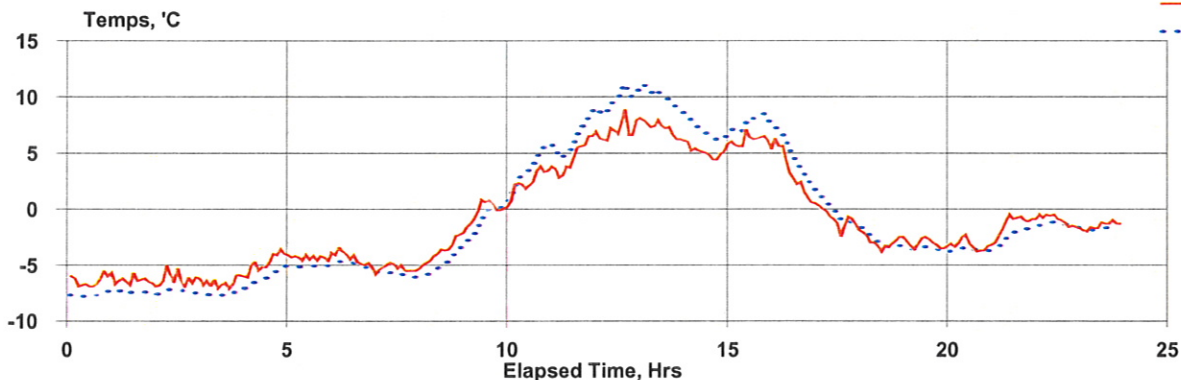
	Date	Time
	dd-mmm	hh:mm:ss
Start:	18-10-dec	0:00:08
Stop:	18-11-dec	0:00:04
ET:	23:59	

Mass Concentration Data:

Filter ID:	31	
Final Wt:		mg
Initial Wt:		mg
Delta Wt:	0.000	mg
Total Vol:	24.043	m ³
Mass Conc:	0	µg/m ³

Notes 1:

Notes 2:



Hourly

18-10-dec	0:05:08	589	-6.4	-7.7	-1.3	25	16.73
18-10-dec	1:05:08	588	-6.4	-7.4	-1.0	25	16.69
18-10-dec	2:05:08	588	-6.2	-7.4	-1.2	25	16.71
18-10-dec	3:05:08	588	-6.5	-7.5	-1.0	25	16.71
18-10-dec	4:05:08	588	-4.7	-6.0	-1.4	25	16.71
18-10-dec	5:05:08	587	-4.3	-5.1	-0.8	26	16.71
18-10-dec	6:05:08	588	-4.5	-5.0	-0.4	26	16.71
18-10-dec	7:05:08	588	-5.2	-5.8	-0.6	26	16.71
18-10-dec	8:05:08	588	-3.6	-4.9	-1.3	26	16.72
18-10-dec	9:05:08	588	-0.1	-0.9	-0.8	26	16.71
18-10-dec	10:05:08	588	2.6	3.7	1.1	27	16.71
18-10-dec	11:05:08	587	4.9	6.4	1.6	28	16.71
18-10-dec	12:05:08	586	7.1	9.7	2.6	29	16.71
18-10-dec	13:05:08	586	7.1	10.0	2.9	29	16.71
18-10-dec	14:05:08	586	5.1	6.9	1.8	28	16.71
18-10-dec	15:05:08	585	6.1	7.7	1.6	29	16.71
18-10-dec	16:05:08	585	3.0	4.6	1.6	28	16.72
18-10-dec	17:05:08	585	-1.0	-0.4	0.6	27	16.72
18-10-dec	18:05:08	585	-2.9	-2.9	0.0	27	16.71
18-10-dec	19:05:08	585	-3.1	-3.6	-0.5	27	16.72
18-10-dec	20:05:08	585	-3.2	-3.7	-0.5	27	16.72
18-10-dec	21:05:08	585	-1.3	-2.4	-1.1	27	16.72
18-10-dec	22:05:08	585	-1.0	-1.4	-0.4	27	16.71
18-10-dec	23:05:08	585	-1.5	-1.8	-0.3	27	16.71

BGI PQ200 Air Sampling System Downloaded 2018 17 dec 08:57:15

Job Details:

Job Name: 18Dec17A.JOB
Version: 5.62
Serial No: 962
Pump Time: ;267:45
Flags:

Job Code:
Site Name:
Station Code: 962A
Operators:
User1:
User2:

	Max	Min	Avg	Units
BP	589	586	587	mmHg
TA	10	-4.1	2.2	°C
Q	---	---	16.71	Lpm

QCV 0.54 %

Max overheat 3 °C
occured 16-dec 12:35:12

Timer Information:

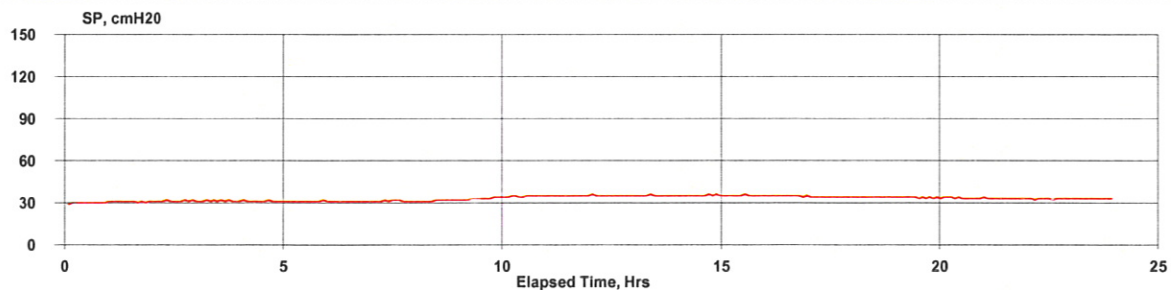
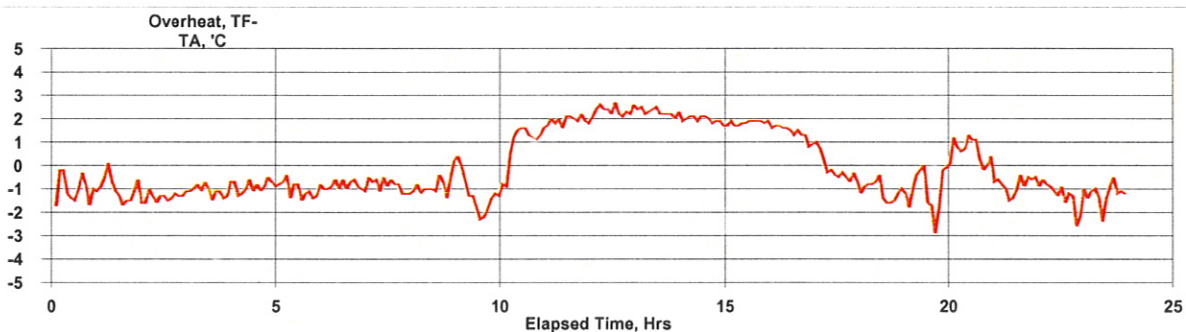
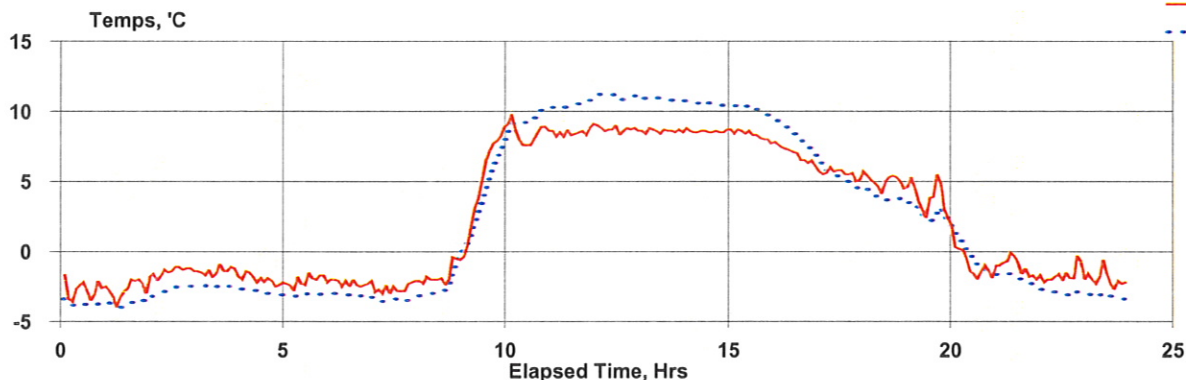
Date	Time
dd-mmm	hh:mm:ss
Start: 18-16-dec	0:00:08
Stop: 18-17-dec	0:00:04
ET: 24:00:00	

Mass Concentration Data:

Filter ID:	10
Final Wt:	mg
Initial Wt:	mg
Delta Wt:	0.000 mg
Total Vol:	24.043 m ³
Mass Conc:	0 µg/m ³

Notes 1:

Notes 2:



Hourly

18-16-dec	0:04:40	588	-2.7	-3.7	-1.0	30	16.71
18-16-dec	1:04:40	588	-2.7	-3.7	-1.0	31	16.71
18-16-dec	2:04:40	588	-1.4	-2.7	-1.3	31	16.71
18-16-dec	3:04:40	588	-1.4	-2.5	-1.1	31	16.70
18-16-dec	4:04:40	588	-2.0	-2.9	-0.9	31	16.70
18-16-dec	5:04:40	588	-2.1	-3.1	-1.0	31	16.71
18-16-dec	6:04:40	588	-2.2	-3.1	-0.9	31	16.71
18-16-dec	7:04:40	588	-2.6	-3.5	-0.8	31	16.72
18-16-dec	8:04:40	588	-1.7	-2.5	-0.8	32	16.71
18-16-dec	9:04:40	588	5.0	3.8	-1.3	33	16.71
18-16-dec	10:04:40	589	8.4	9.4	0.9	35	16.71
18-16-dec	11:04:40	588	8.5	10.4	1.9	35	16.71
18-16-dec	12:04:40	588	8.7	11.1	2.4	35	16.72
18-16-dec	13:04:40	587	8.6	10.9	2.3	35	16.72
18-16-dec	14:04:40	587	8.6	10.5	2.0	35	16.71
18-16-dec	15:04:40	587	8.3	10.1	1.8	35	16.71
18-16-dec	16:04:40	587	6.9	8.3	1.4	35	16.71
18-16-dec	17:04:40	587	5.6	5.4	-0.2	34	16.71
18-16-dec	18:04:40	587	5.0	3.9	-1.1	34	16.71
18-16-dec	19:04:40	587	3.9	2.8	-1.1	34	16.72
18-16-dec	20:04:40	587	-0.7	-0.1	0.6	33	16.72
18-16-dec	21:04:40	587	-1.1	-1.9	-0.8	33	16.72
18-16-dec	22:04:40	587	-1.6	-2.9	-1.3	33	16.71
18-16-dec	23:04:40	587	-2.0	-3.2	-1.2	33	16.71

BGI PQ200 Air Sampling System

Downloaded 2018 23 dec 12:43:54

Job Details:

Job Name: 18Dec23A.JOB
Version: 5.62
Serial No: 962
Pump Time: ;291:44
Flags:

Job Code:
Site Name:
Station Code: 962A
Operators:
User1:
User2:

	Max	Min	Avg	Units
BP	587	580	584	mmHg
TA	5.9	-5.2	0	°C
Q	---	---	16.71	Lpm

QCV 0.56 %
Max overheat 2.9 °C
occured 22-dec 13:25:26

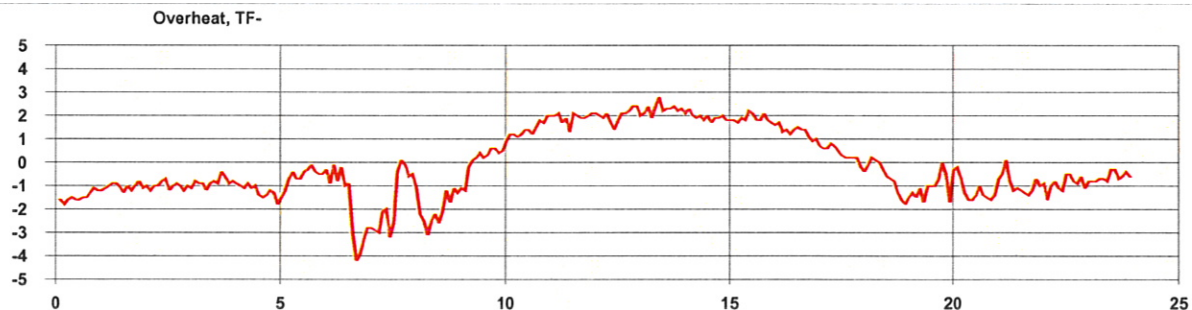
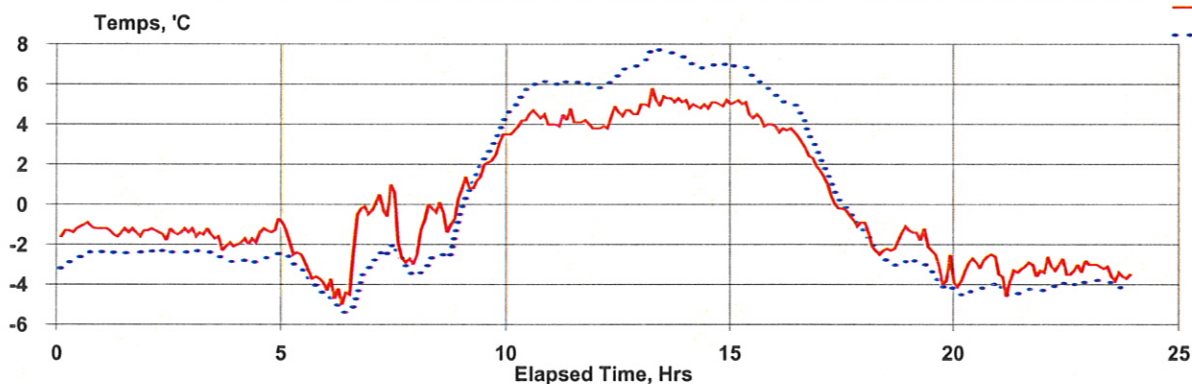
Timer Information:

	Date	Time
	dd-mmm	hh:mm:ss
Start:	18-22-dec	0:00:08
Stop:	18-23-dec	0:00:04
ET:	23:59	

Mass Concentration Data:

Filter ID:	16	
Final Wt:		mg
Initial Wt:		mg
Delta Wt:	0.000	mg
Total Vol:	24.042	m^3
Mass Conc:	0	µg/m3

Notes 1:
Notes 2:



Hourly

18-22-dec	0:05:08	582	-1.2	-2.7	-1.5	29	16.72
18-22-dec	1:05:08	582	-1.4	-2.4	-1.0	29	16.70
18-22-dec	2:05:08	582	-1.4	-2.4	-1.0	29	16.70
18-22-dec	3:05:08	582	-1.7	-2.6	-0.8	29	16.70
18-22-dec	4:05:08	582	-1.5	-2.7	-1.3	29	16.71
18-22-dec	5:05:08	583	-3.0	-3.5	-0.5	29	16.72
18-22-dec	6:05:08	583	-2.5	-4.5	-2.0	29	16.72
18-22-dec	7:05:08	583	-1.2	-2.7	-1.5	29	16.72
18-22-dec	8:05:08	584	-0.4	-2.4	-2.0	29	16.71
18-22-dec	9:05:08	584	2.0	2.3	0.2	30	16.73
18-22-dec	10:05:08	585	4.2	5.6	1.5	32	16.71
18-22-dec	11:05:08	585	4.1	6.1	1.9	32	16.72
18-22-dec	12:05:08	585	4.4	6.4	2.0	32	16.72
18-22-dec	13:05:08	585	5.2	7.5	2.3	32	16.71
18-22-dec	14:05:08	585	5.0	6.9	1.9	32	16.70
18-22-dec	15:05:08	585	4.5	6.3	1.9	32	16.72
18-22-dec	16:05:08	586	3.0	4.3	1.3	31	16.71
18-22-dec	17:05:08	586	-0.2	0.1	0.3	31	16.71
18-22-dec	18:05:08	586	-1.9	-2.6	-0.7	30	16.72
18-22-dec	19:05:08	586	-2.5	-3.5	-1.0	30	16.72
18-22-dec	20:05:08	586	-3.1	-4.3	-1.2	30	16.71
18-22-dec	21:05:08	586	-3.4	-4.4	-0.9	30	16.71
18-22-dec	22:05:08	587	-3.1	-4.0	-0.9	30	16.71
18-22-dec	23:05:08	587	-3.4	-4.0	-0.6	30	16.71

BGI PQ200 Air Sampling System

Downloaded 2018 29 dec 11:44:09

Job Details:

Job Name: 18Dec29A.JOB
Version: 5.62
Serial No: 962
Pump Time: ;315:43
Flags:

Job Code:
Site Name:
Station Code: 962A
Operators:
User1:
User2:

	Max	Min	Avg	Units
BP	583	573	578	mmHg
TA	-4.9	-11.6	-9.1	°C
Q	---	---	16.71	Lpm

QCV 0.57 %
Max overheat 3.5 °C
occured 28-dec 14:08:30

Timer Information:

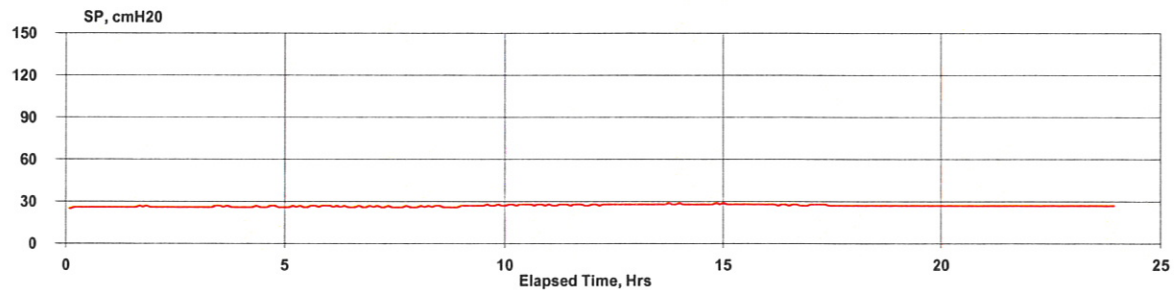
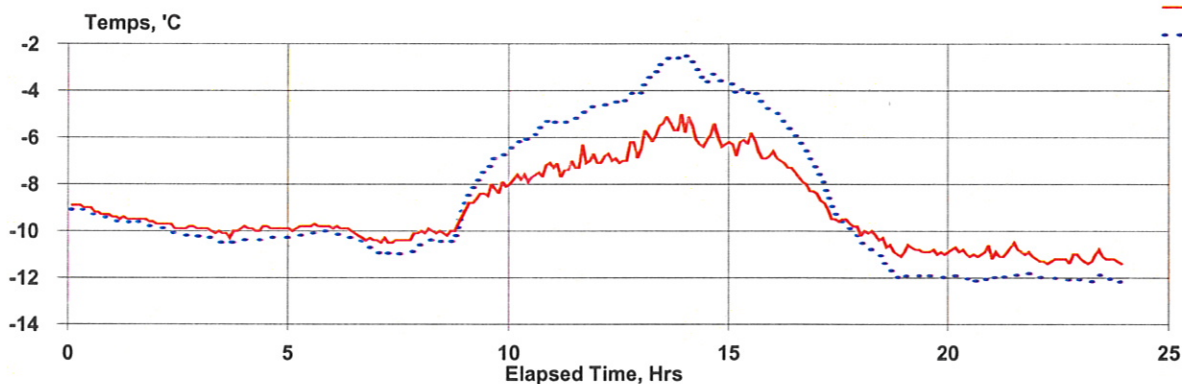
	Date	Time
	dd-mmm	hh:mm:ss
Start:	18-28-dec	0:00:08
Stop:	18-29-dec	0:00:05
ET:	23:59	

Mass Concentration Data:

Filter ID:	34
Final Wt:	mg
Initial Wt:	mg
Delta Wt:	0.000 mg
Total Vol:	24.042 m ³
Mass Conc:	0 µg/m ³

Notes 1:

Notes 2:



Hourly

18-28-dec	0:05:08	575	-9.1	-9.3	-0.2	26	16.71
18-28-dec	1:05:08	575	-9.5	-9.7	-0.2	26	16.71
18-28-dec	2:05:08	575	-9.8	-10.1	-0.3	26	16.70
18-28-dec	3:05:08	576	-10.0	-10.4	-0.4	26	16.71
18-28-dec	4:05:08	576	-9.9	-10.4	-0.5	26	16.73
18-28-dec	5:05:08	576	-9.8	-10.2	-0.3	27	16.71
18-28-dec	6:05:08	576	-10.1	-10.4	-0.3	26	16.70
18-28-dec	7:05:08	577	-10.3	-10.9	-0.6	26	16.70
18-28-dec	8:05:08	577	-9.9	-10.2	-0.3	26	16.71
18-28-dec	9:05:08	578	-8.3	-7.4	1.0	27	16.71
18-28-dec	10:05:08	578	-7.6	-5.9	1.7	28	16.71
18-28-dec	11:05:08	578	-7.1	-5.1	2.0	28	16.71
18-28-dec	12:05:08	578	-6.8	-4.4	2.4	28	16.71
18-28-dec	13:05:08	578	-5.6	-3.0	2.6	28	16.71
18-28-dec	14:05:08	579	-6.0	-3.3	2.7	28	16.72
18-28-dec	15:05:08	579	-6.5	-4.2	2.2	28	16.72
18-28-dec	16:05:08	580	-7.6	-6.0	1.6	28	16.71
18-28-dec	17:05:08	580	-9.5	-9.3	0.2	27	16.71
18-28-dec	18:05:08	581	-10.5	-11.3	-0.8	27	16.72
18-28-dec	19:05:08	581	-10.9	-12.0	-1.1	27	16.70
18-28-dec	20:05:08	581	-10.9	-12.1	-1.1	27	16.71
18-28-dec	21:05:08	582	-10.9	-11.9	-1.0	27	16.71
18-28-dec	22:05:08	582	-11.2	-12.0	-0.8	27	16.71
18-28-dec	23:05:08	582	-11.2	-12.1	-0.9	27	16.71

Compliance Monitor 963B

PM₁₀ Sampler Summary

October 1, 2018 - December 31, 2018

Network: Alton Coal Development

Site: Coal Hollow

Sampler ID: Coal Hollow-B

AQS ID:

Sampler Type: BGI FRM Single

Date	Filter ID	Concentration (µg/m ³) LTP	Concentration (µg/m ³) STP	Sample Period (hr:min)	Sample Volume (m ³)	Std Volume (m ³)	Tare (mg)	Mass Gross (mg)	Net (mg)	Flag	Comments
10/05/18	P2950124	Invalid - AN	Invalid - AN	0:03			393.5072	393.5123	0.0051	SP,FE	
10/11/18	P2950418	Invalid - AN	Invalid - AN	0:03			393.1551	393.1640	0.0089	SP,FE	
10/17/18	P2950423	Invalid - AN	Invalid - AN	6:35	6.6	5.4	394.1190	394.2068	0.0878	SP,CI	Did not run
10/23/18	P2951629	Invalid - AN	Invalid - AN				395.7624	395.7728	0.0104	SP,MD	No data
10/29/18	P2951634	15.7	19.2	23:59	24.0	19.7	391.5482	391.9265	0.3783		
11/04/18	P2951917	4.7	5.6	23:59	24.0	19.9	399.3784	399.4914	0.1130		
11/10/18	P2951922	6.8	8.0	23:59	24.0	20.2	395.7829	395.9464	0.1635		
11/16/18	P2951927	Invalid - AN	Invalid - AN				396.1102	397.4143	1.3041	SP,MD	Data corrupt
11/22/18	P2952181	Invalid - AN	Invalid - AN				389.2870	389.3053	0.0183	SP,MD	Did not run
11/28/18	P2952186	5.4	6.5	23:59	24.0	20.0	392.7649	392.8968	0.1319		
12/04/18	P2952455	2.1	2.4	23:59	24.0	21.1	394.0822	394.1331	0.0509		
12/10/18	P2952459	6.2	7.3	23:59	24.0	20.6	397.5245	397.6748	0.1503		
12/16/18	P2952668	1.4	1.7	24:00	24.0	20.3	389.2084	389.2441	0.0357		
12/22/18	P2952672	4.9	5.7	23:59	24.0	20.3	392.7591	392.8770	0.1179		
12/28/18	P2952677	3.5	4.1	23:59	24.0	20.8	395.9679	396.0538	0.0859		
# Valid		Recovery	Average	St. Dev.	Max	Min					
9		60%	6.7	5.1	19.2	1.7					

Inter-Mountain Laboratories' (IML) data validation is limited by the provided information. Data have been validated based on laboratory QC, field observations and other information available to IML. Additional data validation based on information not provided to IML may be required. According to 40 CFR 58.15 final responsibilities for data review and validation lies with each agency submitting data to AQS.

BGI PQ200 Air Sampling System Downloaded 2018 02 oct 12:26:33

Job Details:

Job Name: 18Oct02B.JOB
Version: 5.62
Serial No: 963
Pump Time: 6741:23
Flags:

Job Code:

Site Name:

Station Code:

Operators:

User1: ++++++

User2:

	Max	Min	Avg	Units
BP	592	589	590	mmHg
TA	25	8.7	16.5	°C
Q	---	---	16.72	Lpm

QCV 0.36 %

Max overheat 2.8 °C

occured 01-oct 11:56:18

Timer Information:

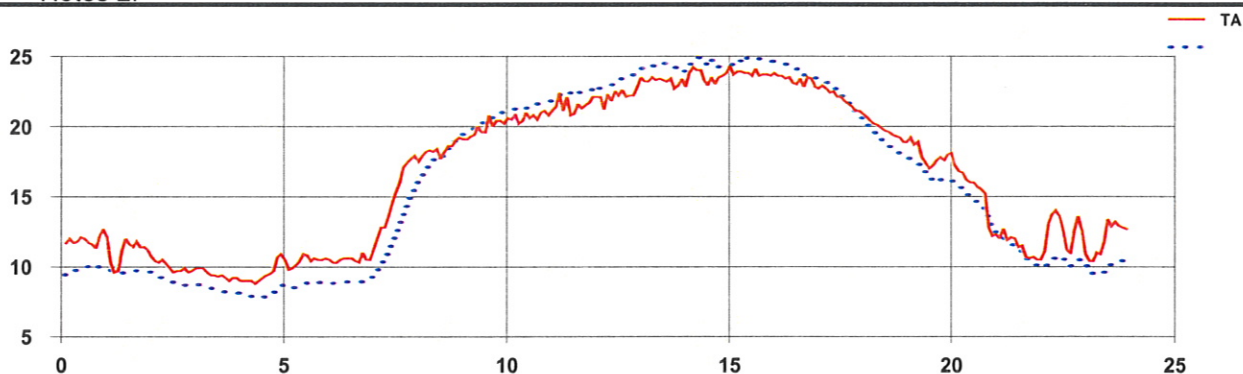
	Date	Time
	dd-mmm	hh:mm:ss
Start:	18-29-sep	0:00:08
Stop:	18-30-sep	0:00:05
ET:	23:59	

Mass Concentration Data:

Filter ID:	13
Final Wt:	mg
Initial Wt:	mg
Delta Wt:	0.000 mg
Total Vol:	24.026 m ³
Mass Conc:	0 µg/m ³

Notes 1:

Notes 2:



Overheat, TF-

Hourly

18-29-sep	0:05:08	591	11.9	9.8	-2.1	27	16.74
18-29-sep	1:05:08	591	11.0	9.6	-1.4	27	16.72
18-29-sep	2:05:08	591	10.0	8.9	-1.1	27	16.73
18-29-sep	3:05:08	591	9.4	8.3	-1.0	27	16.71
18-29-sep	4:05:08	591	9.6	8.1	-1.5	27	16.69
18-29-sep	5:05:08	591	10.4	8.8	-1.7	27	16.75
18-29-sep	6:05:08	591	10.6	8.9	-1.7	27	16.73
18-29-sep	7:05:08	592	15.4	12.6	-2.8	28	16.72
18-29-sep	8:05:08	592	18.5	18.0	-0.5	29	16.71
18-29-sep	9:05:08	592	20.0	20.4	0.4	29	16.71
18-29-sep	10:05:08	592	20.7	21.5	0.7	30	16.72
18-29-sep	11:05:08	592	21.6	22.4	0.8	30	16.72
18-29-sep	12:05:08	592	22.3	23.3	1.0	30	16.71
18-29-sep	13:05:08	591	23.2	24.3	1.1	30	16.74
18-29-sep	14:05:08	591	23.7	24.5	0.8	30	16.73
18-29-sep	15:05:08	590	23.8	24.7	0.9	30	16.72
18-29-sep	16:05:08	590	23.2	24.0	0.8	30	16.73
18-29-sep	17:05:08	590	21.9	22.1	0.2	30	16.71
18-29-sep	18:05:08	590	19.7	18.9	-0.8	30	16.74
18-29-sep	19:05:08	590	17.9	16.7	-1.3	30	16.73
18-29-sep	20:05:08	591	15.2	14.6	-0.7	30	16.73
18-29-sep	21:05:08	591	11.4	11.1	-0.3	29	16.66
18-29-sep	22:05:08	591	12.5	10.3	-2.2	29	16.71
18-29-sep	23:05:08	591	12.0	9.9	-2.1	29	16.74

BGI PQ200 Air Sampling System

Downloaded 2018 08 oct 14:52:51

Job Details:

Job Name: 18Oct08B.JOB
Version: 5.62
Serial No: 963
Pump Time: 6741:26
Flags: Q T

Job Code:

Site Name:

Station Code:

Operators:

User1: ++++++

User2:

	Max	Min	Avg	Units
BP	589	587	587	mmHg
TA	7.3	6.6	7.2	°C
Q	---	---	0	Lpm

QCV 0 %

Max overheat 2.2 °C
occured 05-oct 12:12:55

Timer Information:

	Date dd-mmm	Time hh:mm:ss
Start:	18-05-oct	0:00:08
Stop:	18-06-oct	0:00:05
ET:	0:03	

Mass Concentration Data:

Filter ID:	22	
Final Wt:		mg
Initial Wt:		mg
Delta Wt:	0.000	mg
Total Vol:	0.009	m^3
Mass Conc:	0	ug/m3

Notes 1:

Notes 2:

Hourly

yy-dd-mmm	hh:mm:ss	mmHg	°C	°C	°C	cmH2O	aLpm

BGI PQ200 Air Sampling System

Downloaded 2018 13 oct 11:27:57

Job Details:

Job Name: 18Oct13B.JOB

Version: 5.62

Serial No: 963

Pump Time: 4181:29

Flags: Q T

Job Code:

Site Name: 963B

Station Code:

Operators: KN

User1: ++++++

User2:

	Max	Min	Avg	Units
BP	587	585	585	mmHg
TA	7.6	6.7	7.5	°C
Q	---	---	0	Lpm

QCV 0 %

Max overheat 2.3 °C
occured 11-oct 16:46:16

Timer Information:

	Date	Time
	dd-mmm	hh:mm:ss
Start:	18-11-oct	0:00:08
Stop:	18-12-oct	0:00:05
ET:	0:03	

Mass Concentration Data:

Filter ID:	5	
Final Wt:		mg
Initial Wt:		mg
Delta Wt:	0.000	mg
Total Vol:	0.01	m^3
Mass Conc:	0	µg/m3

Notes 1:

Notes 2:

Hourly

yy-dd-mmm	hh:mm:ss	mmHg	°C	°C	°C	cmH2O	aLpm

BGI PQ200 Air Sampling System Downloaded 2018 18 oct 11:59:40

Job Details:

Job Name: 18Oct18B.JOB
Version: 5.62
Serial No: 963
Pump Time: 4188:04
Flags:

Job Code:
Site Name: 963b
Station Code:
Operators:
User1: |||||
User2:

	Max	Min	Avg	Units
BP	593	591	591	mmHg
TA	10.8	10.4	10.8	°C
Q	---	---	16.71	Lpm

Timer Information:

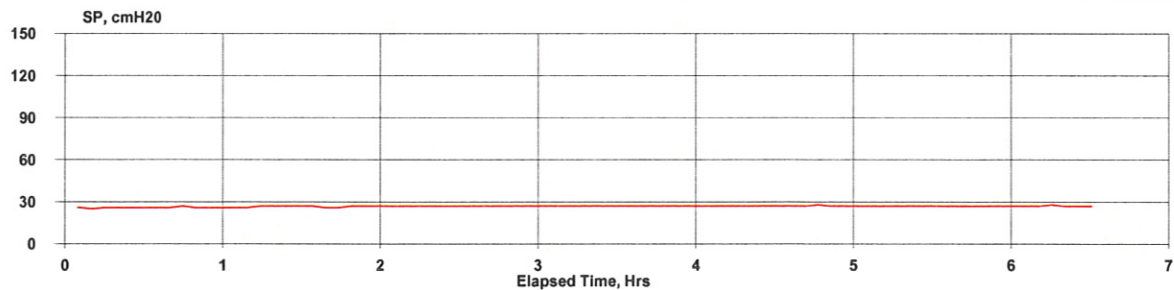
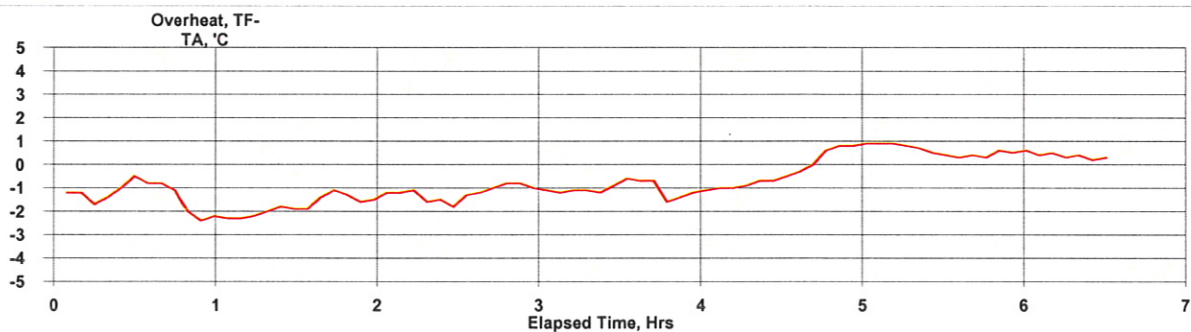
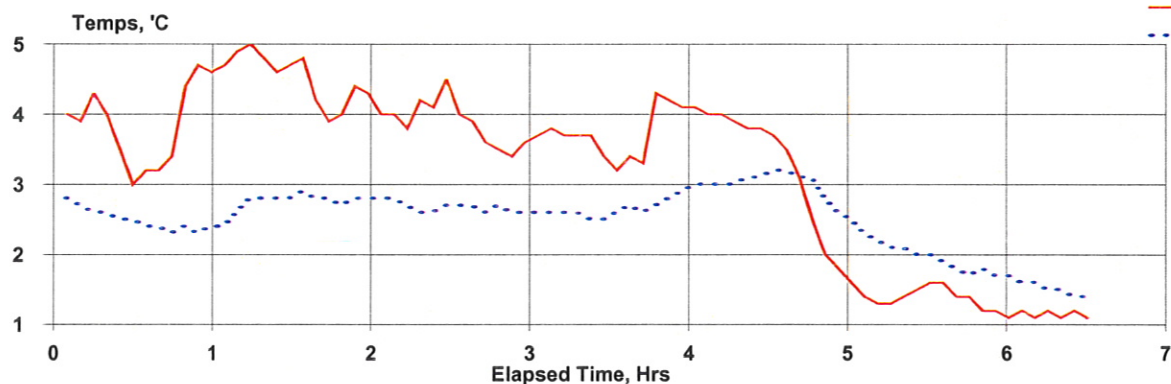
Date Time
dd-mmm hh:mm:ss
Start: 18-18-oct 11:54:29
Stop: 18-18-oct 11:54:47
ET: 6:35

Mass Concentration Data:

Filter ID: 12
Final Wt: mg
Initial Wt: mg
Delta Wt: 0.000 mg
Total Vol: 6.583 m³
Mass Conc: 0 µg/m³

QCV 0 %
Max overheat 0.7 °C
occured 18-oct 11:55:59

Notes 1:
Notes 2:



Hourly

18-17-oct	0:06:08	593	3.9	2.5	-1.4	26	16.70
18-17-oct	1:06:08	593	4.5	2.8	-1.8	27	16.72
18-17-oct	2:06:08	593	3.9	2.7	-1.2	27	16.73
18-17-oct	3:06:08	593	3.7	2.6	-1.1	27	16.72
18-17-oct	4:06:08	593	3.4	3.0	-0.3	27	16.71
18-17-oct	5:06:08	593	1.4	2.0	0.6	27	16.69
18-17-oct	6:06:08	594	1.1	1.5	0.4	27	16.70

BGI PQ200 Air Sampling System

Downloaded 2018 30 oct 13:31:19

Job Details:

Job Name: 18Oct30B.JOB
Version: 5.62
Serial No: 963
Pump Time: 4212:03
Flags:

Job Code:

Site Name:

Station Code:

Operators:

User1: ++++++

User2:

	Max	Min	Avg	Units
BP	593	588	590	mmHg
TA	17.8	2.2	9.3	°C
Q	---	---	16.69	Lpm

QCV 0.49 %

Max overheat 1.5 °C

occured 29-oct 12:01:59

Timer Information:

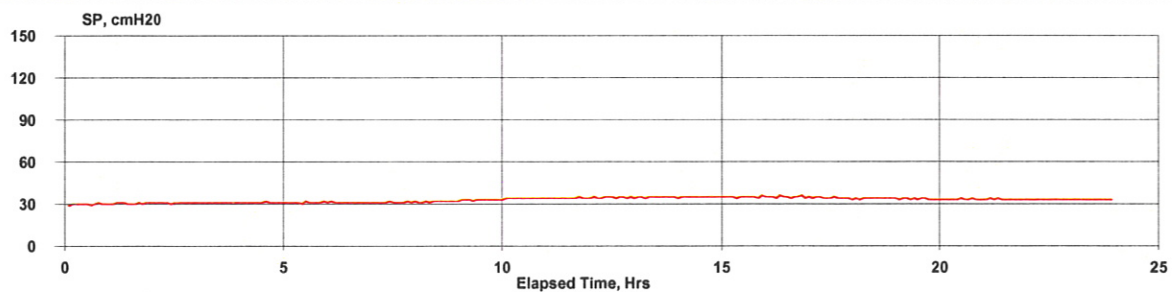
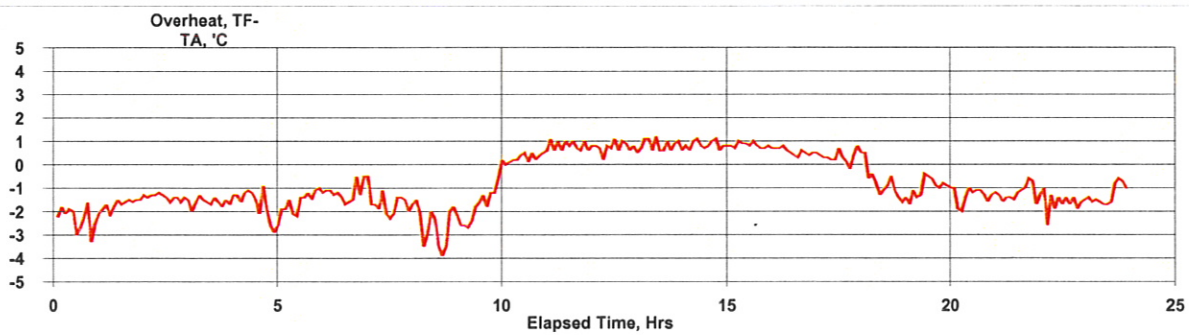
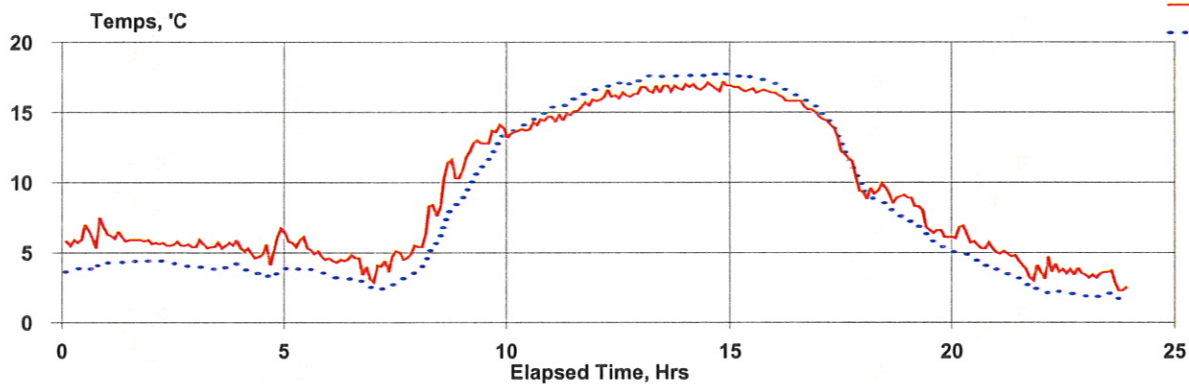
	Date	Time
	dd-mmm	hh:mm:ss
Start:	18-29-oct	0:00:08
Stop:	18-30-oct	0:00:05
ET:	23:59	

Mass Concentration Data:

Filter ID:	35
Final Wt:	mg
Initial Wt:	mg
Delta Wt:	0.000 mg
Total Vol:	24.002 m ³
Mass Conc:	0 µg/m ³

Notes 1:

Notes 2:



Hourly

18-29-oct	0:05:08	592	6.2	3.9	-2.3	30	16.68
18-29-oct	1:05:08	592	6.0	4.3	-1.7	31	16.66
18-29-oct	2:05:08	592	5.6	4.2	-1.4	31	16.66
18-29-oct	3:05:08	591	5.5	4.0	-1.6	31	16.66
18-29-oct	4:05:08	591	5.3	3.6	-1.7	31	16.69
18-29-oct	5:05:08	592	5.3	3.7	-1.5	31	16.72
18-29-oct	6:05:08	591	4.1	3.0	-1.1	31	16.68
18-29-oct	7:05:08	591	4.7	2.9	-1.7	31	16.72
18-29-oct	8:05:08	592	9.1	6.5	-2.6	32	16.71
18-29-oct	9:05:08	592	13.1	11.4	-1.6	33	16.70
18-29-oct	10:05:08	592	14.1	14.4	0.3	34	16.70
18-29-oct	11:05:08	591	15.2	16.0	0.8	34	16.69
18-29-oct	12:05:08	591	16.3	17.0	0.7	35	16.70
18-29-oct	13:05:08	590	16.7	17.5	0.8	35	16.74
18-29-oct	14:05:08	590	16.8	17.7	0.8	35	16.73
18-29-oct	15:05:08	590	16.6	17.4	0.8	35	16.76
18-29-oct	16:05:08	590	15.6	16.1	0.5	35	16.68
18-29-oct	17:05:08	590	12.2	12.6	0.3	34	16.67
18-29-oct	18:05:08	590	9.2	8.3	-0.9	34	16.71
18-29-oct	19:05:08	589	7.1	6.1	-1.0	33	16.69
18-29-oct	20:05:08	589	5.8	4.5	-1.3	33	16.67
18-29-oct	21:05:08	589	4.2	3.0	-1.2	33	16.69
18-29-oct	22:05:08	589	3.7	2.1	-1.6	33	16.72
18-29-oct	23:05:08	589	3.1	1.8	-1.3	33	16.71

BGI PQ200 Air Sampling System Downloaded 2018 05 nov 11:30:48

Job Details:

Job Name: 18Nov05B.JOB
Version: 5.62
Serial No: 963
Pump Time: 4236:02
Flags:

Job Code:
Site Name: 963B
Station Code:
Operators: BH
User1: |||||
User2:

	Max	Min	Avg	Units
BP	592	587	589	mmHg
TA	13.5	-1.7	5.1	°C
Q	---	---	16.69	Lpm

QCV 0.29 %
Max overheat 2.2 °C
occured 04-nov 14:38:05

Timer Information:

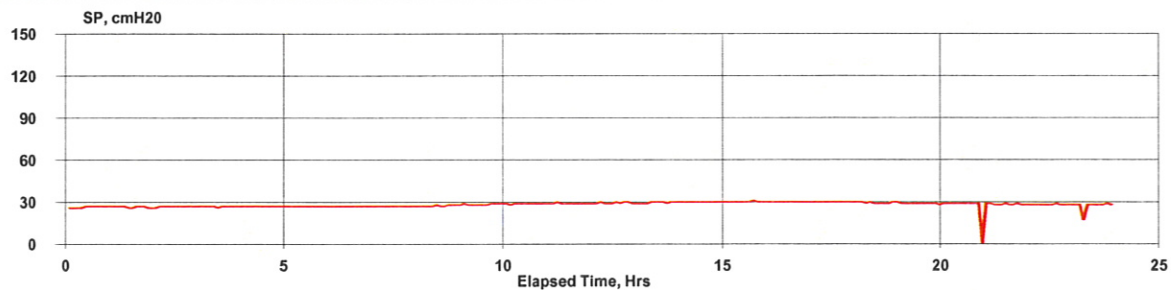
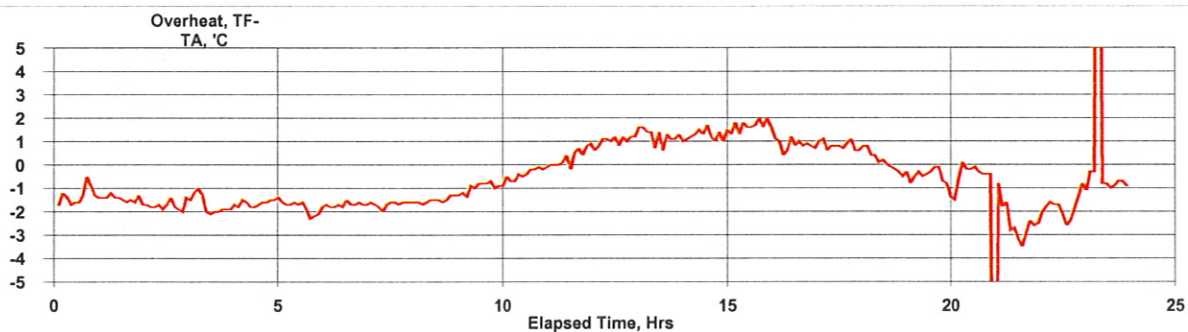
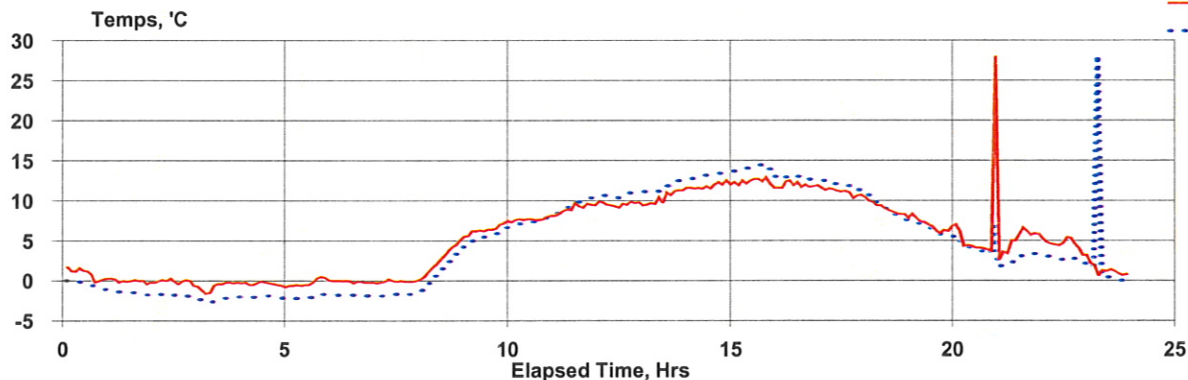
Date Time
dd-mmm hh:mm:ss
Start: 18-04-nov 0:00:08
Stop: 18-05-nov 0:00:05
ET: 23:59

Mass Concentration Data:

Filter ID: 11
Final Wt: mg
Initial Wt: mg
Delta Wt: 0.000 mg
Total Vol: 23.998 m³
Mass Conc: 0 µg/m³

Notes 1:

Notes 2:



Hourly

18-04-nov	0:05:08	592	0.8	-0.5	-1.3	27	16.71
18-04-nov	1:05:08	592	-0.1	-1.6	-1.5	27	16.68
18-04-nov	2:05:08	592	-0.4	-2.0	-1.6	27	16.68
18-04-nov	3:05:08	591	-0.4	-2.3	-1.8	27	16.69
18-04-nov	4:05:08	591	-0.5	-2.1	-1.6	27	16.69
18-04-nov	5:05:08	591	0.0	-1.9	-1.9	27	16.69
18-04-nov	6:05:08	590	-0.1	-1.8	-1.7	27	16.69
18-04-nov	7:05:08	590	0.9	-0.7	-1.6	27	16.70
18-04-nov	8:05:08	590	5.5	4.4	-1.2	28	16.70
18-04-nov	9:05:08	590	7.4	6.8	-0.6	29	16.71
18-04-nov	10:05:08	590	8.7	8.8	0.1	29	16.72
18-04-nov	11:05:08	590	9.6	10.5	1.0	29	16.72
18-04-nov	12:05:08	589	10.3	11.5	1.2	30	16.69
18-04-nov	13:05:08	589	11.8	13.1	1.3	30	16.69
18-04-nov	14:05:08	588	12.3	13.9	1.6	30	16.71
18-04-nov	15:05:08	588	11.9	12.8	0.9	30	16.71
18-04-nov	16:05:08	588	10.8	11.5	0.7	30	16.70
18-04-nov	17:05:08	587	8.5	8.3	-0.2	29	16.71
18-04-nov	18:05:08	587	6.6	5.9	-0.6	29	16.69
18-04-nov	19:10:08	587	4.1	3.9	-0.2	29	16.71
Ö,öü7 a02.7			28.0	6.7	-21.3		0.00
18-04-nov	21:00:08	587	5.1	2.7	-2.4	28	16.69
18-04-nov	22:00:08	587	4.3	2.6	-1.6	28	16.68
18-04-nov	23:00:08	587	1.9	1.6	-0.3	28	16.67
ÂpšĚný20:08	587	514	1.0	3.7	2.7	27	14.64

BGI PQ200 Air Sampling System

Downloaded 2018 12 nov 13:02:52

Job Details:

Job Name: 18Nov12B.JOB

Version: 5.62

Serial No: 963

Pump Time: 4260:01

Flags:

Job Code:

Site Name: 963B

Station Code:

Operators: KN

User1: |||||

User2:

	Max	Min	Avg	Units
BP	592	586	588	mmHg
TA	10.7	-7.8	0.5	°C
Q	---	---	16.67	Lpm

QCV 0.66 %

Max overheat 1.9 °C

occured 10-nov 13:03:49

Timer Information:

Date	Time
dd-mmm	hh:mm:ss
Start: 18-10-nov	0:00:08
Stop: 18-11-nov	0:00:05

ET: 23:59

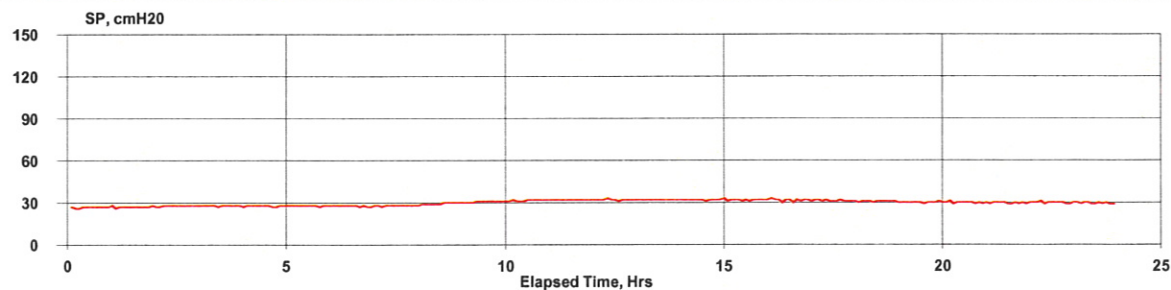
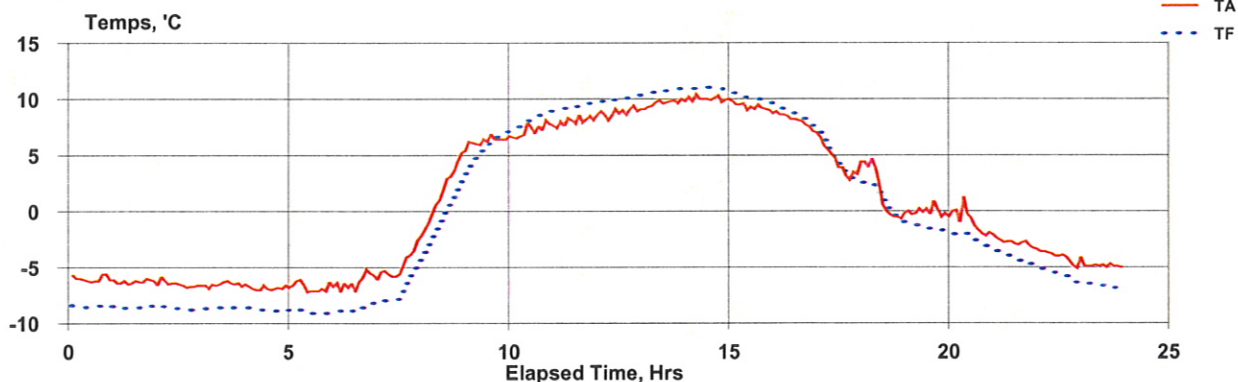
Mass Concentration Data:

Filter ID:	17
Final Wt:	mg
Initial Wt:	mg
Delta Wt:	0.000 mg
Total Vol:	23.96 m ³

Mass Conc: 0 µg/m³

Notes 1:

Notes 2:



Hourly

18-10-nov	0:05:08	592	-6.0	-8.5	-2.5	27	16.66
18-10-nov	1:05:08	591	-6.3	-8.6	-2.3	27	16.61
18-10-nov	2:05:08	591	-6.5	-8.7	-2.2	28	16.70
18-10-nov	3:05:08	590	-6.5	-8.6	-2.1	28	16.69
18-10-nov	4:05:08	590	-6.8	-8.8	-2.0	28	16.68
18-10-nov	5:05:08	590	-6.8	-9.0	-2.2	28	16.69
18-10-nov	6:05:08	590	-6.3	-8.7	-2.4	28	16.64
18-10-nov	7:05:08	589	-4.6	-6.9	-2.3	28	16.65
18-10-nov	8:05:08	590	2.1	-0.4	-2.5	30	16.69
18-10-nov	9:05:08	589	6.3	5.7	-0.6	31	16.70
18-10-nov	10:05:08	589	7.3	8.1	0.9	32	16.70
18-10-nov	11:05:08	589	8.1	9.3	1.2	32	16.70
18-10-nov	12:05:08	588	8.8	10.0	1.2	32	16.72
18-10-nov	13:05:08	588	9.7	10.7	1.0	32	16.68
18-10-nov	14:05:08	587	10.0	10.9	0.9	32	16.68
18-10-nov	15:05:08	587	9.3	10.1	0.8	32	16.67
18-10-nov	16:05:08	587	8.0	8.6	0.5	32	16.68
18-10-nov	17:05:08	587	4.4	4.5	0.1	31	16.74
18-10-nov	18:05:08	587	1.5	1.0	-0.5	31	16.66
18-10-nov	19:05:08	587	-0.1	-1.5	-1.4	30	16.66
18-10-nov	20:05:08	587	-1.0	-2.5	-1.6	30	16.58
18-10-nov	21:05:08	587	-2.9	-4.2	-1.4	30	16.62
18-10-nov	22:05:08	587	-4.1	-5.7	-1.6	30	16.70
18-10-nov	23:05:08	587	-4.9	-6.7	-1.8	29	16.71

BGI PQ200 Air Sampling System Downloaded 2018 19 nov 10:04:09

Job Details:

Job Name: 18Nov19B.JOB
Version: 5.62
Serial No: 963
Pump Time: 4112:16
Flags:

Job Code:
Site Name: 963B
Station Code:
Operators: KN
User1: |||||
User2:

	Max	Min	Avg	Units
BP	593	591	592	mmHg
TA	6	5.5	6	°C
Q	---	---	41.12	Lpm

QCV 0 %
Max overheat 0 °C
occured 00-00:00:00 Code:009

Timer Information:

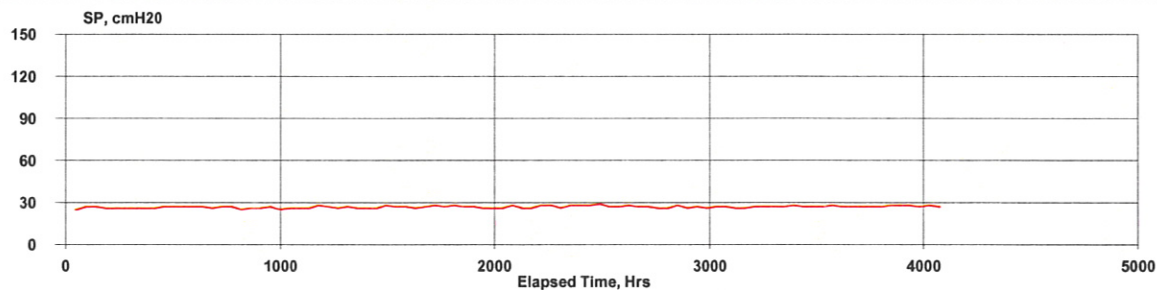
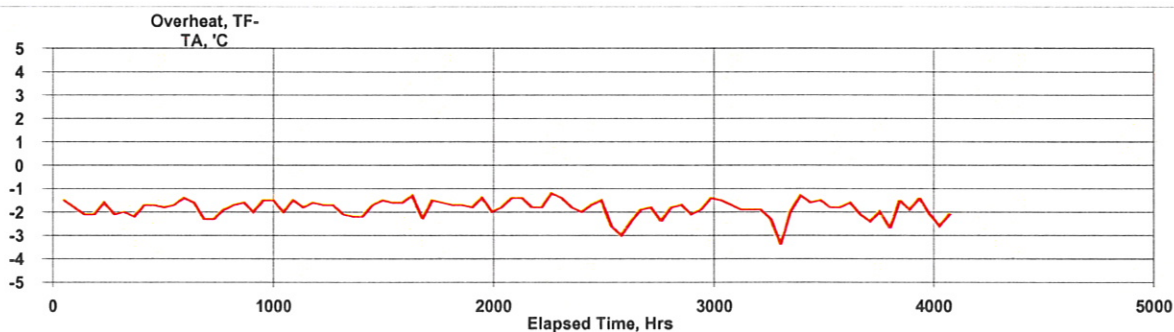
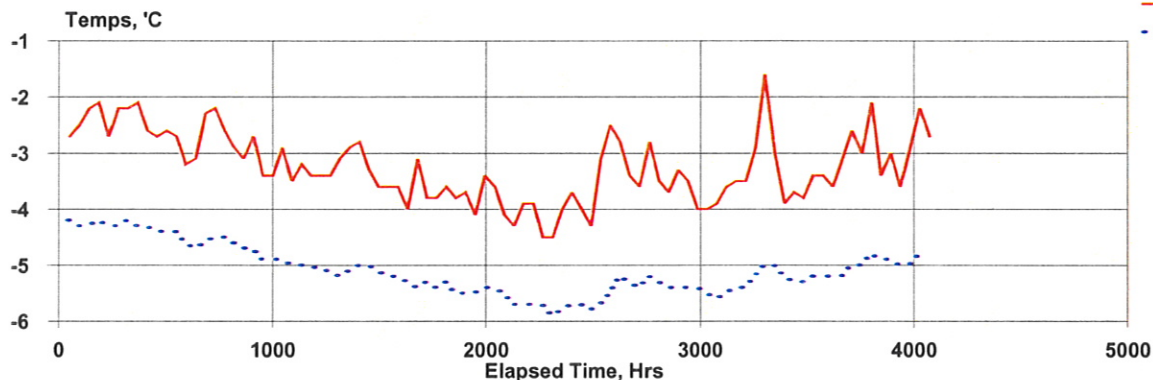
Date Time
dd-mmm hh:mm:ss
Start: 18-19-nov 10:02:12
Stop: 18-19-nov 10:03:01
ET: 4112:16:00

Mass Concentration Data:

Filter ID: 37
Final Wt: mg
Initial Wt: mg
Delta Wt: 0.000 mg
Total Vol: 0 m³
Mass Conc: µg/m³

Notes 1:

Notes 2:



Hourly

18-16-nov	0:08:08	592	-2.4	-4.3	-1.9	26	16.76
18-16-nov	1:08:08	592	-2.9	-4.7	-1.8	26	16.55
18-16-nov	2:08:08	592	-3.4	-5.1	-1.8	27	16.66
18-16-nov	3:08:08	591	-3.8	-5.5	-1.7	27	16.59
18-16-nov	4:08:08	591	-3.7	-5.6	-1.9	28	16.95
18-16-nov	5:08:08	591	-3.5	-5.4	-1.9	27	16.53
18-16-nov	6:08:08	591	-3.1	-5.1	-2.0	27	16.67
18-16-nov	7:08:08	591	-3.0	-4.9	-1.9	28	16.73

BGI PQ200 Air Sampling System

Downloaded 2018 06 dec 13:45:48

Job Details:

Job Name: 18Dec06B.JOB

Version: 5.62

Serial No: 963

Pump Time: 4160:14

Flags:

Job Code:

Site Name:

Station Code: 963B

Operators:

User1: ++++++

User2:

	Max	Min	Avg	Units
BP	594	590	592	mmHg
TA	-1.2	-16.1	-8.4	°C
Q	---	---	16.71	Lpm

QCV 0.58 %

Max overheat 2.8 °C

occured 04-dec 14:46:46

Timer Information:

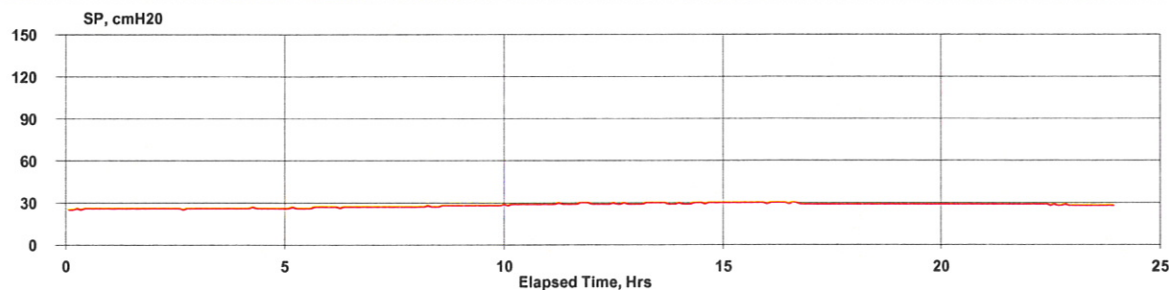
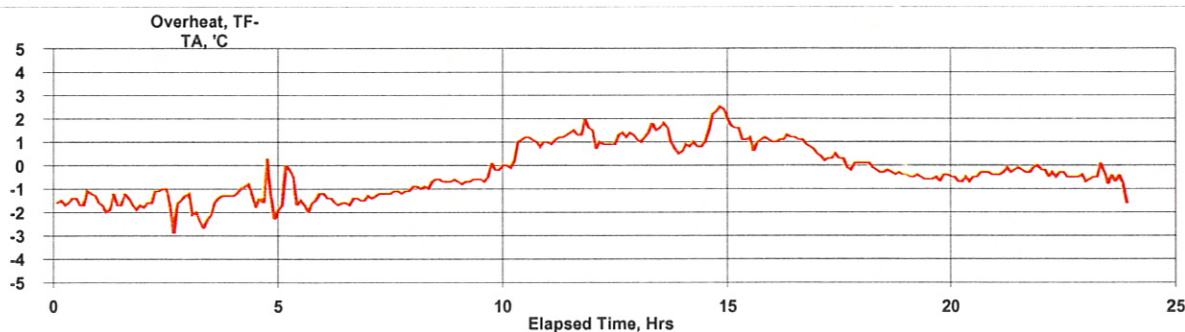
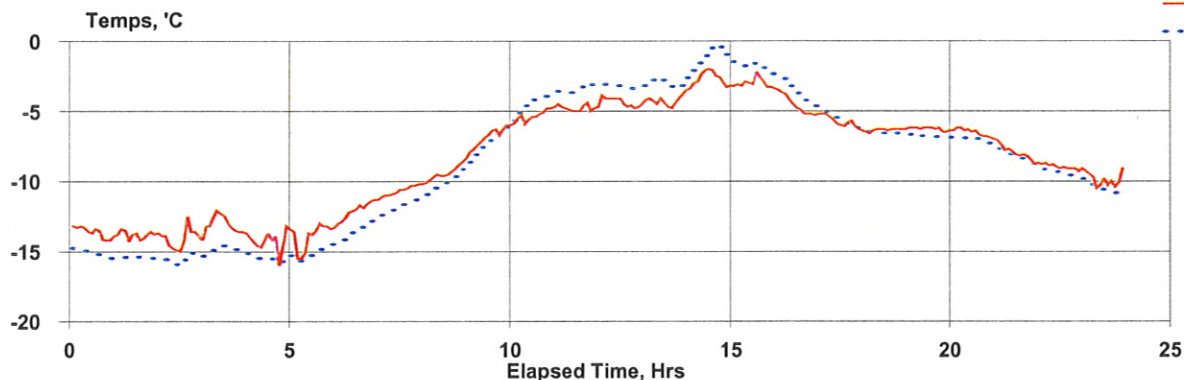
	Date	Time
	dd-mmm	hh:mm:ss
Start:	18-04-dec	0:00:08
Stop:	18-05-dec	0:00:05
ET:	23:59	

Mass Concentration Data:

Filter ID:	12
Final Wt:	mg
Initial Wt:	mg
Delta Wt:	0.000 mg
Total Vol:	24.042 m ³
Mass Conc:	0 µg/m ³

Notes 1:

Notes 2:



Hourly

18-04-dec	0:05:08	592	-13.6	-15.1	-1.5	26	16.71
18-04-dec	1:05:08	592	-13.8	-15.5	-1.7	26	16.71
18-04-dec	2:05:08	592	-14.1	-15.6	-1.5	26	16.70
18-04-dec	3:05:08	592	-13.1	-14.9	-1.8	26	16.71
18-04-dec	4:05:08	592	-14.2	-15.5	-1.3	26	16.71
18-04-dec	5:05:08	592	-13.9	-15.1	-1.2	27	16.71
18-04-dec	6:05:08	592	-12.0	-13.5	-1.5	27	16.71
18-04-dec	7:05:08	593	-10.6	-11.8	-1.2	27	16.71
18-04-dec	8:05:08	593	-9.3	-10.1	-0.8	28	16.71
18-04-dec	9:05:08	594	-6.8	-7.3	-0.5	28	16.73
18-04-dec	10:05:08	594	-5.3	-4.5	0.8	29	16.71
18-04-dec	11:05:08	594	-4.8	-3.4	1.4	29	16.72
18-04-dec	12:05:08	593	-4.4	-3.3	1.1	29	16.70
18-04-dec	13:05:08	593	-4.2	-3.0	1.2	30	16.72
18-04-dec	14:05:08	592	-2.7	-1.2	1.5	30	16.72
18-04-dec	15:05:08	592	-3.0	-1.8	1.2	30	16.70
18-04-dec	16:05:08	592	-4.6	-3.6	1.0	30	16.71
18-04-dec	17:05:08	592	-5.8	-5.6	0.2	29	16.70
18-04-dec	18:05:08	592	-6.4	-6.6	-0.2	29	16.71
18-04-dec	19:05:08	592	-6.3	-6.8	-0.5	29	16.71
18-04-dec	20:05:08	592	-6.6	-7.0	-0.5	29	16.72
18-04-dec	21:05:08	592	-8.0	-8.3	-0.2	29	16.71
18-04-dec	22:05:08	592	-9.0	-9.4	-0.4	29	16.71
18-04-dec	23:05:08	591	-9.9	-10.5	-0.6	28	16.70

BGI PQ200 Air Sampling System Downloaded 2018 11 dec 14:54:59

Job Details:

Job Name: 18Dec11B.JOB
Version: 5.62
Serial No: 963
Pump Time: 4184:13
Flags:

Job Code:

Site Name:

Station Code: 963B

Operators:

User1: ++++++

User2:

	Max	Min	Avg	Units
BP	596	591	593	mmHg
TA	7.2	-7.1	-1.3	°C
Q	---	---	16.71	Lpm

QCV 0.52 %

Max overheat 2.3 °C
occured 10-dec 12:14:22

Timer Information:

	Date	Time
	dd-mmm	hh:mm:ss
Start:	18-10-dec	0:00:08
Stop:	18-11-dec	0:00:05
ET:	23:59	

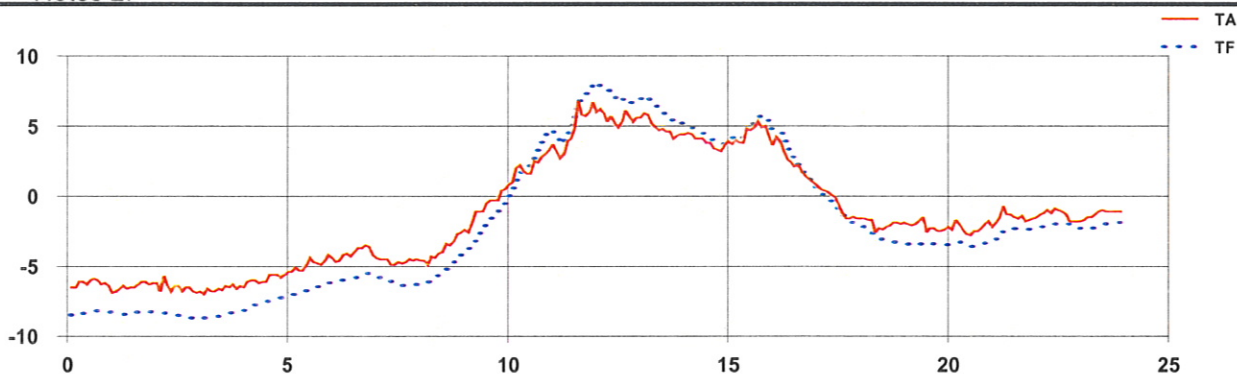
Mass Concentration Data:

Filter ID:	26
Final Wt:	mg
Initial Wt:	mg
Delta Wt:	0.000 mg
Total Vol:	24.041 m ³

Mass Conc: 0 µg/m³

Notes 1:

Notes 2:



Overheat, TF-

Hourly

18-10-dec	0:05:08	595	-6.3	-8.3	-2.0	28	16.71
18-10-dec	1:05:08	595	-6.4	-8.4	-2.0	29	16.71
18-10-dec	2:05:08	595	-6.6	-8.5	-2.0	29	16.71
18-10-dec	3:05:08	594	-6.6	-8.5	-1.9	29	16.70
18-10-dec	4:05:08	594	-5.8	-7.6	-1.7	29	16.70
18-10-dec	5:05:08	594	-4.8	-6.6	-1.8	29	16.72
18-10-dec	6:05:08	594	-4.1	-5.8	-1.7	30	16.71
18-10-dec	7:05:08	594	-4.6	-6.2	-1.6	30	16.70
18-10-dec	8:05:08	594	-3.7	-5.3	-1.7	30	16.72
18-10-dec	9:05:08	594	-0.6	-2.0	-1.4	31	16.71
18-10-dec	10:05:08	594	2.3	2.6	0.3	32	16.71
18-10-dec	11:05:08	594	4.9	5.8	0.9	32	16.71
18-10-dec	12:05:08	593	5.6	7.1	1.5	33	16.71
18-10-dec	13:05:08	592	4.8	6.0	1.2	33	16.71
18-10-dec	14:05:08	592	3.9	4.3	0.5	33	16.71
18-10-dec	15:05:08	592	4.4	4.9	0.5	33	16.71
18-10-dec	16:05:08	591	2.2	2.7	0.5	32	16.72
18-10-dec	17:05:08	591	-0.7	-1.0	-0.3	32	16.73
18-10-dec	18:05:08	592	-2.0	-3.0	-0.9	31	16.71
18-10-dec	19:05:08	592	-2.2	-3.5	-1.3	31	16.72
18-10-dec	20:05:08	592	-2.3	-3.4	-1.2	31	16.71
18-10-dec	21:05:08	592	-1.5	-2.5	-1.0	32	16.72
18-10-dec	22:05:08	592	-1.4	-2.1	-0.8	32	16.71
18-10-dec	23:05:08	592	-1.2	-2.1	-0.9	32	16.72

BGI PQ200 Air Sampling System Downloaded 2018 17 dec 09:15:56

Job Details:

Job Name: 18Dec17B.JOB
Version: 5.62
Serial No: 963
Pump Time: 4208:13
Flags:

Job Code:

Site Name:
Station Code: 963B
Operators:

User1: ++++++

User2:

	Max	Min	Avg	Units
BP	595	592	593	mmHg
TA	10.8	-4.4	1.7	°C
Q	---	---	16.71	Lpm

QCV 0.48 %

Max overheat 1.9 °C
occured 16-dec 12:58:31

Timer Information:

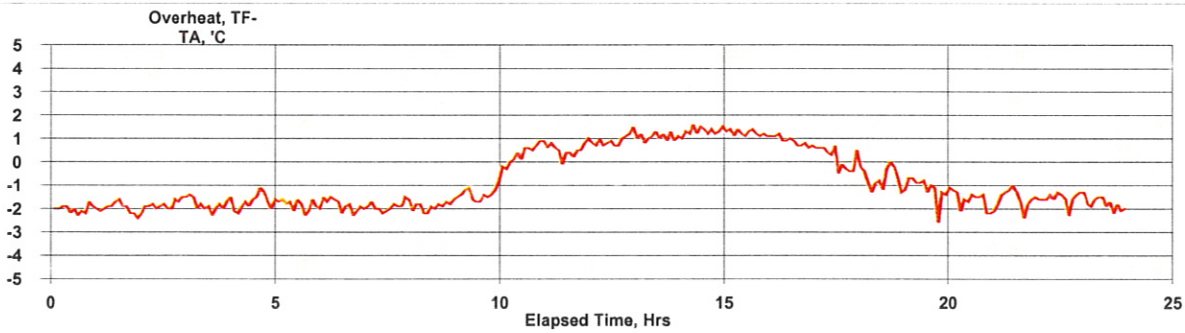
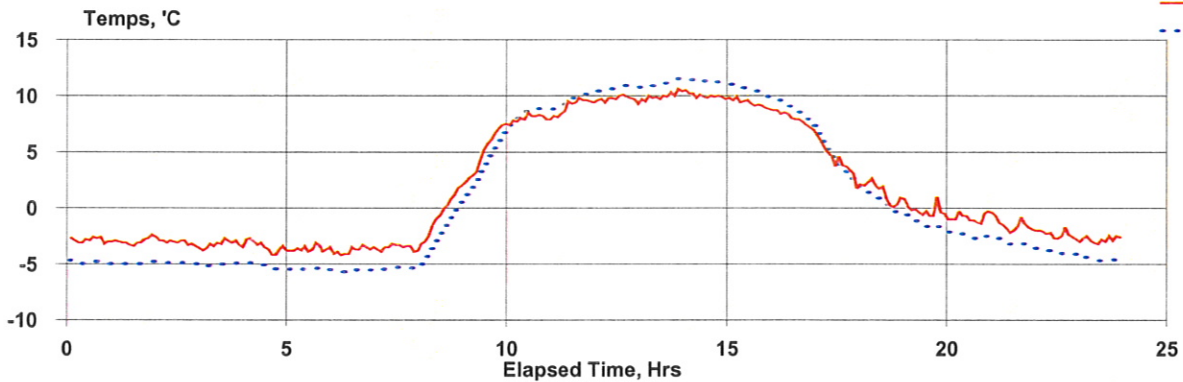
Date	Time
dd-mmm	hh:mm:ss
Start: 18-16-dec	0:00:08
Stop: 18-17-dec	0:00:05
ET: 24:00:00	

Mass Concentration Data:

Filter ID:	13	
Final Wt:		mg
Initial Wt:		mg
Delta Wt:	0.000	mg
Total Vol:	24.04	m^3
Mass Conc:	0	µg/m3

Notes 1:

Notes 2:



Hourly

18-16-dec	0:04:32	594	-2.9	-4.9	-2.0	29	16.72
18-16-dec	1:04:32	594	-3.0	-5.0	-2.0	29	16.72
18-16-dec	2:04:32	594	-3.1	-4.9	-1.8	29	16.71
18-16-dec	3:04:32	594	-3.2	-5.1	-1.8	29	16.70
18-16-dec	4:04:32	594	-3.5	-5.2	-1.7	29	16.71
18-16-dec	5:04:32	594	-3.6	-5.5	-1.9	29	16.71
18-16-dec	6:04:32	594	-3.8	-5.6	-1.9	29	16.71
18-16-dec	7:04:32	594	-3.5	-5.4	-1.9	29	16.71
18-16-dec	8:04:32	595	-0.5	-2.4	-1.9	30	16.71
18-16-dec	9:04:32	595	5.1	3.7	-1.4	31	16.71
18-16-dec	10:04:32	595	8.0	8.4	0.4	32	16.71
18-16-dec	11:04:32	595	9.1	9.6	0.5	33	16.73
18-16-dec	12:04:32	594	9.7	10.7	0.9	33	16.72
18-16-dec	13:04:32	594	10.0	11.1	1.1	33	16.71
18-16-dec	14:04:32	593	10.0	11.3	1.3	33	16.72
18-16-dec	15:04:32	593	9.4	10.6	1.2	33	16.72
18-16-dec	16:04:32	593	8.0	8.9	0.9	33	16.71
18-16-dec	17:04:32	594	4.3	4.4	0.2	32	16.72
18-16-dec	18:04:32	594	1.4	0.7	-0.7	31	16.72
18-16-dec	19:04:32	593	-0.2	-1.3	-1.2	31	16.71
18-16-dec	20:04:32	593	-0.9	-2.5	-1.6	31	16.71
18-16-dec	21:04:32	593	-1.4	-3.0	-1.6	31	16.72
18-16-dec	22:04:32	593	-2.3	-3.9	-1.6	31	16.71
18-16-dec	23:04:32	593	-2.8	-4.6	-1.8	31	16.71

BGI PQ200 Air Sampling System Downloaded 2018 23 dec 13:19:25

Job Details:

Job Name: 18Dec23B.JOB
Version: 5.62
Serial No: 963
Pump Time: 4232:12
Flags:

Job Code:
Site Name:
Station Code: 963B
Operators:
User1: ++++++
User2:

	Max	Min	Avg	Units
BP	594	586	590	mmHg
TA	7.3	-5.4	0.4	°C
Q	---	---	16.71	Lpm

QCV 0.49 %
Max overheat 2 °C
occured 22-dec 12:35:40

Timer Information:

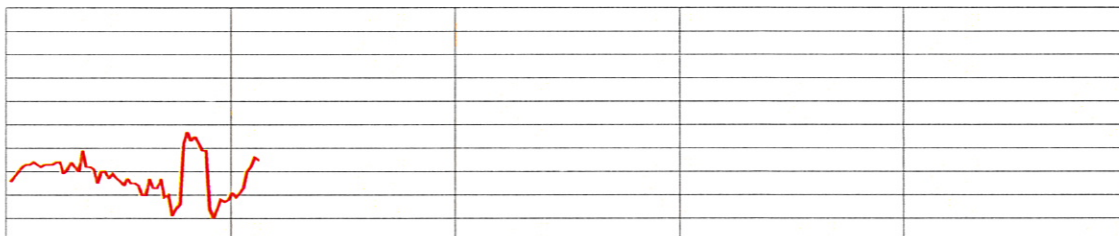
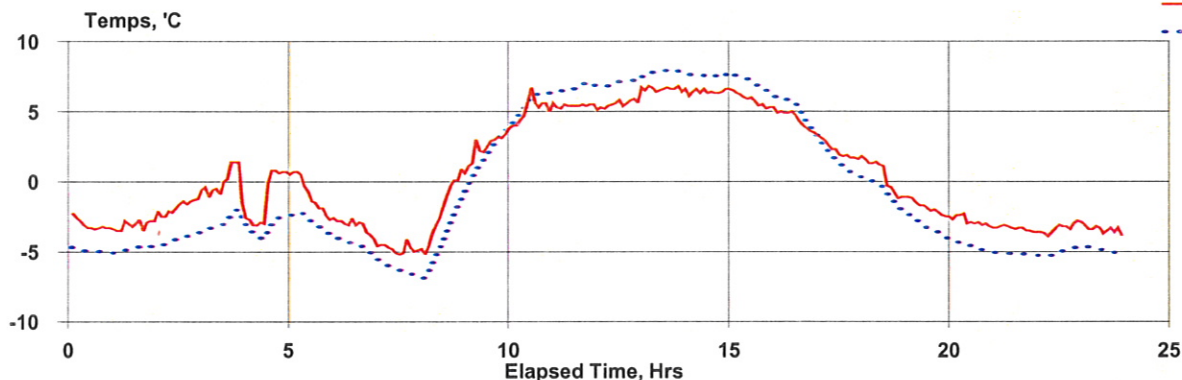
Date Time
dd-mmm hh:mm:ss
Start: 18-22-dec 0:00:08
Stop: 18-23-dec 0:00:05
ET: 23:59

Mass Concentration Data:

Filter ID: 17
Final Wt: mg
Initial Wt: mg
Delta Wt: 0.000 mg
Total Vol: 24.037 m³
Mass Conc: 0 µg/m³

Notes 1:

Notes 2:



Hourly

18-22-dec	0:05:08	588	-3.1	-4.9	-1.8	27	16.71
18-22-dec	1:05:08	588	-3.0	-4.8	-1.8	27	16.72
18-22-dec	2:05:08	588	-1.7	-4.1	-2.4	27	16.70
18-22-dec	3:05:08	589	-0.3	-2.9	-2.6	28	16.72
18-22-dec	4:05:08	589	-0.9	-3.2	-2.3	28	16.71
18-22-dec	5:05:08	589	-1.1	-2.9	-1.8	28	16.71
18-22-dec	6:05:08	589	-3.3	-4.6	-1.3	28	16.71
18-22-dec	7:05:08	589	-4.8	-6.3	-1.5	28	16.70
18-22-dec	8:05:08	590	-1.7	-4.0	-2.3	28	16.70
18-22-dec	9:05:08	591	2.6	1.9	-0.7	29	16.71
18-22-dec	10:05:08	592	5.2	5.6	0.4	30	16.70
18-22-dec	11:05:08	591	5.4	6.7	1.3	30	16.72
18-22-dec	12:05:08	591	5.7	7.0	1.4	30	16.71
18-22-dec	13:05:08	591	6.6	7.8	1.2	30	16.70
18-22-dec	14:05:08	591	6.4	7.6	1.2	30	16.72
18-22-dec	15:05:08	592	5.8	7.0	1.3	30	16.71
18-22-dec	16:05:08	592	4.3	5.0	0.7	30	16.71
18-22-dec	17:05:08	592	2.1	1.4	-0.8	29	16.71
18-22-dec	18:05:08	592	0.3	-0.8	-1.1	29	16.71
18-22-dec	19:05:08	593	-1.9	-3.3	-1.4	29	16.72
18-22-dec	20:05:08	593	-2.9	-4.7	-1.8	28	16.72
18-22-dec	21:05:08	593	-3.4	-5.2	-1.8	28	16.72
18-22-dec	22:05:08	593	-3.3	-5.0	-1.7	28	16.71
18-22-dec	23:05:08	593	-3.4	-4.9	-1.5	28	16.72

BGI PQ200 Air Sampling System Downloaded 2018 29 dec 12:01:59

Job Details:

Job Name: 18Dec29B.JOB
 Version: 5.62
 Serial No: 963
 Pump Time: 4256:11
 Flags:

Job Code:
 Site Name:
 Station Code: 963B
 Operators:
 User1: |||||
 User2:

	Max	Min	Avg	Units
BP	590	580	585	mmHg
TA	-3.8	-11.2	-8.3	°C
Q	---	---	16.71	Lpm

QCV 0.56 %
 Max overheat 2.2 °C
 occurred 28-dec 12:25:11

Timer Information:

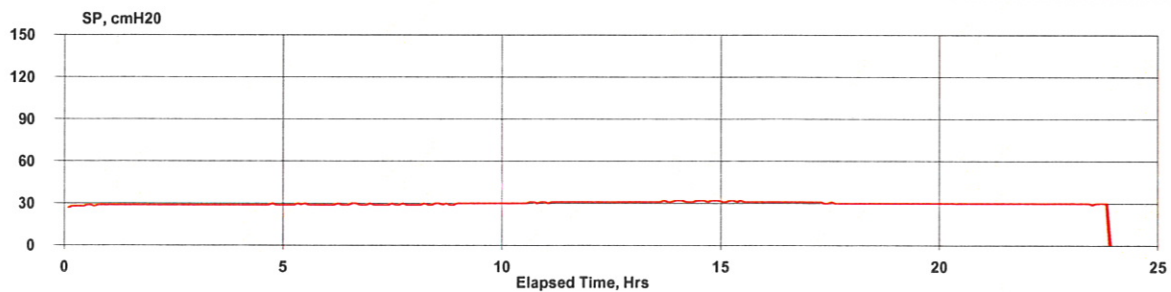
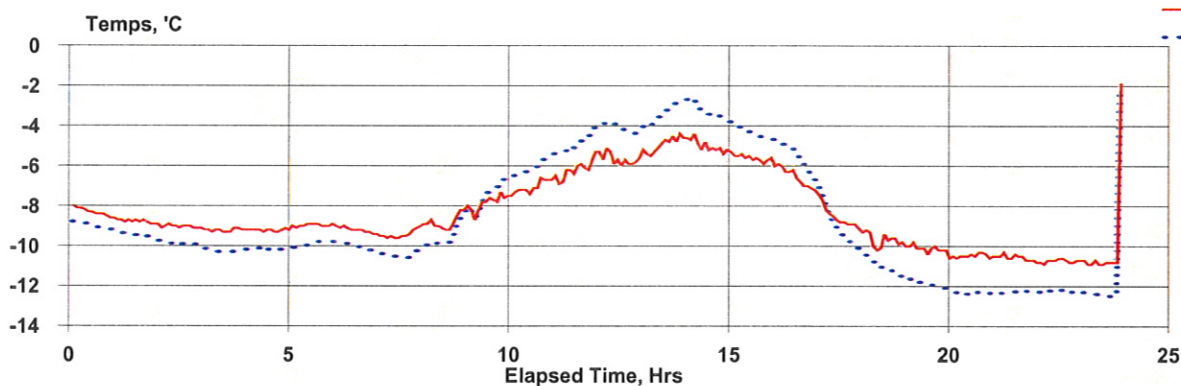
Date Time
 dd-mmm hh:mm:ss
 Start: 18-28-dec 0:00:08
 Stop: 18-29-dec 0:00:04
 ET: 23:59

Mass Concentration Data:

Filter ID: 35
 Final Wt: mg
 Initial Wt: mg
 Delta Wt: 0.000 mg
 Total Vol: 24.041 m³
 Mass Conc: 0 µg/m³

Notes 1:

Notes 2:



Hourly

18-28-dec	0:05:08	582	-8.3	-9.0	-0.7	28	16.71
18-28-dec	1:05:08	582	-8.8	-9.5	-0.7	29	16.70
18-28-dec	2:05:08	582	-9.0	-9.9	-0.9	29	16.71
18-28-dec	3:05:08	582	-9.2	-10.2	-1.0	29	16.72
18-28-dec	4:05:08	583	-9.2	-10.2	-1.0	29	16.72
18-28-dec	5:05:08	583	-9.0	-9.9	-1.0	29	16.71
18-28-dec	6:05:08	583	-9.2	-10.0	-0.8	29	16.72
18-28-dec	7:05:08	583	-9.4	-10.5	-1.1	29	16.72
18-28-dec	8:05:08	584	-8.8	-9.6	-0.8	29	16.71
18-28-dec	9:05:08	584	-7.9	-7.6	0.3	30	16.71
18-28-dec	10:05:08	585	-7.1	-6.1	0.9	30	16.71
18-28-dec	11:05:08	585	-6.2	-4.9	1.2	31	16.71
18-28-dec	12:05:08	585	-5.7	-4.1	1.6	31	16.71
18-28-dec	13:05:08	585	-4.9	-3.4	1.5	31	16.71
18-28-dec	14:05:08	586	-5.0	-3.2	1.8	32	16.69
18-28-dec	15:05:08	586	-5.6	-4.3	1.3	31	16.71
18-28-dec	16:05:08	587	-6.5	-5.4	1.1	31	16.71
18-28-dec	17:05:08	587	-8.5	-8.9	-0.4	30	16.71
18-28-dec	18:05:08	588	-9.7	-11.0	-1.3	30	16.71
18-28-dec	19:05:08	588	-10.1	-11.9	-1.8	30	16.71
18-28-dec	20:05:08	588	-10.5	-12.3	-1.9	30	16.71
18-28-dec	21:05:08	589	-10.5	-12.3	-1.7	30	16.71
18-28-dec	22:05:08	589	-10.7	-12.2	-1.5	30	16.70
18-28-dec	23:05:08	589	-10.8	-12.4	-1.6	30	16.70
18-29-dec	12:00:34	590	-1.9	-2.3	-0.4		0.00

Collocated Monitor 964C

PM₁₀ Sampler Summary

October 1, 2018 - December 31, 2018

Network: Alton Coal Development

Site: Coal Hollow

Sampler ID: Coal Hollow-C

AQS ID:

Sampler Type: BGI FRM Single

Date	Filter ID	Concentration (µg/m ³) LTP	Concentration (µg/m ³) STP	Sample Period (hr:min)	Sample Volume (m ³)	Std Volume (m ³)	Tare (mg)	Mass Gross (mg)	Net (mg)	Flag	Comments
10/05/18	P2950125	3.2	3.9	23:59	24.0	19.7	389.4343	389.5127	0.0784		
10/11/18	P2950419	3.7	4.5	23:23	23.4	19.5	401.2496	401.3379	0.0883	FE	
10/17/18	P2950424	4.9	5.8	23:59	24.0	20.3	388.4740	388.5927	0.1187		
10/23/18	P2951630	4.4	5.2	24:00	24.0	20.0	392.2922	392.3981	0.1059		
10/29/18	P2951635	20.0	24.4	23:59	24.0	19.8	394.9893	395.4721	0.4828		
11/04/18	P2951918	4.8	5.7	23:59	24.0	20.0	392.7097	392.8256	0.1159		
11/10/18	P2951923	7.1	8.4	23:41	23.7	20.1	398.2643	398.4337	0.1694	FE	
11/16/18	P2951928	Invalid - AN	Invalid - AN	22:08	22.2	18.6	399.8122	401.6370	1.8248	SP,FE	
11/22/18	P2952182	Invalid - AN	Invalid - AN	6:10	6.2	5.4	394.8228	395.3407	0.5179	SP	
11/28/18	P2952187	Invalid - AN	Invalid - AN	7:31	7.5	6.4	384.5929	384.6595	0.0666	SP,FE	
12/04/18	P2952456	Invalid - AN	Invalid - AN	0:39	0.7	0.6	389.9278	389.9481	0.0203	SP,FE	
12/10/18	P2952460	Invalid - AN	Invalid - AN	0:05	0.1	0.1	397.1466	397.1599	0.0133	SP,FE,CV	
12/16/18	P2952667	1.5	1.8	24:00	24.0	20.4	393.1207	393.1583	0.0376		
12/22/18	P2952673	5.3	6.2	23:59	24.0	20.4	391.6736	391.8017	0.1281		
12/28/18	P2952678	Invalid - AN	Invalid - AN	10:27	10.5	9.1	391.6550	391.7080	0.0530	SP,FE	
# Valid		Recovery	Average	St. Dev.	Max	Min					
9		60%	7.3	6.6	24.4	1.8					

Inter-Mountain Laboratories' (IML) data validation is limited by the provided information. Data have been validated based on laboratory QC, field observations and other information available to IML. Additional data validation based on information not provided to IML may be required. According to 40 CFR 58.15 final responsibilities for data review and validation lies with each agency submitting data to AQS.

BGI PQ200 Air Sampling System

Downloaded 2018 02 oct 12:26:53

Job Details:

Job Name: 18Oct02C.JOB
Version: 5.62
Serial No: 964
Pump Time: 2318:24
Flags:

Job Code:

Site Name:

Station Code:

Operators:

User1: |||||

User2:

	Max	Min	Avg	Units
BP	592	800	592	mmHg
TA	16	15.6	16	°C
Q	---	---	16.71	Lpm

Timer Information:

	Date	Time
	dd-mmm	hh:mm:ss
Start:	18-02-oct	12:24:14
Stop:	18-02-oct	12:24:19
ET:	6:43	

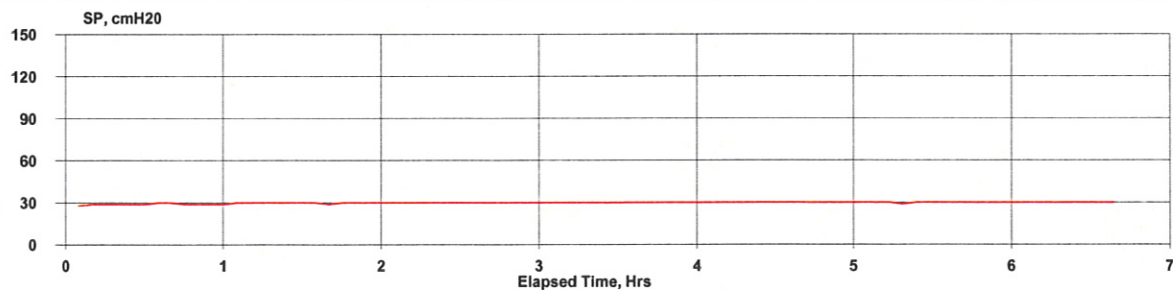
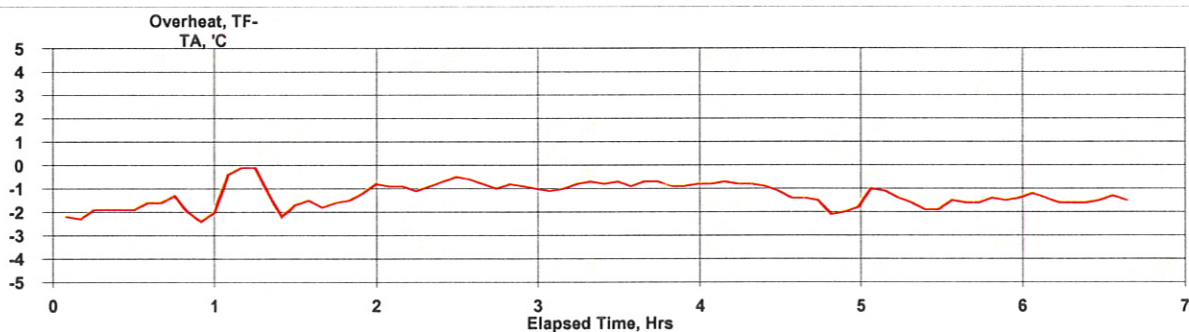
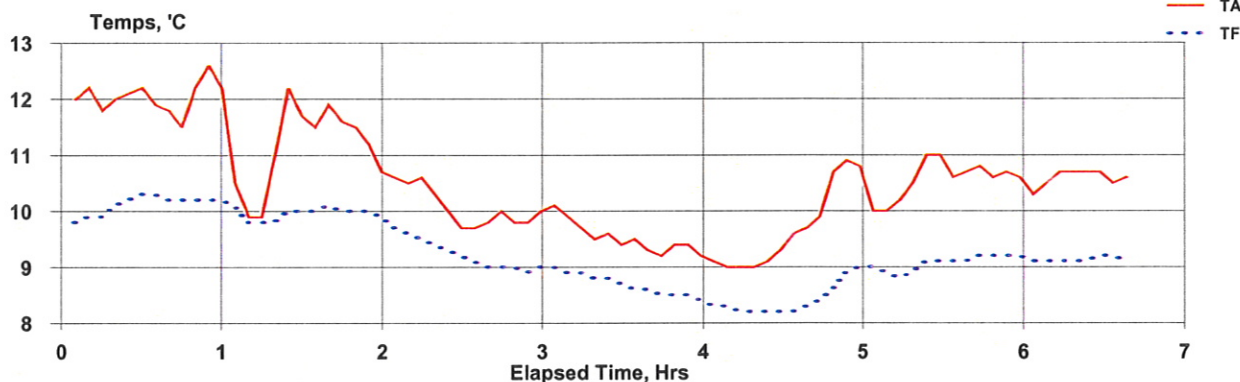
Mass Concentration Data:

Filter ID:	18	
Final Wt:		mg
Initial Wt:		mg
Delta Wt:	0.000	mg
Total Vol:	6.727	m ³
Mass Conc:	0	µg/m ³

QCV 0 %
Max overheat 1 °C
occured 02-oct 12:24:19

Notes 1:

Notes 2:



Hourly

18-29-sep	0:05:08	593	12.0	10.1	-1.9	29	16.71
18-29-sep	1:05:08	593	11.1	10.0	-1.2	30	16.71
18-29-sep	2:05:08	593	10.1	9.2	-0.8	30	16.72
18-29-sep	3:05:08	593	9.5	8.7	-0.8	30	16.71
18-29-sep	4:05:08	593	9.7	8.4	-1.3	30	16.71
18-29-sep	5:05:08	593	10.6	9.1	-1.5	30	16.71
18-29-sep	6:05:08	593	10.6	9.1	-1.5	30	16.71

BGI PQ200 Air Sampling System

Downloaded 2018 08 oct 14:53:51

Job Details:

Job Name: 18Oct08C.JOB
Version: 5.62
Serial No: 964
Pump Time: 2342:23
Flags:

Job Code:

Site Name:

Station Code:

Operators:

User1: ++++++

User2:

	Max	Min	Avg	Units
BP	592	589	591	mmHg
TA	15.6	3.2	9.2	°C
Q	---	---	16.68	Lpm

QCV 0.9 %

Max overheat 3.2 °C

occured 05-oct 13:56:25

Timer Information:

	Date	Time
	dd-mmm	hh:mm:ss
Start:	18-05-oct	0:00:08
Stop:	18-06-oct	0:00:04
ET:	23:59	

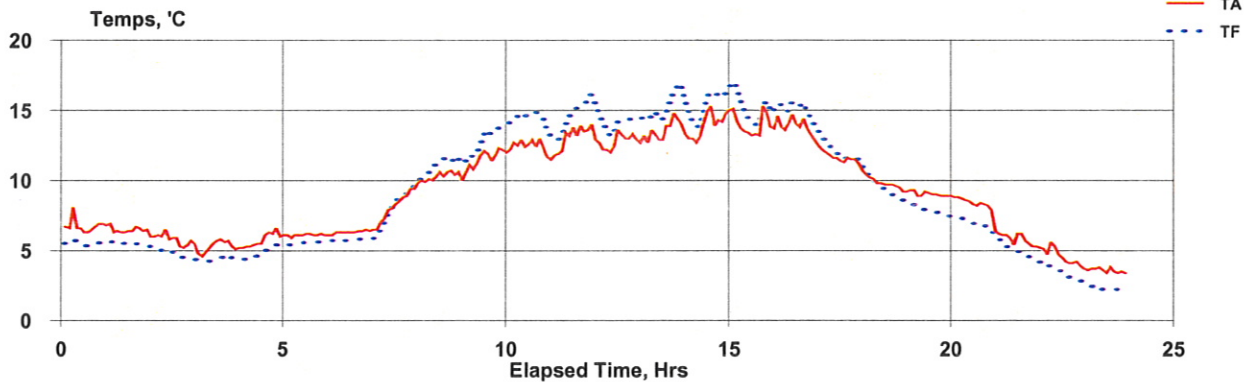
Mass Concentration Data:

Filter ID:	28
Final Wt:	mg
Initial Wt:	mg
Delta Wt:	0.000 mg
Total Vol:	23.994 m ³

Mass Conc: 0 µg/m³

Notes 1:

Notes 2:



Hourly

18-05-oct	0:06:08	591	6.8	5.5	-1.3	25	16.60
18-05-oct	1:06:08	591	6.4	5.5	-1.0	26	16.67
18-05-oct	2:06:08	591	5.8	4.8	-1.0	26	16.69
18-05-oct	3:06:08	591	5.3	4.4	-0.9	26	16.71
18-05-oct	4:06:08	591	5.8	4.9	-0.9	26	16.52
18-05-oct	5:06:08	592	6.1	5.5	-0.6	27	16.60
18-05-oct	6:06:08	592	6.3	5.7	-0.6	27	16.70
18-05-oct	7:06:08	592	8.3	8.2	-0.1	27	16.67
18-05-oct	8:06:08	592	10.3	11.1	0.8	27	16.70
18-05-oct	9:06:08	592	11.6	12.8	1.2	27	16.64
18-05-oct	10:06:08	592	12.4	14.4	2.0	28	16.63
18-05-oct	11:06:08	592	13.1	14.6	1.5	28	16.71
18-05-oct	12:06:08	592	12.8	14.1	1.3	28	16.71
18-05-oct	13:06:08	592	13.6	15.2	1.7	28	16.70
18-05-oct	14:06:08	591	14.0	15.4	1.3	28	16.72
18-05-oct	15:06:08	591	13.9	15.1	1.2	28	16.72
18-05-oct	16:06:08	591	13.8	15.0	1.2	28	16.72
18-05-oct	17:06:08	591	11.5	11.9	0.4	28	16.71
18-05-oct	18:06:08	591	9.7	9.4	-0.3	28	16.71
18-05-oct	19:06:08	591	9.0	7.9	-1.2	27	16.70
18-05-oct	20:06:08	591	8.3	6.9	-1.3	27	16.71
18-05-oct	21:06:08	591	5.8	4.9	-0.8	27	16.72
18-05-oct	22:06:08	591	4.5	3.4	-1.1	27	16.71
18-05-oct	23:06:08	591	3.6	2.3	-1.3	27	16.70

BGI PQ200 Air Sampling System Downloaded 2018 13 oct 11:30:00

Job Details:

Job Name: 18Oct13C.JOB
Version: 5.62
Serial No: 964
Pump Time: 4157:46
Flags: Q T

Job Code:
Site Name: 964C
Station Code:
Operators: KN
User1: ++++++
User2:

	Max	Min	Avg	Units
BP	592	587	590	mmHg
TA	12.2	0.2	5.4	°C
Q	---	---	16.7	Lpm

QCV 0.57 %
Max overheat 2.9 °C
occured 11-oct 13:10:48

Timer Information:

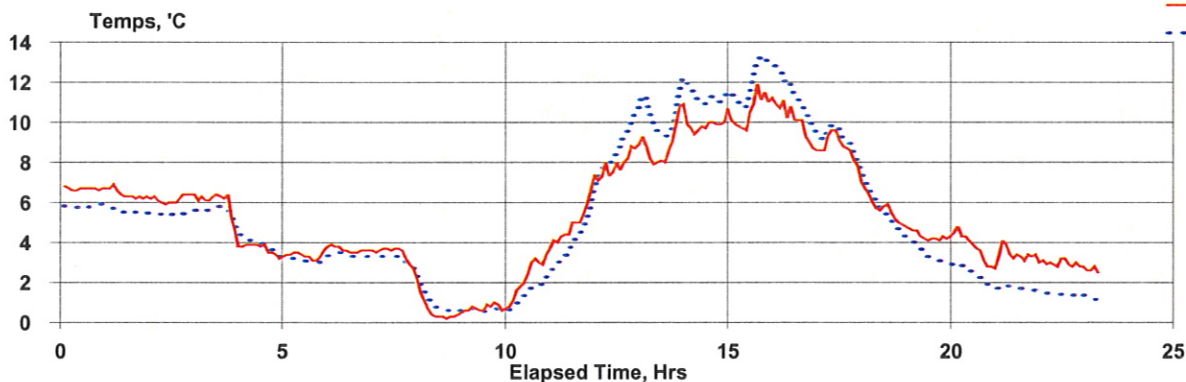
Date Time
dd-mmm hh:mm:ss
Start: 18-11-oct 0:00:08
Stop: 18-12-oct 0:00:05
ET: 23:23

Mass Concentration Data:

Filter ID: 6
Final Wt: mg
Initial Wt: mg
Delta Wt: 0.000 mg
Total Vol: 23.42 m³
Mass Conc: 0 µg/m³

Notes 1:

Notes 2:



Hourly

18-11-oct	0:05:08	589	6.7	5.8	-0.9	29	16.69
18-11-oct	1:05:08	589	6.4	5.5	-0.9	30	16.71
18-11-oct	2:05:08	589	6.2	5.4	-0.7	30	16.71
18-11-oct	3:05:08	589	5.8	5.5	-0.3	30	16.71
18-11-oct	4:05:08	589	3.7	3.9	0.2	30	16.70
18-11-oct	5:05:08	589	3.4	3.1	-0.3	30	16.72
18-11-oct	6:05:08	589	3.6	3.4	-0.3	30	16.72
18-11-oct	7:05:08	590	3.3	3.1	-0.2	30	16.71
18-11-oct	8:05:08	591	0.5	0.9	0.4	30	16.72
18-11-oct	9:05:08	591	0.7	0.6	-0.1	30	16.73
18-11-oct	10:05:08	591	2.4	1.5	-0.9	30	16.72
18-11-oct	11:05:08	591	5.1	4.2	-1.0	30	16.71
18-11-oct	12:05:08	590	8.0	8.8	0.8	31	16.71
18-11-oct	13:05:08	590	9.0	10.3	1.4	31	16.71
18-11-oct	14:05:08	590	9.9	11.3	1.4	31	16.72
18-11-oct	15:05:08	590	10.6	12.0	1.4	32	16.71
18-11-oct	16:05:08	590	10.0	11.3	1.3	31	16.72
18-11-oct	17:05:08	590	8.7	9.1	0.4	31	16.71
18-11-oct	18:05:08	590	5.6	5.6	-0.1	31	16.71
18-11-oct	19:05:08	591	4.3	3.4	-0.9	31	16.71
18-11-oct	20:05:08	591	3.7	2.4	-1.3	31	16.71
18-11-oct	21:05:08	592	3.4	1.7	-1.7	30	16.71
18-11-oct	22:05:08	592	3.0	1.4	-1.6	31	16.71
18-11-oct	23:05:08	592	2.6	1.2	-1.4	31	16.71

BGI PQ200 Air Sampling System

Downloaded 2018 18 oct 12:20:31

Job Details:

Job Name: 18Oct18C.JOB
Version: 5.62
Serial No: 964
Pump Time: 4181:45
Flags:

Job Code:
Site Name: 964C
Station Code:
Operators:
User1: |||||
User2:

	Max	Min	Avg	Units
BP	596	593	595	mmHg
TA	9.4	-2.1	3.6	°C
Q	---	---	16.71	Lpm

QCV 0.58 %
Max overheat 3.4 °C
occured 17-oct 10:19:57

Timer Information:

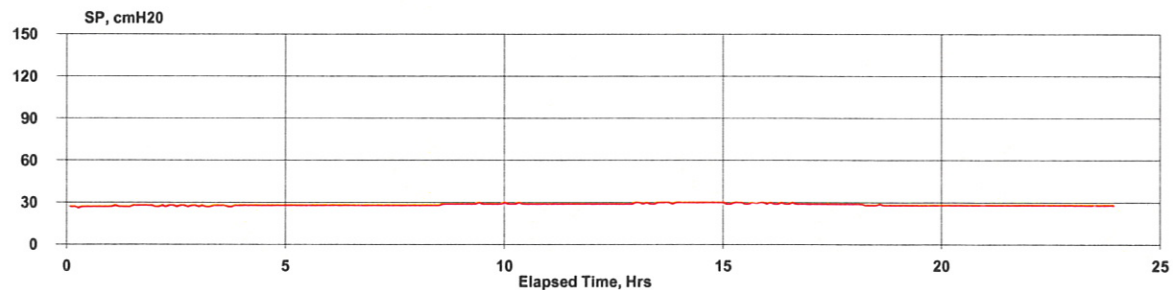
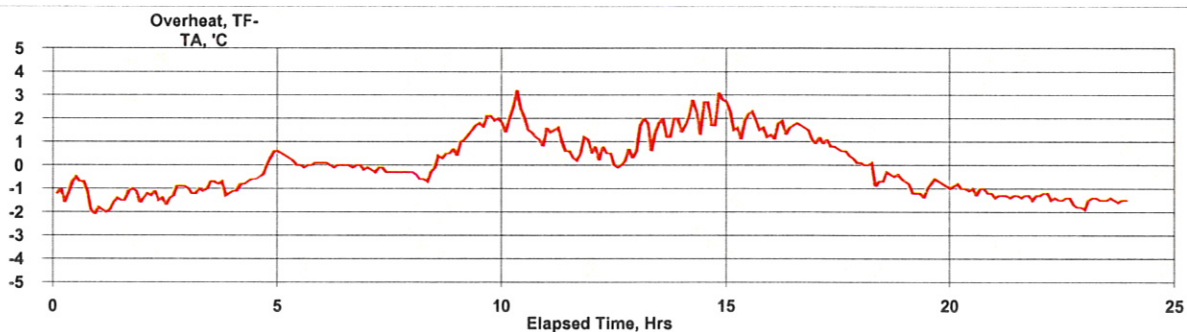
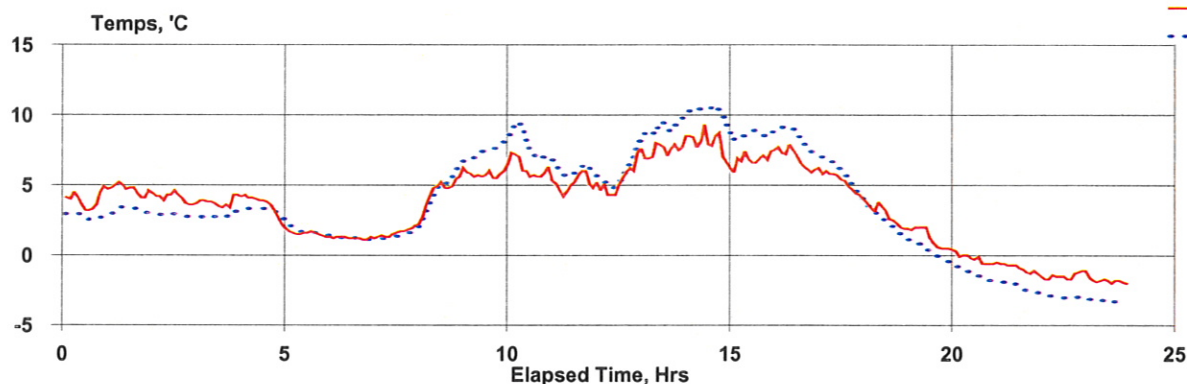
	Date	Time
	dd-mmm	hh:mm:ss
Start:	18-17-oct	0:00:08
Stop:	18-18-oct	0:00:04
ET:	23:59	

Mass Concentration Data:

Filter ID:	23
Final Wt:	mg
Initial Wt:	mg
Delta Wt:	0.000 mg
Total Vol:	24.043 m ³
Mass Conc:	0 µg/m ³

Notes 1:

Notes 2:



Hourly

18-17-oct	0:05:08	595	4.0	2.8	-1.2	27	16.71
18-17-oct	1:05:08	595	4.7	3.2	-1.5	28	16.72
18-17-oct	2:05:08	595	4.0	2.8	-1.2	28	16.71
18-17-oct	3:05:08	595	3.8	2.8	-1.0	28	16.71
18-17-oct	4:05:08	595	3.5	3.1	-0.3	28	16.72
18-17-oct	5:05:08	595	1.5	1.7	0.1	28	16.71
18-17-oct	6:05:08	596	1.2	1.2	0.0	28	16.71
18-17-oct	7:05:08	596	1.7	1.4	-0.3	28	16.71
18-17-oct	8:05:08	596	4.8	4.8	0.0	29	16.71
18-17-oct	9:05:08	596	5.8	7.5	1.7	29	16.71
18-17-oct	10:05:08	596	6.1	7.9	1.8	29	16.72
18-17-oct	11:05:08	596	5.1	6.0	0.9	29	16.72
18-17-oct	12:05:08	596	5.5	5.9	0.4	29	16.72
18-17-oct	13:05:08	595	7.6	9.2	1.6	30	16.71
18-17-oct	14:05:08	595	7.9	10.2	2.3	30	16.71
18-17-oct	15:05:08	595	6.9	8.6	1.7	30	16.70
18-17-oct	16:05:08	595	6.8	8.3	1.5	29	16.71
18-17-oct	17:05:08	595	5.2	5.8	0.6	29	16.71
18-17-oct	18:05:08	596	2.8	2.4	-0.4	28	16.70
18-17-oct	19:05:08	596	1.2	0.2	-1.0	28	16.72
18-17-oct	20:05:08	596	-0.3	-1.4	-1.1	28	16.72
18-17-oct	21:05:08	596	-1.0	-2.3	-1.3	28	16.71
18-17-oct	22:05:08	596	-1.5	-3.0	-1.5	28	16.72
18-17-oct	23:05:08	596	-1.8	-3.3	-1.5	28	16.70

BGI PQ200 Air Sampling System

Downloaded 2018 24 oct 13:15:48

Job Details:

Job Name: 18Oct24C.JOB
Version: 5.62
Serial No: 964
Pump Time: 4205:45
Flags:

Job Code:

Site Name:

Station Code:

Operators:

User1: ++++++

User2:

	Max	Min	Avg	Units
BP	594	591	593	mmHg
TA	14.9	0.1	6.2	°C
Q	---	---	16.7	Lpm

QCV 0.54 %
Max overheat 2.8 °C
occured 23-oct 14:45:01

Timer Information:

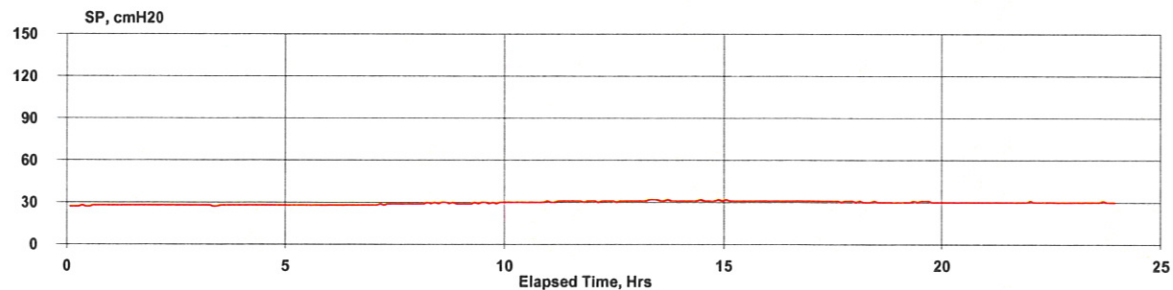
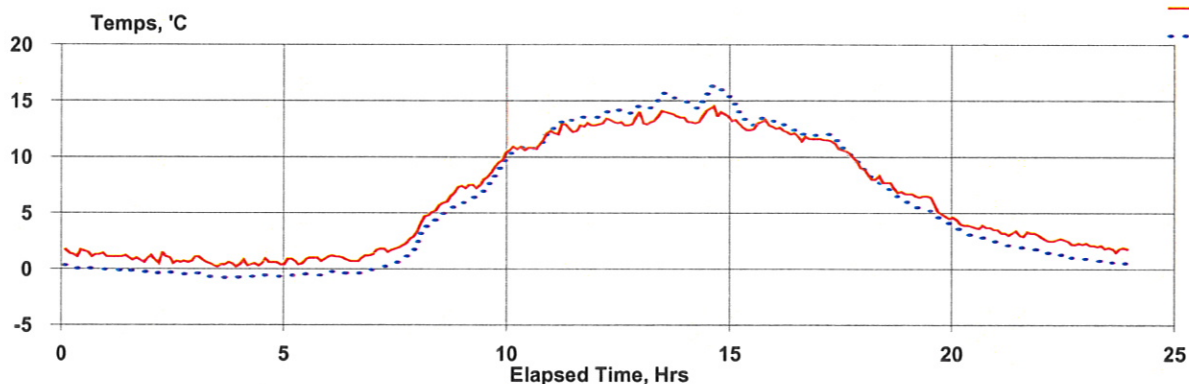
	Date	Time
	dd-mmm	hh:mm:ss
Start:	18-23-oct	0:00:08
Stop:	18-24-oct	0:00:05
ET:	24:00:00	

Mass Concentration Data:

Filter ID:	
Final Wt:	mg
Initial Wt:	mg
Delta Wt:	0.000 mg
Total Vol:	24.04 m ³
Mass Conc:	0 ug/m ³

Notes 1:

Notes 2:



Hourly

18-23-oct	0:04:53	593	1.4	0.1	-1.3	28	16.71
18-23-oct	1:04:53	593	1.0	-0.2	-1.2	28	16.71
18-23-oct	2:04:53	593	0.8	-0.4	-1.2	28	16.71
18-23-oct	3:04:53	593	0.5	-0.7	-1.2	28	16.71
18-23-oct	4:04:53	593	0.5	-0.7	-1.2	28	16.71
18-23-oct	5:04:53	593	0.8	-0.6	-1.4	28	16.71
18-23-oct	6:04:53	593	1.0	-0.3	-1.3	28	16.71
18-23-oct	7:04:53	593	2.1	0.7	-1.4	29	16.71
18-23-oct	8:04:53	594	5.8	4.7	-1.1	29	16.71
18-23-oct	9:04:53	594	8.4	7.4	-1.0	30	16.72
18-23-oct	10:04:53	594	11.1	11.0	-0.1	30	16.71
18-23-oct	11:04:53	594	12.6	13.3	0.7	31	16.71
18-23-oct	12:04:53	593	13.2	14.0	0.9	31	16.71
18-23-oct	13:04:53	593	13.5	15.0	1.5	31	16.71
18-23-oct	14:04:53	593	13.7	15.4	1.7	31	16.72
18-23-oct	15:04:53	592	12.9	13.6	0.8	31	16.71
18-23-oct	16:04:53	592	12.0	12.4	0.4	31	16.72
18-23-oct	17:04:53	592	10.7	11.0	0.3	31	16.71
18-23-oct	18:04:53	592	7.7	7.4	-0.3	30	16.71
18-23-oct	19:04:53	593	5.9	5.1	-0.8	30	16.71
18-23-oct	20:04:53	593	3.9	3.1	-0.8	30	16.71
18-23-oct	21:04:53	593	3.2	2.0	-1.2	30	16.71
18-23-oct	22:04:53	593	2.5	1.2	-1.2	30	16.71
18-23-oct	23:04:53	593	1.9	0.7	-1.2	30	16.70

BGI PQ200 Air Sampling System

Downloaded 2018 30 oct 13:27:17

Job Details:

Job Name: 18Oct30C.JOB
Version: 5.62
Serial No: 964
Pump Time: 4229:44
Flags:

Job Code:

Site Name:

Station Code:

Operators:

User1: ++++++

User2:

	Max	Min	Avg	Units
BP	595	590	592	mmHg
TA	17.9	2.3	9.4	°C
Q	---	---	16.7	Lpm

QCV 0.55 %

Max overheat 1.7 °C
occured 29-oct 12:29:51

Timer Information:

	Date	Time
	dd-mmm	hh:mm:ss
Start:	18-29-oct	0:00:08
Stop:	18-30-oct	0:00:05
ET:	23:59	

Mass Concentration Data:

Filter ID:	42	
Final Wt:		mg
Initial Wt:		mg
Delta Wt:	0.000	mg
Total Vol:	24.041	m^3
Mass Conc:	0	µg/m3

Notes 1:

Notes 2:

Hourly

18-29-oct	0:05:08	594	6.1	4.2	-2.0	30	16.72
18-29-oct	1:05:08	594	6.1	4.6	-1.5	30	16.70
18-29-oct	2:05:08	594	5.8	4.5	-1.3	31	16.71
18-29-oct	3:05:08	593	5.6	4.3	-1.3	31	16.71
18-29-oct	4:05:08	593	5.4	3.9	-1.5	31	16.72
18-29-oct	5:05:08	593	5.5	4.0	-1.5	31	16.73
18-29-oct	6:05:08	593	4.3	3.3	-1.0	31	16.71
18-29-oct	7:05:08	593	4.8	3.2	-1.7	31	16.72
18-29-oct	8:05:08	594	9.3	6.8	-2.6	31	16.70
18-29-oct	9:05:08	594	13.3	11.6	-1.6	32	16.71
18-29-oct	10:05:08	594	14.2	14.7	0.4	33	16.72
18-29-oct	11:05:08	593	15.5	16.3	0.8	33	16.72
18-29-oct	12:05:08	592	16.4	17.4	1.0	34	16.71
18-29-oct	13:05:08	592	16.9	18.0	1.1	34	16.71
18-29-oct	14:05:08	592	17.1	18.3	1.1	34	16.71
18-29-oct	15:05:08	591	16.8	18.0	1.2	34	16.71
18-29-oct	16:05:08	591	15.7	16.7	1.0	34	16.71
18-29-oct	17:05:08	591	12.2	13.0	0.8	33	16.71
18-29-oct	18:05:08	592	9.4	8.7	-0.8	33	16.71
18-29-oct	19:05:08	591	7.1	6.5	-0.7	33	16.71
18-29-oct	20:05:08	591	5.9	4.8	-1.1	32	16.71
18-29-oct	21:05:08	591	4.2	3.3	-0.8	32	16.71
18-29-oct	22:05:08	591	3.8	2.4	-1.4	32	16.70
18-29-oct	23:05:08	591	3.2	2.1	-1.1	32	16.71

BGI PQ200 Air Sampling System Downloaded 2018 05 nov 11:31:46

Job Details:

Job Name: 18Nov05C.JOB
Version: 5.62
Serial No: 964
Pump Time: 4253:43
Flags:

Job Code:
Site Name: 964C
Station Code:
Operators: BH
User1: ++++++
User2:

	Max	Min	Avg	Units
BP	594	589	591	mmHg
TA	13.8	-1.7	5.3	°C
Q	---	---	16.7	Lpm

Timer Information:

Date Time
dd-mmm hh:mm:ss
Start: 18-04-nov 0:00:08
Stop: 18-05-nov 0:00:05
ET: 23:59

Mass Concentration Data:

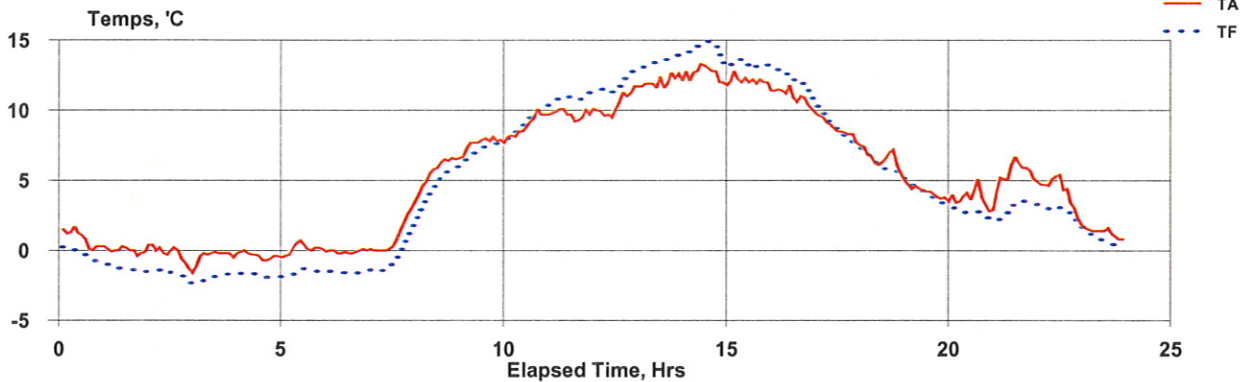
Filter ID: 13
Final Wt: mg
Initial Wt: mg
Delta Wt: 0.000 mg
Total Vol: 24.042 m³

QCV 0.58 %
Max overheat 2.5 °C
occured 04-nov 14:49:16

Mass Conc: 0 µg/m³

Notes 1:

Notes 2:



Hourly

18-04-nov	0:05:08	594	0.8	-0.3	-1.1	27	16.71
18-04-nov	1:05:08	594	0.0	-1.3	-1.4	28	16.71
18-04-nov	2:05:08	594	-0.3	-1.7	-1.4	28	16.70
18-04-nov	3:05:08	593	-0.3	-2.0	-1.7	28	16.71
18-04-nov	4:05:08	593	-0.4	-1.8	-1.4	28	16.71
18-04-nov	5:05:08	593	0.1	-1.6	-1.7	28	16.71
18-04-nov	6:05:08	593	-0.1	-1.6	-1.5	28	16.70
18-04-nov	7:05:08	593	1.1	-0.4	-1.5	28	16.72
18-04-nov	8:05:08	593	5.8	4.7	-1.2	29	16.71
18-04-nov	9:05:08	592	7.7	7.2	-0.5	30	16.71
18-04-nov	10:05:08	592	9.0	9.2	0.2	30	16.70
18-04-nov	11:05:08	592	9.8	10.9	1.1	30	16.71
18-04-nov	12:05:08	591	10.5	11.9	1.3	31	16.71
18-04-nov	13:05:08	591	12.1	13.5	1.5	31	16.72
18-04-nov	14:05:08	590	12.6	14.3	1.7	31	16.71
18-04-nov	15:05:08	590	12.1	13.3	1.2	31	16.72
18-04-nov	16:05:08	590	10.9	12.1	1.2	30	16.71
18-04-nov	17:05:08	589	8.6	8.7	0.1	30	16.72
18-04-nov	18:05:08	589	6.4	6.1	-0.3	30	16.71
18-04-nov	19:05:08	589	4.1	4.0	-0.1	30	16.72
18-04-nov	20:05:08	589	3.7	2.7	-1.0	29	16.71
18-04-nov	21:05:08	589	5.5	3.0	-2.5	29	16.70
18-04-nov	22:05:08	589	4.1	2.8	-1.3	29	16.72
18-04-nov	23:05:08	589	1.3	0.7	-0.5	29	16.71

BGI PQ200 Air Sampling System Downloaded 2018 12 nov 13:04:13

Job Details:

Job Name: 18Nov12C.JOB
Version: 5.62
Serial No: 964
Pump Time: 4277:24
Flags: Q T

Job Code:
Site Name: 964C
Station Code:
Operators: KN
User1: ++++++
User2:

	Max	Min	Avg	Units
BP	594	588	590	mmHg
TA	11	-7.5	0.7	°C
Q	---	---	16.7	Lpm

QCV 0.57 %
Max overheat 2.2 °C
occured 10-nov 13:02:34

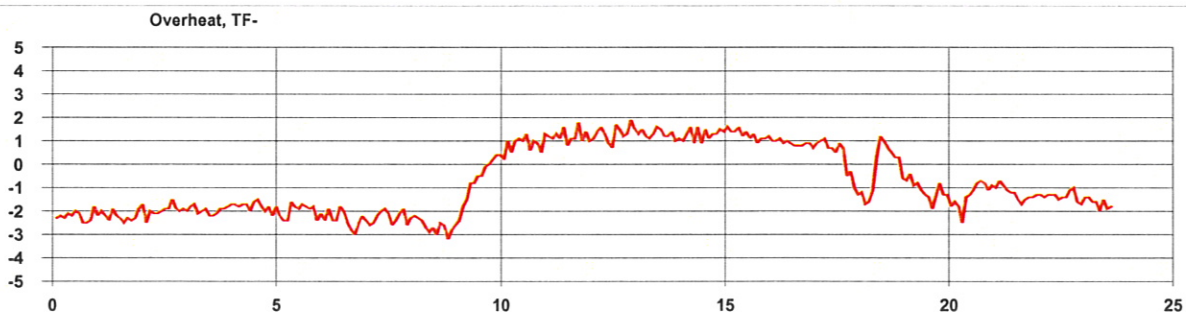
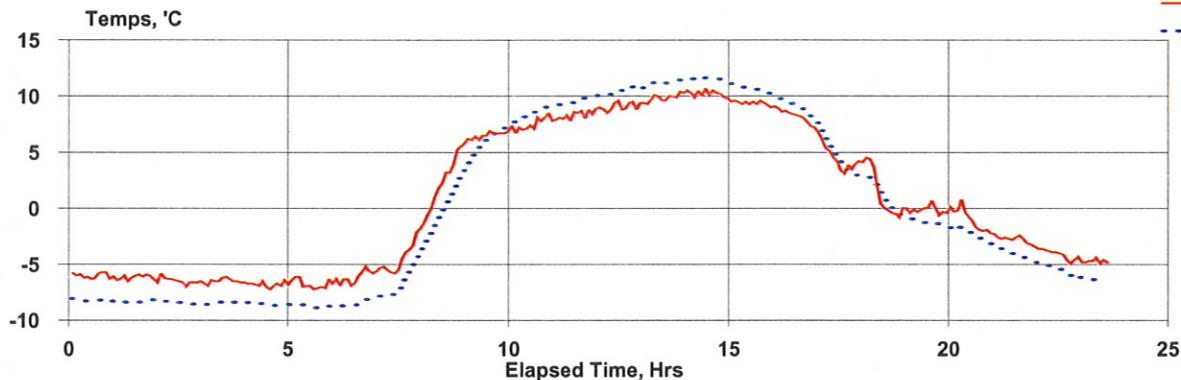
Timer Information:

Date Time
dd-mmm hh:mm:ss
Start: 18-10-nov 0:00:08
Stop: 18-11-nov 0:00:05
ET: 23:41

Mass Concentration Data:

Filter ID: 18
Final Wt: mg
Initial Wt: mg
Delta Wt: 0.000 mg
Total Vol: 23.734 m³
Mass Conc: 0 µg/m³

Notes 1:
Notes 2:



Hourly

18-10-nov	0:05:08	594	-6.0	-8.2	-2.2	30	16.71
18-10-nov	1:05:08	593	-6.2	-8.4	-2.2	31	16.71
18-10-nov	2:05:08	593	-6.4	-8.4	-2.0	31	16.70
18-10-nov	3:05:08	593	-6.5	-8.4	-1.9	31	16.70
18-10-nov	4:05:08	592	-6.8	-8.6	-1.8	31	16.72
18-10-nov	5:05:08	592	-6.7	-8.7	-2.0	31	16.72
18-10-nov	6:05:08	592	-6.1	-8.5	-2.4	31	16.70
18-10-nov	7:05:08	592	-4.4	-6.6	-2.3	32	16.71
18-10-nov	8:05:08	592	2.5	-0.2	-2.7	33	16.72
18-10-nov	9:05:08	591	6.5	5.9	-0.6	34	16.71
18-10-nov	10:05:08	591	7.5	8.4	0.9	35	16.71
18-10-nov	11:05:08	591	8.3	9.5	1.2	35	16.71
18-10-nov	12:05:08	590	9.1	10.4	1.3	35	16.72
18-10-nov	13:05:08	590	9.9	11.1	1.3	35	16.72
18-10-nov	14:05:08	589	10.2	11.5	1.3	35	16.71
18-10-nov	15:05:08	589	9.4	10.7	1.3	35	16.72
18-10-nov	16:05:08	589	8.2	9.1	0.9	35	16.71
18-10-nov	17:05:08	589	4.5	4.8	0.3	35	16.71
18-10-nov	18:05:08	589	1.4	1.3	-0.2	34	16.71
18-10-nov	19:05:08	589	-0.1	-1.2	-1.1	34	16.71
18-10-nov	20:05:08	589	-1.0	-2.3	-1.3	34	16.71
18-10-nov	21:05:08	589	-2.8	-4.0	-1.2	34	16.71
18-10-nov	22:05:08	589	-4.1	-5.4	-1.4	33	16.72
18-10-nov	23:05:08	589	-4.7	-6.4	-1.7	33	16.71

BGI PQ200 Air Sampling System

Downloaded 2018 19 nov 10:10:18

Job Details:

Job Name: 18Nov19C.JOB
Version: 5.62
Serial No: 964
Pump Time: 4299:32
Flags: Q T

Job Code:
Site Name: 964
Station Code:
Operators: KN

User1: |||||
User2:

	Max	Min	Avg	Units
BP	594	591	592	mmHg
TA	13.9	-4.6	3.7	°C
Q	---	---	16.7	Lpm

QCV 0.52 %
Max overheat 2.4 °C
occured 17-nov 17:48:29

Timer Information:

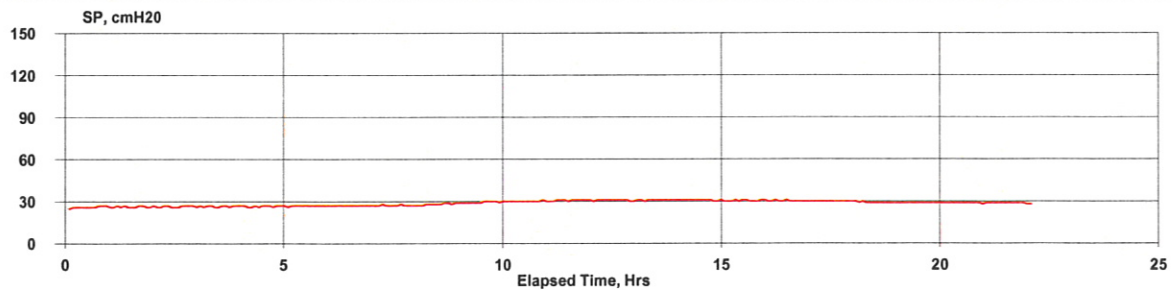
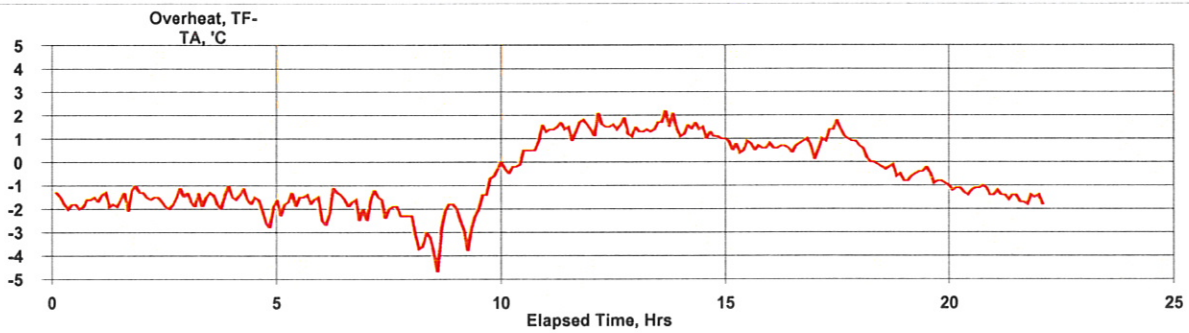
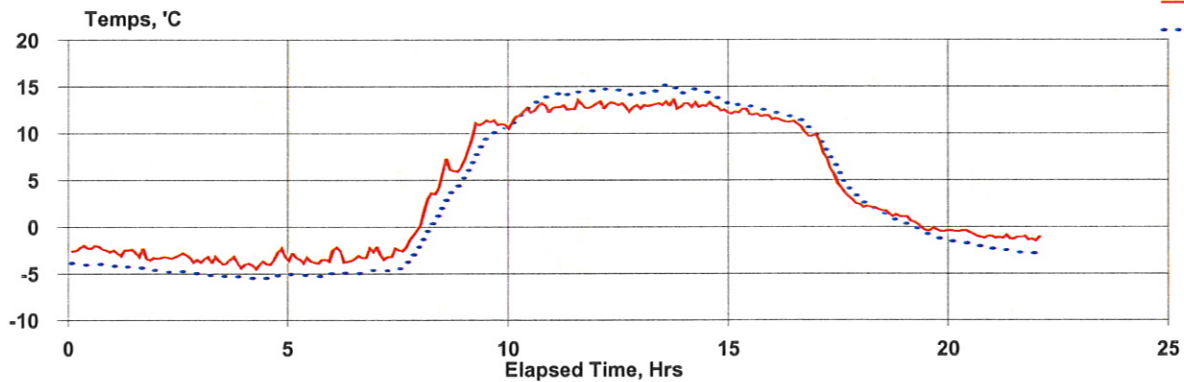
	Date	Time
	dd-mmm	hh:mm:ss
Start:	18-16-nov	0:00:08
Stop:	18-17-nov	0:00:05
ET:	22:08	

Mass Concentration Data:

Filter ID:	38
Final Wt:	mg
Initial Wt:	mg
Delta Wt:	0.000 mg
Total Vol:	22.189 m ³
Mass Conc:	0 µg/m ³

Notes 1:

Notes 2:



Hourly

18-16-nov	0:05:08	594	-2.3	-4.1	-1.7	26	16.71
18-16-nov	1:05:08	594	-2.9	-4.4	-1.5	26	16.71
18-16-nov	2:05:08	594	-3.3	-4.9	-1.6	27	16.71
18-16-nov	3:05:08	594	-3.7	-5.3	-1.6	27	16.71
18-16-nov	4:05:08	593	-3.6	-5.4	-1.8	27	16.71
18-16-nov	5:05:08	593	-3.5	-5.2	-1.7	27	16.71
18-16-nov	6:05:08	593	-3.0	-4.9	-1.9	27	16.71
18-16-nov	7:05:08	593	-2.1	-4.0	-1.9	27	16.70
18-16-nov	8:05:08	593	5.1	2.1	-3.0	28	16.71
18-16-nov	9:05:08	593	10.7	9.0	-1.7	29	16.71
18-16-nov	10:05:08	593	12.4	12.8	0.4	30	16.71
18-16-nov	11:05:08	592	12.9	14.3	1.5	31	16.71
18-16-nov	12:05:08	592	12.9	14.5	1.5	31	16.71
18-16-nov	13:05:08	592	13.1	14.6	1.5	31	16.70
18-16-nov	14:05:08	592	12.8	14.1	1.3	31	16.72
18-16-nov	15:05:08	592	12.1	12.8	0.7	30	16.70
18-16-nov	16:05:08	592	10.8	11.4	0.6	30	16.71
18-16-nov	17:05:08	592	5.0	6.0	1.1	30	16.71
18-16-nov	18:05:08	592	1.6	1.5	-0.2	29	16.71
18-16-nov	19:05:08	592	0.0	-0.7	-0.7	29	16.71
18-16-nov	20:05:08	592	-0.7	-1.9	-1.2	29	16.71
18-16-nov	21:05:08	592	-1.2	-2.7	-1.5	29	16.71
18-16-nov	22:05:08	591	-1.1	-2.9	-1.8	28	16.70

BGI PQ200 Air Sampling System Downloaded 2018 26 nov 10:59:40

Job Details:

Job Name: 18Nov26C.JOB
Version: 5.62
Serial No: 964
Pump Time: 4561:42
Flags: Q T

Job Code:
Site Name: 964C
Station Code:
Operators: KN
User1: ++++++
User2:

	Max	Min	Avg	Units
BP	595	593	594	mmHg
TA	-3.8	-8.2	-6.1	°C
Q	---	---	16.7	Lpm

QCV 0.07 %
Max overheat 3.8 °C
occured 24-nov 15:23:44

Timer Information:

Date Time
dd-mmm hh:mm:ss
Start: 18-20-nov 0:00:08
Stop: 18-21-nov 0:00:05
ET: 6:10

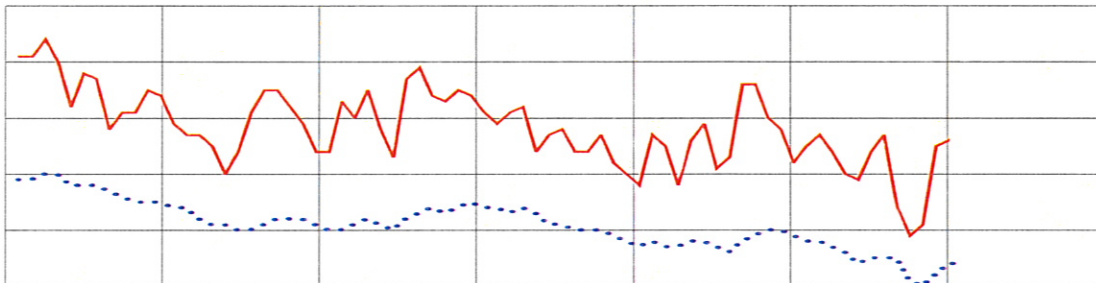
Mass Concentration Data:

Filter ID: 6
Final Wt: mg
Initial Wt: mg
Delta Wt: 0.000 mg
Total Vol: 6.176 m³

Mass Conc: 0 µg/m³

Notes 1:

Notes 2:



Hourly

18-20-nov	0:04:29	594	-5.4	-7.3	-1.9	29	16.71
18-20-nov	1:04:29	594	-6.2	-7.8	-1.7	30	16.71
18-20-nov	2:04:29	594	-5.8	-7.8	-2.0	30	16.71
18-20-nov	3:04:29	594	-6.3	-7.9	-1.5	30	16.72
18-20-nov	4:04:29	594	-6.4	-8.2	-1.9	30	16.71
18-20-nov	5:04:29	594	-6.9	-8.5	-1.6	30	16.71
18-20-nov	6:04:29	594	-6.8	-8.6	-1.8	30	16.70

BGI PQ200 Air Sampling System Downloaded 2018 06 dec 13:48:03

Job Details:

Job Name: 18Dec06C.JOB
Version: 5.62
Serial No: 964
Pump Time: 4825:52
Flags: Q T

Job Code:
Site Name:
Station Code: 964C
Operators:
User1: ++++++
User2:

	Max	Min	Avg	Units
BP	595	593	593	mmHg
TA	-11.4	-14	-13.1	°C
Q	---	---	16.7	Lpm

QCV 0.18 %
Max overheat 2.2 °C
occured 05-dec 17:08:12

Timer Information:

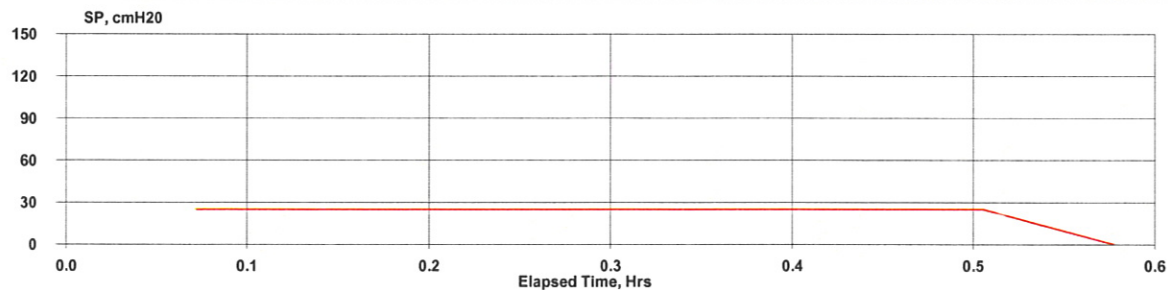
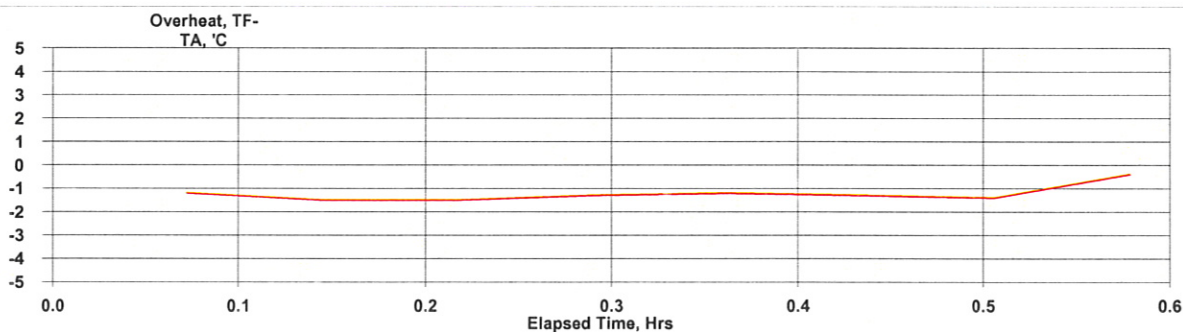
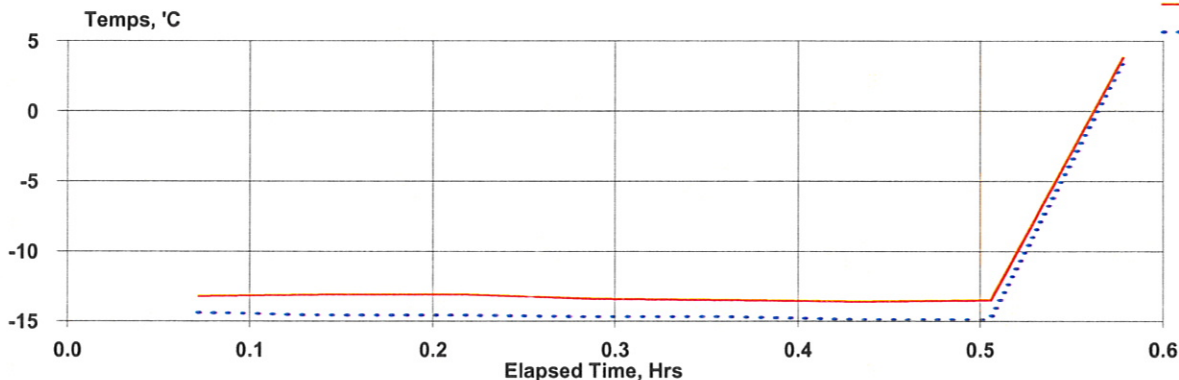
Date Time
dd-mmm hh:mm:ss
Start: 18-04-dec 0:00:08
Stop: 18-05-dec 0:00:05
ET: 0:39

Mass Concentration Data:

Filter ID: 23
Final Wt: mg
Initial Wt: mg
Delta Wt: 0.000 mg
Total Vol: 0.659 m³
Mass Conc: 0 µg/m³

Notes 1:

Notes 2:



Hourly

18-04-dec	0:05:08	594	-13.3	-14.7	-1.3	25	16.70
18-06-dec	13:41:39	589	3.8	3.4	-0.4		0.00

BGI PQ200 Air Sampling System

Downloaded 2018 11 dec 14:55:47

Job Details:

Job Name: 18Dec11C.JOB
Version: 5.62
Serial No: 964
Pump Time: 4825:57
Flags: Q T

Job Code:
Site Name:
Station Code: 964C
Operators:

User1: ++++++

User2:

	Max	Min	Avg	Units
BP	598	596	597	mmHg
TA	-5	-6.5	-5.7	°C
Q	---	---	16.29	Lpm

QCV 5.2 %

Max overheat 2.1 °C
occured 10-dec 16:21:13

Timer Information:

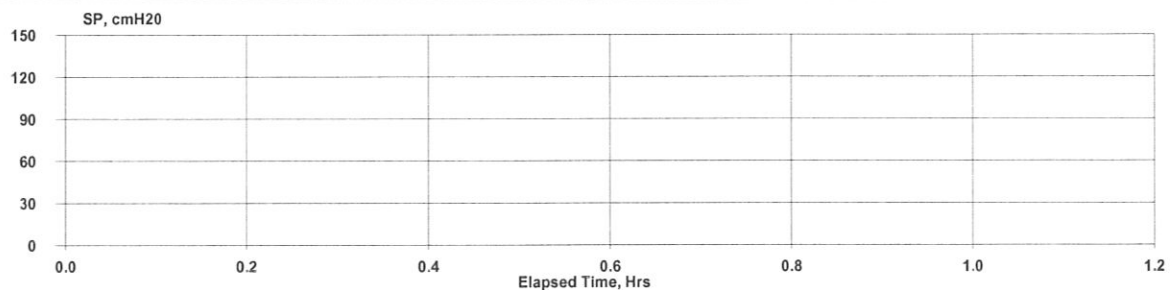
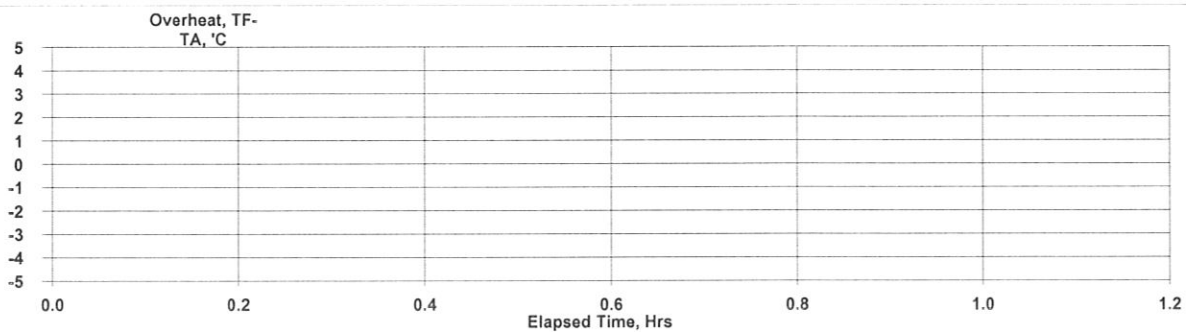
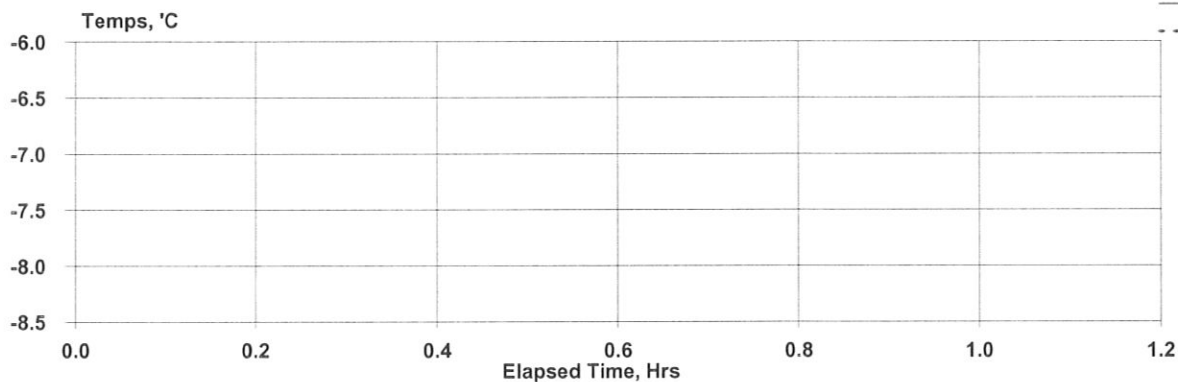
	Date dd-mmm	Time hh:mm:ss
Start:	18-10-dec	0:00:08
Stop:	18-11-dec	0:00:05
ET:	0:05	

Mass Concentration Data:

Filter ID:	27	
Final Wt:		mg
Initial Wt:		mg
Delta Wt:	0.000	mg
Total Vol:	0.088	m ³
Mass Conc:	0	µg/m ³

Notes 1:

Notes 2:



Hourly

18-10-dec	0:05:08	598	-6.4	-8.2	-1.8	28	16.77
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BGI PQ200 Air Sampling System Downloaded 2018 17 dec 09:16:40

Job Details:

Job Name: 18Dec17C.JOB
Version: 5.62
Serial No: 964
Pump Time: 4849:57
Flags:

Job Code:
Site Name:
Station Code: 964C
Operators:
User1: ++++++
User2:

	Max	Min	Avg	Units
BP	597	594	595	mmHg
TA	10.9	-4.4	1.8	°C
Q	---	---	16.7	Lpm

QCV 0.56 %
Max overheat 2.1 °C
occured 16-dec 12:56:36

Timer Information:

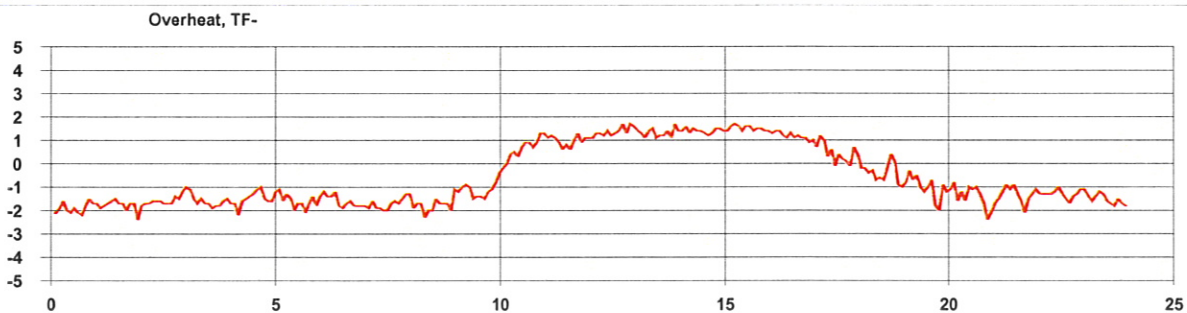
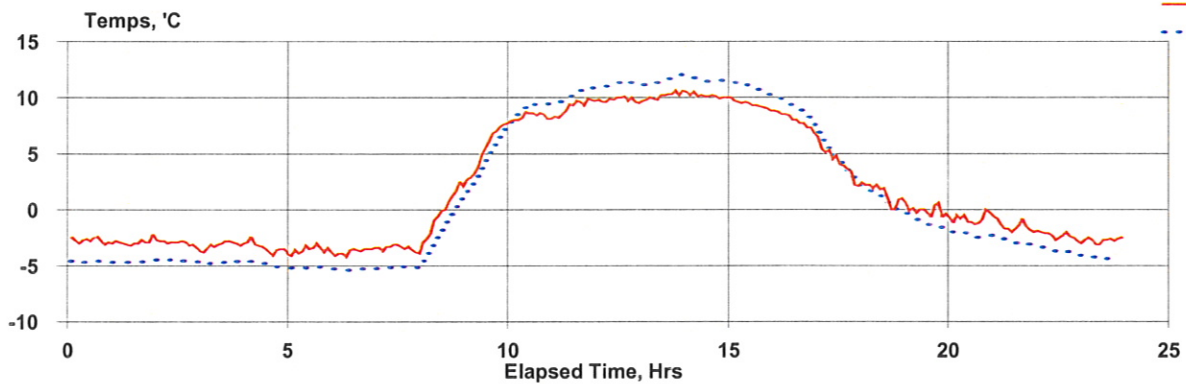
Date Time
dd-mmm hh:mm:ss
Start: 18-16-dec 0:00:08
Stop: 18-17-dec 0:00:04
ET: 24:00:00

Mass Concentration Data:

Filter ID: 11
Final Wt: mg
Initial Wt: mg
Delta Wt: 0.000 mg
Total Vol: 24.042 m³
Mass Conc: 0 µg/m³

Notes 1:

Notes 2:



Hourly

18-16-dec	0:04:52	597	-2.8	-4.6	-1.9	27	16.71
18-16-dec	1:04:52	596	-2.9	-4.7	-1.8	28	16.71
18-16-dec	2:04:52	596	-3.0	-4.6	-1.5	28	16.71
18-16-dec	3:04:52	596	-3.1	-4.7	-1.6	28	16.71
18-16-dec	4:04:52	596	-3.4	-4.9	-1.5	28	16.70
18-16-dec	5:04:52	597	-3.6	-5.2	-1.6	28	16.71
18-16-dec	6:04:52	597	-3.7	-5.3	-1.6	28	16.71
18-16-dec	7:04:52	597	-3.4	-5.1	-1.7	28	16.71
18-16-dec	8:04:52	597	-0.1	-1.9	-1.8	28	16.71
18-16-dec	9:04:52	597	5.5	4.4	-1.1	30	16.70
18-16-dec	10:04:52	597	8.3	9.0	0.6	31	16.71
18-16-dec	11:04:52	597	9.2	10.2	1.0	31	16.72
18-16-dec	12:04:52	596	9.8	11.2	1.4	31	16.71
18-16-dec	13:04:52	595	10.1	11.5	1.3	31	16.71
18-16-dec	14:04:52	595	10.2	11.6	1.4	32	16.72
18-16-dec	15:04:52	595	9.4	10.9	1.5	31	16.71
18-16-dec	16:04:52	595	8.0	9.2	1.2	31	16.71
18-16-dec	17:04:52	596	4.2	4.7	0.4	30	16.71
18-16-dec	18:04:52	596	1.5	1.1	-0.4	30	16.71
18-16-dec	19:04:52	595	-0.1	-1.1	-1.0	29	16.71
18-16-dec	20:04:52	596	-0.8	-2.2	-1.4	29	16.71
18-16-dec	21:04:52	595	-1.4	-2.8	-1.4	29	16.71
18-16-dec	22:04:52	595	-2.3	-3.6	-1.3	29	16.72
18-16-dec	23:04:52	595	-2.8	-4.3	-1.5	29	16.71

BGI PQ200 Air Sampling System Downloaded 2018 23 dec 13:20:26

Job Details:

Job Name: 18Dec23C.JOB
Version: 5.62
Serial No: 964
Pump Time: 4873:56
Flags:

Job Code:

Site Name:
Station Code: 964C
Operators:

User1: ++++++

User2:

	Max	Min	Avg	Units
BP	596	588	592	mmHg
TA	7.3	-5.4	0.5	°C
Q	---	---	16.71	Lpm

QCV 0.57 %

Max overheat 2.1 °C
occured 22-dec 11:36:28

Timer Information:

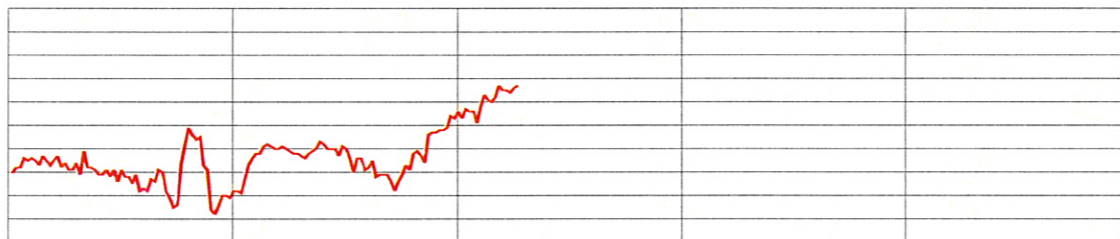
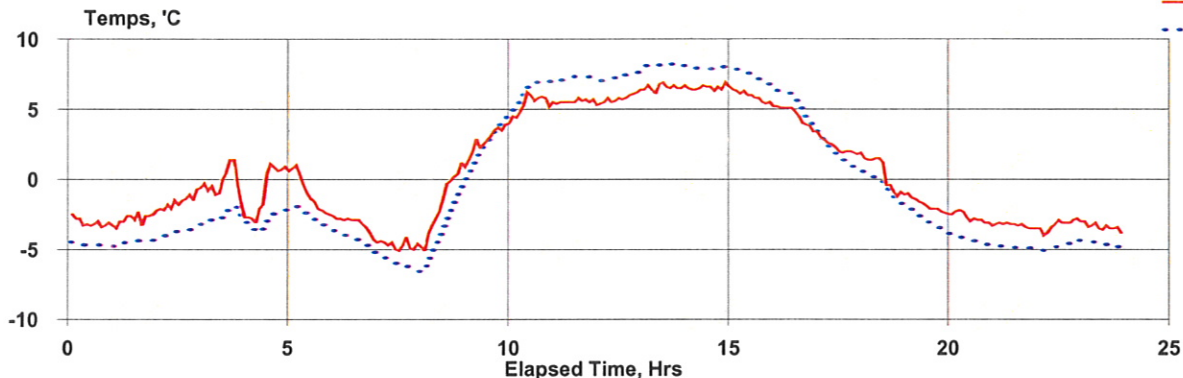
	Date	Time
	dd-mmm	hh:mm:ss
Start:	18-22-dec	0:00:08
Stop:	18-23-dec	0:00:04
ET:	23:59	

Mass Concentration Data:

Filter ID:	18	
Final Wt:		mg
Initial Wt:		mg
Delta Wt:	0.000	mg
Total Vol:	24.043	m ³
Mass Conc:	0	µg/m ³

Notes 1:

Notes 2:



Hourly

18-22-dec	0:05:08	590	-3.1	-4.7	-1.6	30	16.70
18-22-dec	1:05:08	590	-2.8	-4.5	-1.7	31	16.71
18-22-dec	2:05:08	591	-1.5	-3.8	-2.2	31	16.71
18-22-dec	3:05:08	591	-0.4	-2.6	-2.2	31	16.71
18-22-dec	4:05:08	591	-0.6	-2.9	-2.3	31	16.71
18-22-dec	5:05:08	591	-1.2	-2.7	-1.5	31	16.72
18-22-dec	6:05:08	591	-3.3	-4.3	-1.1	31	16.71
18-22-dec	7:05:08	592	-4.7	-6.0	-1.3	31	16.71
18-22-dec	8:05:08	592	-1.4	-3.4	-2.0	31	16.71
18-22-dec	9:05:08	593	3.0	2.6	-0.4	33	16.71
18-22-dec	10:05:08	593	5.4	6.3	0.9	34	16.71
18-22-dec	11:05:08	593	5.5	7.2	1.6	34	16.70
18-22-dec	12:05:08	593	5.8	7.3	1.5	34	16.71
18-22-dec	13:05:08	593	6.6	8.1	1.5	34	16.72
18-22-dec	14:05:08	593	6.5	7.9	1.4	34	16.71
18-22-dec	15:05:08	594	5.9	7.3	1.5	34	16.71
18-22-dec	16:05:08	594	4.5	5.3	0.9	33	16.72
18-22-dec	17:05:08	594	2.2	1.7	-0.5	33	16.71
18-22-dec	18:05:08	594	0.3	-0.5	-0.8	33	16.71
18-22-dec	19:05:08	595	-1.9	-3.0	-1.1	32	16.71
18-22-dec	20:05:08	595	-2.8	-4.4	-1.6	32	16.73
18-22-dec	21:05:08	595	-3.3	-4.9	-1.6	32	16.71
18-22-dec	22:05:08	595	-3.2	-4.8	-1.5	32	16.71
18-22-dec	23:05:08	595	-3.4	-4.6	-1.2	32	16.71

BGI PQ200 Air Sampling System

Downloaded 2018 29 dec 12:01:52

Job Details:

Job Name: 18Dec29C.JOB
Version: 5.62
Serial No: 964
Pump Time: 4628:23
Flags: Q T

Job Code:
Site Name:
Station Code: 964C
Operators:
User1: |||||
User2:

	Max	Min	Avg	Units
BP	588	582	585	mmHg
TA	-6.5	-9.6	-8.7	°C
Q	---	---	16.7	Lpm

QCV 0 %
Max overheat 2 °C
occured 28-dec 17:13:18

Timer Information:

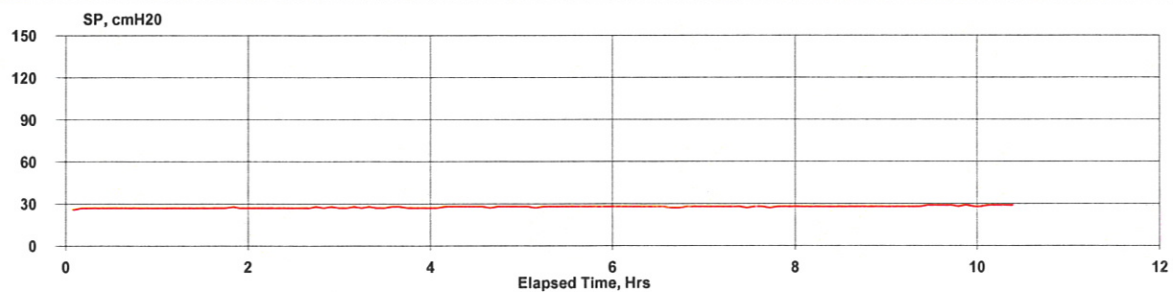
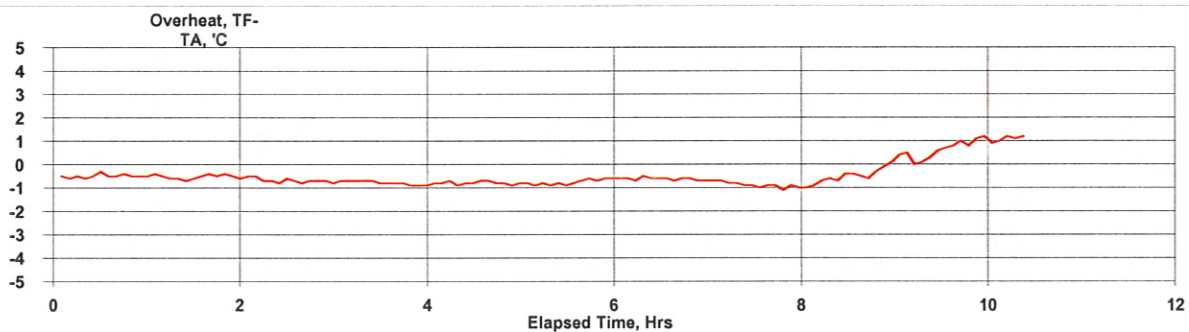
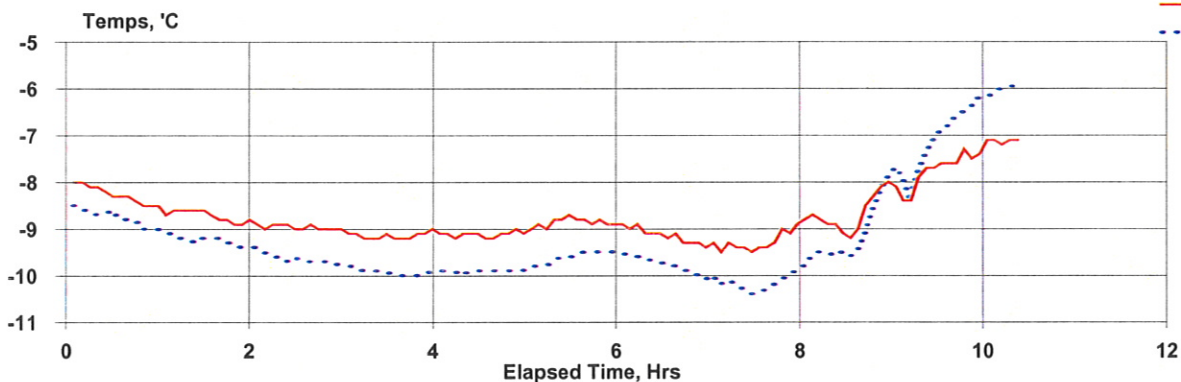
	Date	Time
	dd-mmm	hh:mm:ss
Start:	18-28-dec	0:00:08
Stop:	18-29-dec	0:00:05
ET:	10:27	

Mass Concentration Data:

Filter ID:	42	
Final Wt:		mg
Initial Wt:		mg
Delta Wt:	0.000	mg
Total Vol:	10.478	m ³
Mass Conc:	0	µg/m ³

Notes 1:

Notes 2:



Hourly

18-28-dec	0:05:08	584	-8.3	-8.8	-0.5	27	16.71
18-28-dec	1:05:08	584	-8.7	-9.2	-0.5	27	16.71
18-28-dec	2:05:08	585	-9.0	-9.6	-0.7	27	16.71
18-28-dec	3:05:08	585	-9.1	-9.9	-0.8	27	16.71
18-28-dec	4:05:08	585	-9.1	-9.9	-0.8	28	16.71
18-28-dec	5:05:08	585	-8.9	-9.6	-0.8	28	16.71
18-28-dec	6:05:08	585	-9.1	-9.8	-0.6	28	16.71
18-28-dec	7:05:08	586	-9.3	-10.2	-0.9	28	16.72
18-28-dec	8:05:08	586	-8.7	-9.2	-0.5	28	16.71
18-28-dec	9:05:08	587	-7.8	-7.1	0.6	28	16.71
18-28-dec	10:05:08	587	-7.1	-6.0	1.1	29	16.71

Compliance Monitor 2366D

PM₁₀ Sampler Summary

October 1, 2018 - December 31, 2018

Network: Alton Coal Development

Site: Coal Hollow

Sampler ID: Coal Hollow-D

AQS ID:

Sampler Type: BGI FRM Single

Date	Filter ID	Concentration (µg/m3) LTP	Concentration (µg/m3) STP	Sample Period (hr:min)	Sample Volume (m3)	Std Volume (m3)	Tare (mg)	Mass Gross (mg)	Net (mg)	Flag	Comments
10/05/18	P2950126	5.5	6.7	23:59	24.0	19.7	383.5001	383.6330	0.1329		
10/11/18	P2950420	5.8	7.0	23:59	24.0	19.9	394.9924	395.1319	0.1395		
10/17/18	P2950425	14.9	17.8	23:59	24.0	20.2	389.7746	390.1347	0.3601		
10/23/18	P2951631	Invalid - AI	Invalid - AI				394.6530	394.7436	0.0906	SP,MD	Data corrupt
10/29/18	P2951636	76.4	93.1	23:59	24.0	19.7	395.7656	397.6038	1.8382		
11/04/18	P2951919	4.8	5.8	23:59	24.0	19.9	397.3447	397.4619	0.1172		
11/10/18	P2951924	34.1	40.6	23:59	24.0	20.2	390.7350	391.5564	0.8214		
11/16/18	P2951929	34.9	41.9	23:59	24.0	20.0	396.8132	397.6522	0.8390		
11/22/18	P2952183	12.2	14.4	23:59	24.0	20.3	393.4536	393.7478	0.2942		
11/28/18	P2952189	159.8	191.6	23:59	24.0	20.0	397.8077	401.6494	3.8417		
12/04/18	P2952457	2.8	3.2	23:59	24.0	21.1	397.1055	397.1747	0.0692		
12/10/18	P2952462	8.1	9.5	23:59	24.0	20.5	393.9348	394.1314	0.1966		
12/16/18	P2952669	7.6	9.0	23:59	24.0	20.3	388.8653	389.0480	0.1827		
12/22/18	P2952674	10.2	12.1	24:00	24.0	20.3	390.6447	390.8919	0.2472		
12/28/18	P2952679	24.0	27.6	23:59	24.0	20.9	394.3590	394.9362	0.5772		
11/26/18	P2952188	Field Blank					400.6414	400.6499	0.0085		
# Valid		Recovery	Average	St. Dev.	Max	Min					
14		93%	34.3	51.2	191.6	3.2					

Inter-Mountain Laboratories' (IML) data validation is limited by the provided information. Data have been validated based on laboratory QC, field observations and other information available to IML. Additional data validation based on information not provided to IML may be required. According to 40 CFR 58.15 final responsibilities for data review and validation lies with each agency submitting data to AQS.

BGI PQ200 Air Sampling System Downloaded 2018 02 oct 12:37:33

Job Details:

Job Name: 18Oct02D.JOB
Version: 5.62
Serial No: 2366
Pump Time: 3962:55
Flags:

Job Code:

Site Name:

Station Code:

Operators:

User1: yyyyyyyyyyyyyyyyyyyyyyyyyyyyyyy

User2: yyyyyyyyyyyyyyyyyyyyyyyyyyyyyyy

	Max	Min	Avg	Units
BP	591	588	589	mmHg
TA	24.3	5.8	15.8	°C
Q	---	---	16.7	Lpm

Timer Information:

Date Time
dd-mmm hh:mm:ss
Start: 18-29-sep 0:00:08
Stop: 18-30-sep 0:00:05
ET: 23:59

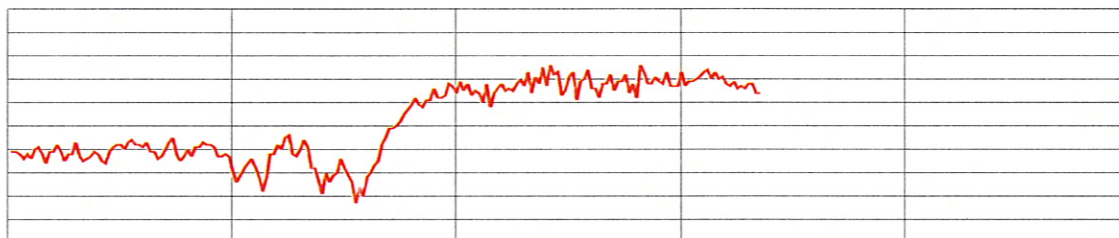
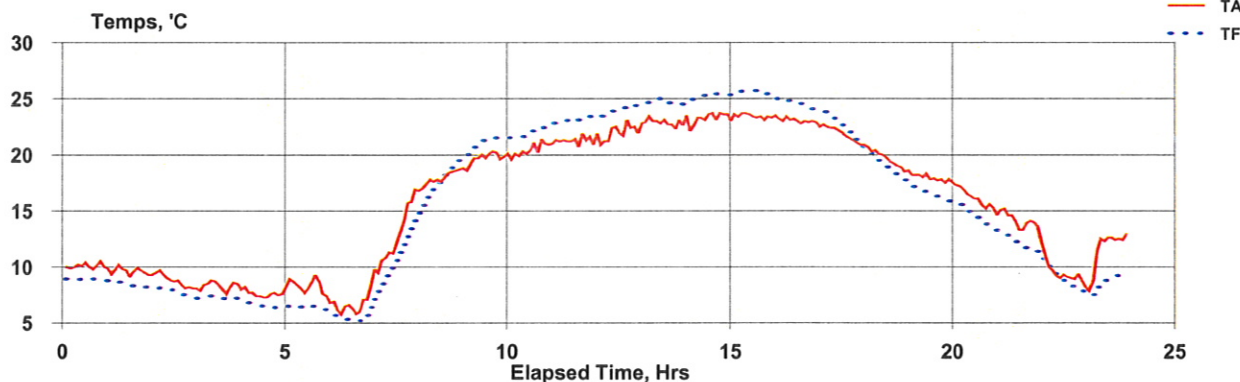
Mass Concentration Data:

Filter ID: 19
Final Wt: mg
Initial Wt: mg
Delta Wt: 0.000 mg
Total Vol: 24.041 m³
Mass Conc: 0 µg/m³

QCV 0.55 %
Max overheat 3 °C
occured 29-sep 14:38:40

Notes 1:

Notes 2:



Hourly

18-29-sep	0:05:08	590	10.1	8.9	-1.2	29	16.72
18-29-sep	1:05:08	590	9.6	8.4	-1.2	30	16.72
18-29-sep	2:05:08	590	8.7	7.8	-1.0	30	16.71
18-29-sep	3:05:08	590	8.3	7.2	-1.1	31	16.71
18-29-sep	4:05:08	591	7.6	6.5	-1.1	31	16.71
18-29-sep	5:05:08	591	8.2	6.4	-1.8	31	16.71
18-29-sep	6:05:08	591	6.9	5.6	-1.3	31	16.72
18-29-sep	7:05:08	591	13.2	10.9	-2.3	32	16.71
18-29-sep	8:05:08	591	18.0	17.7	-0.4	33	16.70
18-29-sep	9:05:08	591	19.8	21.0	1.3	34	16.71
18-29-sep	10:05:08	591	20.5	22.0	1.5	34	16.71
18-29-sep	11:05:08	590	21.3	23.2	1.8	35	16.72
18-29-sep	12:05:08	590	22.0	24.0	1.9	35	16.71
18-29-sep	13:05:08	590	22.9	24.6	1.7	35	16.71
18-29-sep	14:05:08	589	23.2	25.2	2.0	35	16.71
18-29-sep	15:05:08	589	23.5	25.5	2.0	35	16.71
18-29-sep	16:05:08	589	23.0	24.5	1.5	35	16.71
18-29-sep	17:05:08	589	21.8	22.5	0.7	35	16.71
18-29-sep	18:05:08	589	19.6	19.0	-0.6	35	16.71
18-29-sep	19:05:08	589	17.9	16.5	-1.4	35	16.71
18-29-sep	20:05:08	589	16.1	14.5	-1.5	34	16.71
18-29-sep	21:05:08	590	14.0	12.1	-1.9	34	16.71
18-29-sep	22:05:08	590	9.3	9.0	-0.3	34	16.71
18-29-sep	23:05:08	590	11.7	8.6	-3.1	34	16.71

BGI PQ200 Air Sampling System Downloaded 2018 08 oct 15:04:09

Job Details:

Job Name: 18Oct08D.JOB
Version: 5.62
Serial No: 2366
Pump Time: 3986:54
Flags:

Job Code:

Site Name:

Station Code:

Operators:

User1: yyyyyyyyyyyyyyyyyyyyyyyyyyyyyyy

User2: yyyyyyyyyyyyyyyyyyyyyyyyyyy

	Max	Min	Avg	Units
BP	590	588	588	mmHg
TA	14.9	3.8	8.6	°C
Q	---	---	16.7	Lpm

Timer Information:

	Date	Time
	dd-mmm	hh:mm:ss
Start:	18-05-oct	0:00:08
Stop:	18-06-oct	0:00:04
ET:	23:59	

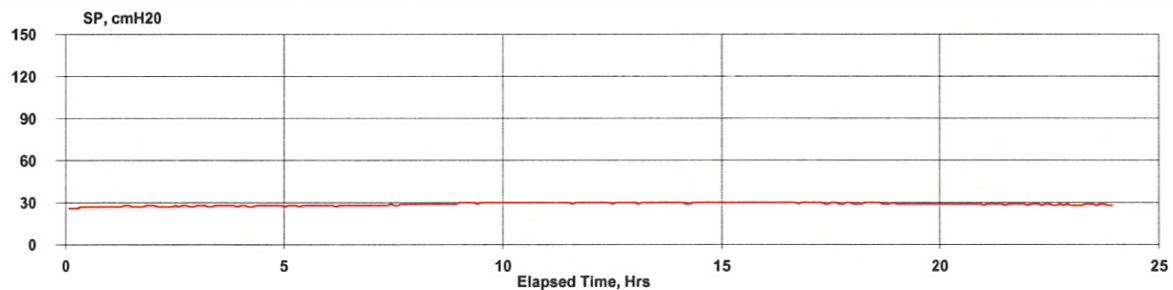
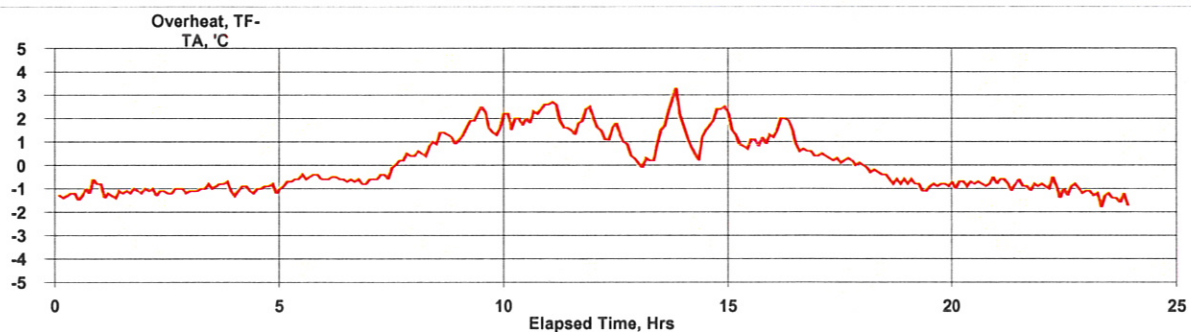
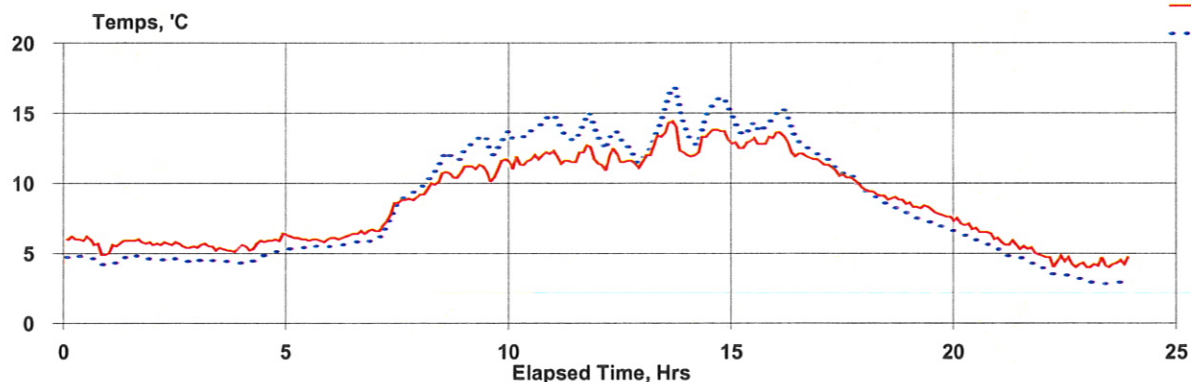
Mass Concentration Data:

Filter ID:	29	
Final Wt:		mg
Initial Wt:		mg
Delta Wt:	0.000	mg
Total Vol:	24.04	m^3
Mass Conc:	0	ug/m3

QCV 0.55 %
Max overheat 3.6 °C
occured 05-oct 13:46:28

Notes 1:

Notes 2:



Hourly

18-05-oct	0:05:08	589	5.7	4.6	-1.1	27	16.71
18-05-oct	1:05:08	589	5.8	4.6	-1.2	27	16.71
18-05-oct	2:05:08	589	5.6	4.5	-1.1	27	16.71
18-05-oct	3:05:08	589	5.4	4.4	-1.0	28	16.72
18-05-oct	4:05:08	589	5.8	4.8	-1.0	28	16.71
18-05-oct	5:05:08	589	6.0	5.4	-0.6	28	16.72
18-05-oct	6:05:08	589	6.4	5.7	-0.6	28	16.72
18-05-oct	7:05:08	589	8.3	8.2	-0.1	29	16.70
18-05-oct	8:05:08	590	10.3	11.3	1.0	29	16.70
18-05-oct	9:05:08	590	11.1	12.9	1.8	30	16.71
18-05-oct	10:05:08	590	11.8	13.9	2.1	30	16.70
18-05-oct	11:05:08	589	11.9	13.8	2.0	30	16.71
18-05-oct	12:05:08	589	11.6	12.6	1.1	30	16.71
18-05-oct	13:05:08	589	13.0	14.4	1.4	30	16.71
18-05-oct	14:05:08	589	13.1	14.6	1.5	30	16.71
18-05-oct	15:05:08	588	13.0	14.0	1.1	30	16.71
18-05-oct	16:05:08	588	12.2	13.3	1.1	30	16.70
18-05-oct	17:05:08	588	10.5	10.7	0.2	30	16.71
18-05-oct	18:05:08	589	9.0	8.5	-0.5	30	16.71
18-05-oct	19:05:08	589	8.0	7.1	-0.9	29	16.71
18-05-oct	20:05:08	589	6.7	5.9	-0.8	29	16.72
18-05-oct	21:05:08	589	5.4	4.6	-0.8	29	16.71
18-05-oct	22:05:08	589	4.4	3.4	-1.0	29	16.71
18-05-oct	23:05:08	589	4.3	2.9	-1.4	28	16.72

BGI PQ200 Air Sampling System Downloaded 2018 13 oct 11:43:46

Job Details:

Job Name: 18Oct13D.JOB
Version: 5.62
Serial No: 2366
Pump Time: 4010:53
Flags:

Job Code:
Site Name: 2366D
Station Code:
Operators: KN

User1: yyyyyyyyyyyyyyyyyyyyyyyyyyyyyy
User2: yyyyyyyyyyyyyyyyyyyyyyyyyyyyyy

	Max	Min	Avg	Units
BP	590	585	587	mmHg
TA	12.1	0.1	5.2	°C
Q	---	---	16.71	Lpm

QCV 0.54 %
Max overheat 4.1 °C
occured 11-oct 14:23:15

Timer Information:

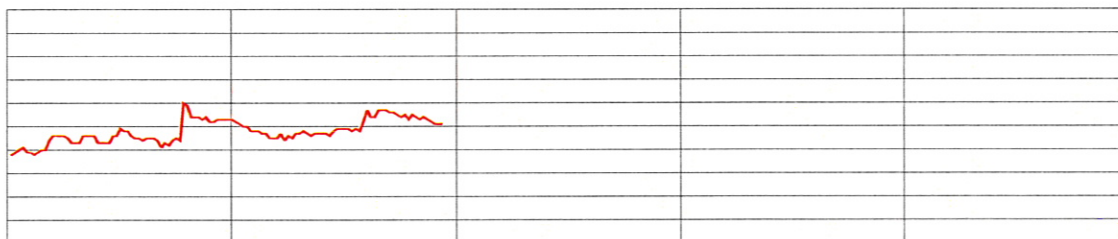
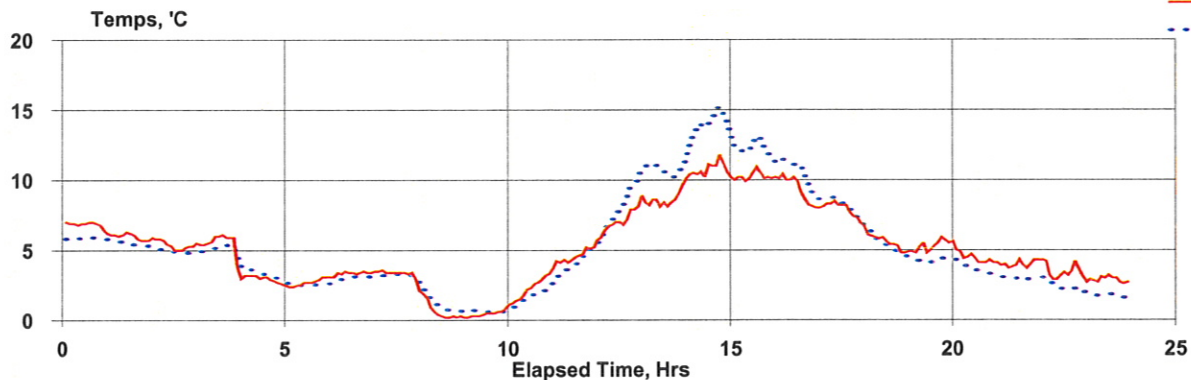
	Date	Time
	dd-mmm	hh:mm:ss
Start:	18-11-oct	0:00:08
Stop:	18-12-oct	0:00:05
ET:	23:59	

Mass Concentration Data:

Filter ID:	7	
Final Wt:		mg
Initial Wt:		mg
Delta Wt:	0.000	mg
Total Vol:	24.041	m ³
Mass Conc:	0	ug/m ³

Notes 1:

Notes 2:



Hourly

18-11-oct	0:05:08	587	6.8	5.8	-1.0	29	16.73
18-11-oct	1:05:08	586	6.0	5.5	-0.5	30	16.70
18-11-oct	2:05:08	586	5.4	4.9	-0.5	30	16.71
18-11-oct	3:05:08	586	5.4	5.0	-0.4	30	16.70
18-11-oct	4:05:08	587	3.0	3.3	0.3	30	16.70
18-11-oct	5:05:08	587	2.7	2.5	-0.2	30	16.71
18-11-oct	6:05:08	587	3.4	3.0	-0.4	30	16.71
18-11-oct	7:05:08	588	3.3	3.2	-0.1	30	16.70
18-11-oct	8:05:08	588	0.6	1.1	0.5	30	16.71
18-11-oct	9:05:08	588	0.5	0.6	0.1	30	16.71
18-11-oct	10:05:08	588	2.4	1.7	-0.7	30	16.71
18-11-oct	11:05:08	588	4.7	4.1	-0.5	30	16.70
18-11-oct	12:05:08	588	7.2	8.1	0.9	31	16.71
18-11-oct	13:05:08	587	8.7	10.8	2.1	32	16.71
18-11-oct	14:05:08	587	10.8	14.0	3.2	32	16.71
18-11-oct	15:05:08	587	10.2	12.2	2.0	32	16.71
18-11-oct	16:05:08	587	9.2	10.4	1.2	32	16.71
18-11-oct	17:05:08	588	7.8	8.1	0.3	31	16.71
18-11-oct	18:05:08	588	5.5	5.4	-0.1	31	16.71
18-11-oct	19:05:08	589	5.3	4.3	-1.0	31	16.71
18-11-oct	20:05:08	589	4.4	3.6	-0.7	31	16.71
18-11-oct	21:05:08	589	4.0	2.9	-1.1	31	16.70
18-11-oct	22:05:08	590	3.3	2.3	-1.0	31	16.70
18-11-oct	23:05:08	590	2.9	1.7	-1.2	31	16.71

BGI PQ200 Air Sampling System Downloaded 2018 18 oct 12:50:23

Job Details:

Job Name: 18Oct18D.JOB
Version: 5.62
Serial No: 2366
Pump Time: 4034:52
Flags:

Job Code:
Site Name: 2366D
Station Code:
Operators:

User1: yyyyyyyyyyyyyyyyyyyyyyyyyyyyyyy
User2: yyyyyyyyyyyyyyyyyyyyyyyyyyy

	Max	Min	Avg	Units
BP	594	591	593	mmHg
TA	7.8	-1.7	3.5	°C
Q	---	---	16.71	Lpm

Timer Information:

	Date	Time
	dd-mmm	hh:mm:ss
Start:	18-17-oct	0:00:08
Stop:	18-18-oct	0:00:05
ET:	23:59	

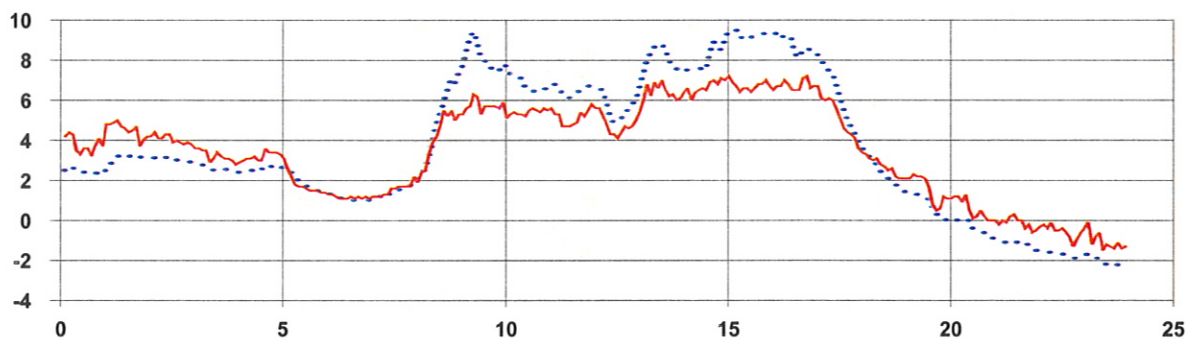
Mass Concentration Data:

Filter ID:	24
Final Wt:	mg
Initial Wt:	mg
Delta Wt:	0.000 mg
Total Vol:	24.042 m ³
Mass Conc:	0 µg/m ³

QCV 0.56 %
Max overheat 3.4 °C
occured 17-oct 09:16:45

Notes 1:

Notes 2:



Hourly

18-17-oct	0:05:08	593	3.9	2.5	-1.4	26	16.71
18-17-oct	1:05:08	592	4.5	3.1	-1.3	27	16.71
18-17-oct	2:05:08	592	4.0	3.1	-1.0	27	16.70
18-17-oct	3:05:08	592	3.2	2.6	-0.6	27	16.71
18-17-oct	4:05:08	593	3.2	2.6	-0.7	27	16.71
18-17-oct	5:05:08	593	1.7	1.8	0.1	27	16.71
18-17-oct	6:05:08	593	1.2	1.1	-0.1	27	16.71
18-17-oct	7:05:08	593	1.6	1.5	-0.1	27	16.71
18-17-oct	8:05:08	593	4.4	5.2	0.8	28	16.70
18-17-oct	9:05:08	593	5.7	8.1	2.4	29	16.72
18-17-oct	10:05:08	593	5.4	6.8	1.4	29	16.71
18-17-oct	11:05:08	593	5.2	6.5	1.3	29	16.71
18-17-oct	12:05:08	593	4.8	5.7	0.9	28	16.71
18-17-oct	13:05:08	593	6.4	8.0	1.6	29	16.71
18-17-oct	14:05:08	593	6.7	8.2	1.4	29	16.71
18-17-oct	15:05:08	593	6.7	9.3	2.6	29	16.71
18-17-oct	16:05:08	593	6.8	8.7	2.0	29	16.71
18-17-oct	17:05:08	593	4.9	5.9	1.0	29	16.72
18-17-oct	18:05:08	593	2.6	2.3	-0.3	28	16.72
18-17-oct	19:05:08	593	1.5	0.8	-0.7	28	16.71
18-17-oct	20:05:08	594	0.5	-0.4	-0.9	28	16.70
18-17-oct	21:05:08	594	-0.2	-1.2	-1.1	28	16.72
18-17-oct	22:05:08	594	-0.6	-1.7	-1.2	28	16.71
18-17-oct	23:05:08	594	-1.1	-2.1	-1.0	28	16.71

BGI PQ200 Air Sampling System

Downloaded 2018 29 dec 12:01:52

Job Details:

Job Name: 18Oct24D.JOB

Version:

Serial No:

Pump Time:

Flags:

Job Code:

Site Name:

Station Code:

Operators:

User1: ++++++

User2:

	Max	Min	Avg	Units
BP	0	0	0	mmHg
TA	0	0	0	°C
Q	---	---	0	Lpm

QCV 0 %

Max overheat 0 °C
occured

Timer Information:

Date Time
dd-mmm hh:mm:ss
Start:
Stop:
ET:

Mass Concentration Data:

Filter ID:
Final Wt: mg
Initial Wt: mg
Delta Wt: 0.000 mg
Total Vol: 0 m³
Mass Conc: µg/m³

Notes 1:

Notes 2:

Hourly

yy-dd-mmm	hh:mm:ss	mmHg	°C	°C	°C	cmH2O	aLpm

BGI PQ200 Air Sampling System

Downloaded 2018 30 oct 13:40:34

Job Details:

Job Name: 18Oct30D.JOB
Version: 5.62
Serial No: 2366
Pump Time: 4082:50
Flags:

Job Code:

Site Name:

Station Code:

Operators:

User1: yyyyyyyyyyyyyyyyyyyyyyyyyyyyyyy

User2: yyyyyyyyyyyyyyyyyyyyyyyyyyyyyyy

	Max	Min	Avg	Units
BP	592	588	590	mmHg
TA	17.5	2.4	8.8	°C
Q	---	---	16.7	Lpm

Timer Information:

	Date	Time
	dd-mmm	hh:mm:ss
Start:	18-29-oct	0:00:08
Stop:	18-30-oct	0:00:05
ET:	23:59	

Mass Concentration Data:

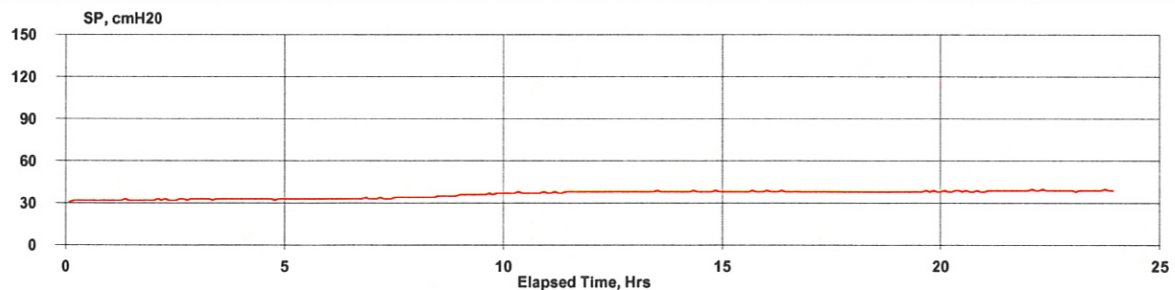
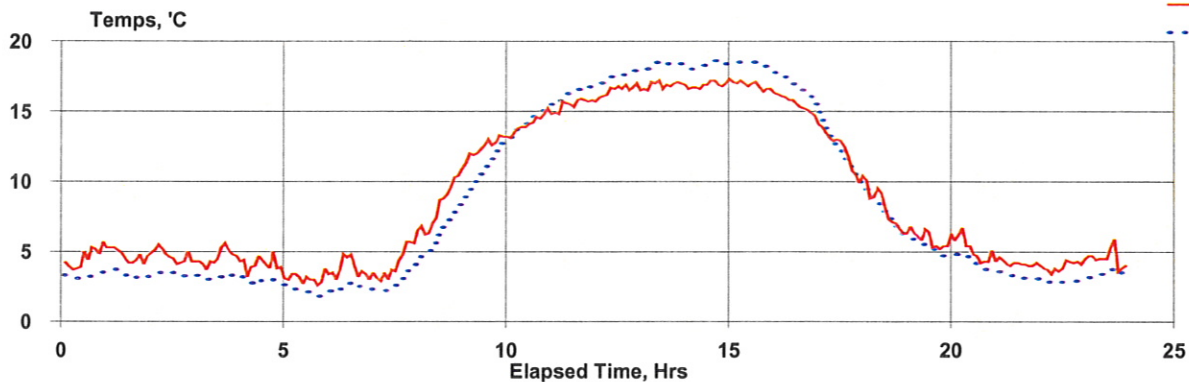
Filter ID:	JBR1	
Final Wt:		mg
Initial Wt:		mg
Delta Wt:	0.000	mg
Total Vol:	24.041	m ³
Mass Conc:	0	µg/m ³

QCV 0.55 %

Max overheat 2.1 °C
occured 29-oct 14:43:00

Notes 1:

Notes 2:



Hourly

18-29-oct	0:05:08	592	4.6	3.2	-1.4	32	16.71
18-29-oct	1:05:08	592	4.7	3.3	-1.4	32	16.72
18-29-oct	2:05:08	591	4.7	3.4	-1.3	33	16.71
18-29-oct	3:05:08	591	4.6	3.2	-1.4	33	16.71
18-29-oct	4:05:08	591	4.0	2.9	-1.1	33	16.71
18-29-oct	5:05:08	591	3.1	2.1	-1.0	33	16.71
18-29-oct	6:05:08	591	3.8	2.4	-1.3	33	16.71
18-29-oct	7:05:08	591	4.4	2.9	-1.5	34	16.72
18-29-oct	8:05:08	591	8.5	6.3	-2.1	35	16.71
18-29-oct	9:05:08	591	12.5	10.9	-1.6	36	16.72
18-29-oct	10:05:08	591	14.2	14.3	0.1	37	16.71
18-29-oct	11:05:08	590	15.5	16.3	0.8	38	16.71
18-29-oct	12:05:08	590	16.6	17.5	0.9	38	16.72
18-29-oct	13:05:08	589	16.9	18.3	1.4	38	16.71
18-29-oct	14:05:08	589	16.9	18.3	1.4	38	16.71
18-29-oct	15:05:08	589	16.8	18.4	1.6	38	16.71
18-29-oct	16:05:08	589	15.4	16.7	1.3	38	16.70
18-29-oct	17:05:08	589	12.1	12.1	0.0	38	16.72
18-29-oct	18:05:08	589	7.9	7.8	-0.1	38	16.71
18-29-oct	19:05:08	589	5.9	5.3	-0.6	38	16.71
18-29-oct	20:05:08	589	5.1	4.3	-0.8	38	16.71
18-29-oct	21:05:08	589	4.2	3.2	-0.9	39	16.71
18-29-oct	22:05:08	589	4.0	2.9	-1.1	39	16.71
18-29-oct	23:05:08	589	4.5	3.4	-1.1	39	16.71

BGI PQ200 Air Sampling System

Downloaded 2018 05 nov 12:02:13

Job Details:

Job Name: 18Nov05D.JOB
Version: 5.62
Serial No: 2366
Pump Time: 4106:49
Flags:

Job Code:
Site Name: 2366D
Station Code:
Operators: BH

User1: yyyyyyyyyyyyyyyyyyyyyyyyyyyyyyy
User2: yyyyyyyyyyyyyyyyyyyyyyyyyyyyyyy

	Max	Min	Avg	Units
BP	592	586	588	mmHg
TA	13.1	-0.5	5.1	°C
Q	---	---	16.71	Lpm

QCV 0.51 %
Max overheat 2.8 °C
occured 04-nov 14:31:40

Timer Information:

	Date	Time
	dd-mmm	hh:mm:ss
Start:	18-04-nov	0:00:08
Stop:	18-05-nov	0:00:05
ET:	23:59	

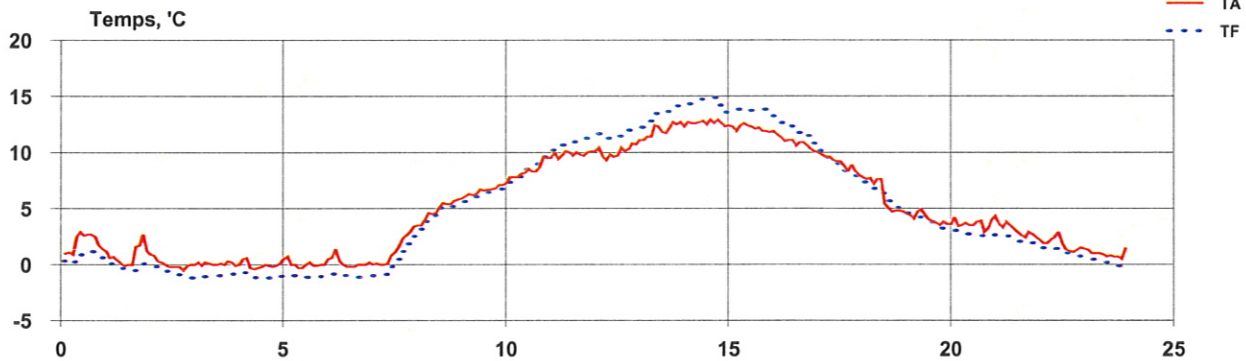
Mass Concentration Data:

Filter ID:	14	
Final Wt:		mg
Initial Wt:		mg
Delta Wt:	0.000	mg
Total Vol:	24.038	m^3

Mass Conc: 0 µg/m3

Notes 1:

Notes 2:



Overheat, TF-

Hourly

18-04-nov	0:05:08	592	1.9	0.7	-1.3	25	16.71
18-04-nov	1:05:08	591	0.8	-0.2	-1.0	25	16.71
18-04-nov	2:05:08	591	0.0	-0.8	-0.7	26	16.71
18-04-nov	3:05:08	591	0.1	-1.0	-1.1	25	16.71
18-04-nov	4:05:08	591	0.0	-1.1	-1.1	25	16.71
18-04-nov	5:05:08	591	0.1	-1.1	-1.1	26	16.71
18-04-nov	6:05:08	590	0.2	-1.0	-1.2	26	16.71
18-04-nov	7:05:08	590	1.5	0.5	-1.1	26	16.71
18-04-nov	8:05:08	590	5.0	4.6	-0.4	27	16.71
18-04-nov	9:05:08	590	6.7	6.3	-0.4	27	16.71
18-04-nov	10:05:08	590	8.5	8.5	0.0	27	16.72
18-04-nov	11:05:08	589	9.9	10.9	1.0	28	16.70
18-04-nov	12:05:08	589	10.2	11.6	1.5	28	16.70
18-04-nov	13:05:08	588	12.0	13.4	1.4	28	16.70
18-04-nov	14:05:08	588	12.6	14.4	1.8	28	16.71
18-04-nov	15:05:08	587	12.1	13.7	1.5	28	16.72
18-04-nov	16:05:08	587	10.8	11.9	1.1	28	16.71
18-04-nov	17:05:08	587	8.9	8.8	-0.2	28	16.70
18-04-nov	18:05:08	587	6.0	6.0	0.0	28	16.71
18-04-nov	19:05:08	587	4.0	3.8	-0.2	27	16.70
18-04-nov	20:05:08	587	3.7	2.7	-1.0	27	16.72
18-04-nov	21:05:08	587	3.0	2.1	-0.8	27	16.71
18-04-nov	22:05:08	587	1.8	1.1	-0.7	27	16.71
18-04-nov	23:05:08	587	0.9	0.2	-0.7	27	16.71

BGI PQ200 Air Sampling System Downloaded 2018 12 nov 13:26:06

Job Details:

Job Name: 18Nov12D.JOB
Version: 5.62
Serial No: 2366
Pump Time: 4130:48
Flags:

Job Code:
Site Name: 2366d
Station Code:
Operators: KN

User1: yyyyyyyyyyyyyyyyyyyyyyyyyyyyyyy
User2: yyyyyyyyyyyyyyyyyyyyyyyyyyyyyyy

	Max	Min	Avg	Units
BP	592	586	588	mmHg
TA	10.7	-5.8	1.1	°C
Q	---	---	16.71	Lpm

Timer Information:

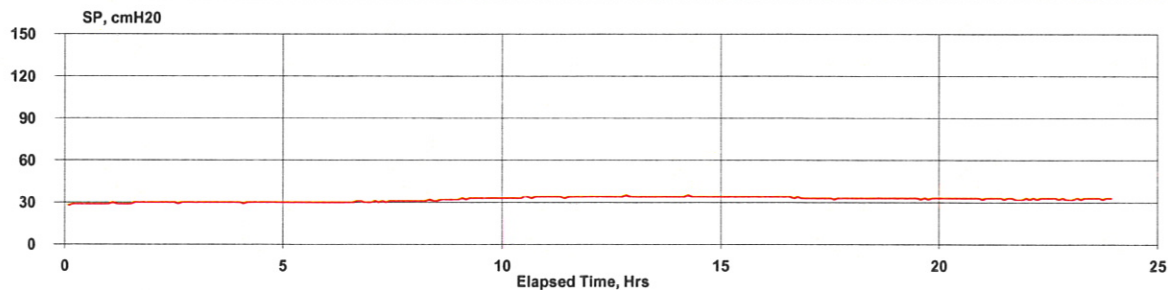
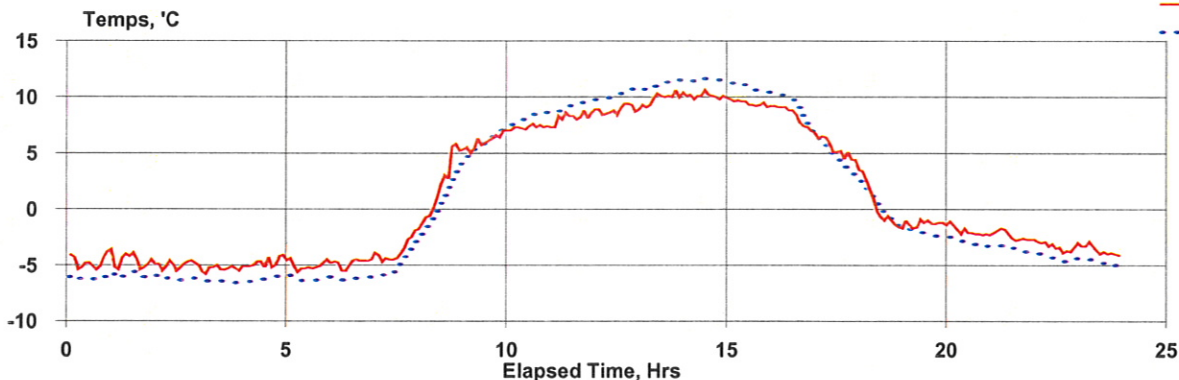
Date Time
dd-mmm hh:mm:ss
Start: 18-10-nov 0:00:08
Stop: 18-11-nov 0:00:04
ET: 23:59

Mass Concentration Data:

Filter ID: 19
Final Wt: mg
Initial Wt: mg
Delta Wt: 0.000 mg
Total Vol: 24.038 m³
Mass Conc: 0 µg/m³

QCV 0.45 %
Max overheat 2.1 °C
occured 10-nov 12:55:05

Notes 1:
Notes 2:



Hourly

18-10-nov	0:05:08	592	-4.7	-6.2	-1.5	29	16.71
18-10-nov	1:05:08	591	-4.7	-6.0	-1.3	30	16.71
18-10-nov	2:05:08	591	-5.0	-6.2	-1.2	30	16.72
18-10-nov	3:05:08	590	-5.3	-6.5	-1.1	30	16.71
18-10-nov	4:05:08	590	-4.8	-6.2	-1.5	30	16.72
18-10-nov	5:05:08	590	-5.1	-6.3	-1.2	30	16.71
18-10-nov	6:05:08	590	-4.7	-6.2	-1.4	30	16.70
18-10-nov	7:05:08	589	-3.6	-4.9	-1.3	31	16.72
18-10-nov	8:05:08	589	2.4	0.7	-1.7	32	16.70
18-10-nov	9:05:08	589	6.1	5.9	-0.2	33	16.71
18-10-nov	10:05:08	589	7.3	8.1	0.8	34	16.71
18-10-nov	11:05:08	588	8.3	9.2	0.9	34	16.71
18-10-nov	12:05:08	588	8.9	10.2	1.4	34	16.70
18-10-nov	13:05:08	587	9.9	11.1	1.2	34	16.72
18-10-nov	14:05:08	586	10.1	11.5	1.4	34	16.70
18-10-nov	15:05:08	586	9.4	10.8	1.4	34	16.71
18-10-nov	16:05:08	586	8.2	9.1	0.9	34	16.71
18-10-nov	17:05:08	586	5.2	4.6	-0.6	33	16.71
18-10-nov	18:05:08	587	0.1	0.2	0.2	33	16.71
18-10-nov	19:05:08	587	-1.3	-2.1	-0.9	33	16.71
18-10-nov	20:05:08	587	-2.0	-3.0	-1.0	33	16.73
18-10-nov	21:05:08	587	-2.4	-3.5	-1.1	33	16.71
18-10-nov	22:05:08	587	-3.3	-4.4	-1.0	33	16.70
18-10-nov	23:05:08	587	-3.7	-4.7	-1.0	33	16.70

BGI PQ200 Air Sampling System Downloaded 2018 19 nov 10:44:30

Job Details:

Job Name: 18Nov19D.JOB
Version: 5.62
Serial No: 2366
Pump Time: 4154:47
Flags:

Job Code:
Site Name: 2366D
Station Code:
Operators: KN

User1:
User2:

	Max	Min	Avg	Units
BP	595	595	595	mmHg
TA	3.8	3.8	3.8	°C
Q	---	---	16.7	Lpm

Timer Information:

Date Time
dd-mmm hh:mm:ss
Start: 00-00-00:00:00 *
Stop: 00-00-00:00:00 Code:007
ET: 23:59

Mass Concentration Data:

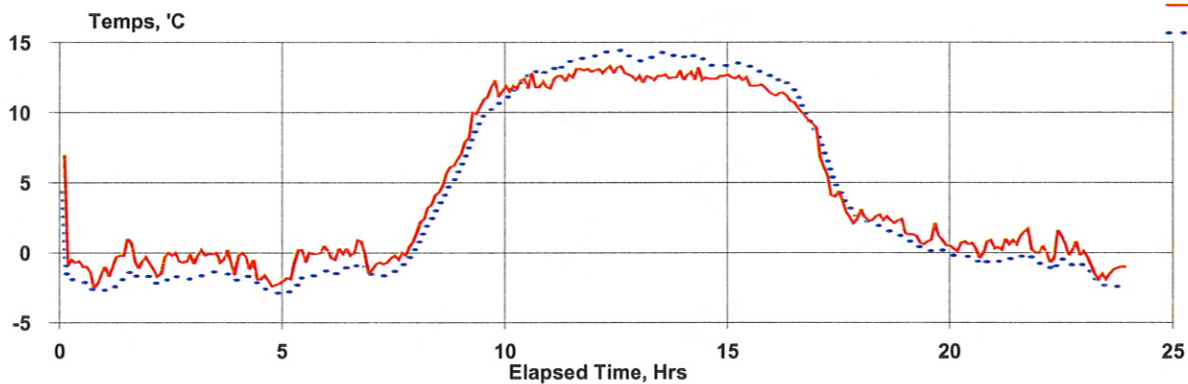
Filter ID: 39
Final Wt: mg
Initial Wt: mg
Delta Wt: 0.000 mg
Total Vol: 24.024 m³

QCV 0 %
Max overheat 0 °C
occured 00-00:00:00 *

Mass Conc: 0 µg/m³

Notes 1:

Notes 2:



Hourly

18-19-nov	10:36:24	591	2.6	1.7	-1.0	28	16.59
18-16-nov	11:40:08	589	13.1	14.1	1.1	32	16.71
18-16-nov	12:40:08	589	12.5	14.0	1.4	32	16.70
18-16-nov	13:40:08	589	12.6	14.0	1.4	32	16.71
18-16-nov	14:40:08	589	12.4	13.3	0.9	32	16.71
18-16-nov	15:40:08	589	11.3	12.3	1.0	32	16.70
18-16-nov	16:40:08	589	6.8	7.5	0.7	31	16.71
18-16-nov	17:40:08	589	2.5	2.4	-0.1	30	16.71
18-16-nov	18:40:08	589	1.4	0.8	-0.7	30	16.71
18-16-nov	19:40:08	589	0.7	-0.1	-0.9	30	16.71
18-16-nov	20:40:08	589	0.5	-0.6	-1.1	30	16.72
18-16-nov	21:40:08	589	0.5	-0.7	-1.2	30	16.71
18-16-nov	22:40:08	589	-0.7	-1.4	-0.7	30	16.72
18-16-nov	23:40:08	589	-1.1	-2.4	-1.3	30	16.69

BGI PQ200 Air Sampling System Downloaded 2018 26 nov 12:35:39

Job Details:

Job Name: 18Nov26D.JOB
Version: 5.62
Serial No: 2366
Pump Time: 4178:46
Flags:

Job Code:
Site Name: 2366D
Station Code:
Operators: KN

User1:
User2:

	Max	Min	Avg	Units
BP	591	587	589	mmHg
TA	4.9	-3.4	0.2	°C
Q	---	---	16.71	Lpm

QCV 0.55 %

Max overheat 5.3 °C
occured 24-nov 15:06:51

Timer Information:

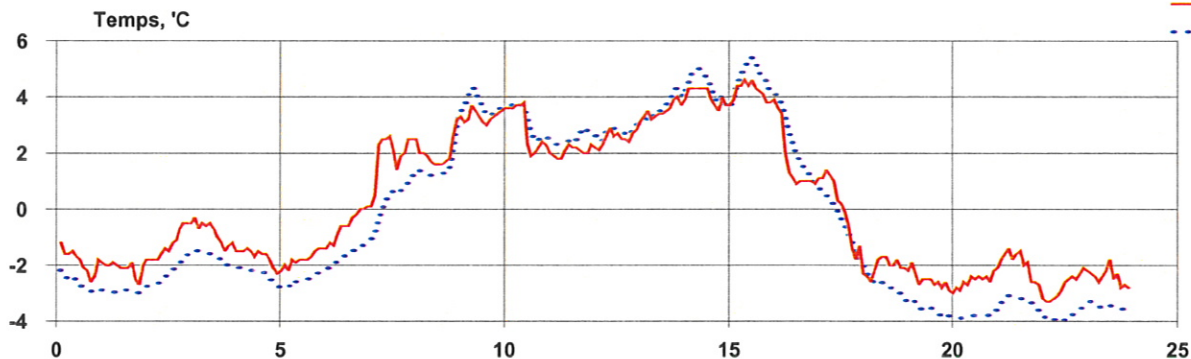
Date	Time
dd-mmm	hh:mm:ss
Start: 18-22-nov	0:00:08
Stop: 18-23-nov	0:00:05
ET: 23:59	

Mass Concentration Data:

Filter ID:	7
Final Wt:	mg
Initial Wt:	mg
Delta Wt:	0.000 mg
Total Vol:	24.042 m ³
Mass Conc:	0 µg/m ³

Notes 1:

Notes 2:



Overheat, TF-

Hourly

18-22-nov	0:05:08	591	-1.9	-2.7	-0.8	26	16.70
18-22-nov	1:05:08	591	-2.1	-2.9	-0.8	27	16.72
18-22-nov	2:05:08	590	-1.2	-2.2	-1.0	27	16.71
18-22-nov	3:05:08	589	-0.9	-1.7	-0.8	27	16.71
18-22-nov	4:05:08	589	-1.7	-2.3	-0.6	28	16.70
18-22-nov	5:05:08	589	-1.7	-2.5	-0.8	27	16.71
18-22-nov	6:05:08	589	-0.5	-1.6	-1.1	28	16.72
18-22-nov	7:05:08	589	2.1	0.4	-1.7	28	16.71
18-22-nov	8:05:08	589	2.1	1.6	-0.5	28	16.71
18-22-nov	9:05:08	589	3.3	3.7	0.4	29	16.72
18-22-nov	10:05:08	589	2.8	3.1	0.3	29	16.71
18-22-nov	11:05:08	589	2.1	2.5	0.5	29	16.71
18-22-nov	12:05:08	588	2.6	2.7	0.1	29	16.71
18-22-nov	13:05:08	588	3.6	3.7	0.1	29	16.72
18-22-nov	14:05:08	588	4.0	4.3	0.3	29	16.71
18-22-nov	15:05:08	588	4.2	4.7	0.5	29	16.71
18-22-nov	16:05:08	588	1.5	2.2	0.6	29	16.70
18-22-nov	17:05:08	589	-0.2	-0.5	-0.3	29	16.72
18-22-nov	18:05:08	589	-2.1	-2.8	-0.7	29	16.71
18-22-nov	19:05:08	589	-2.6	-3.6	-1.0	28	16.71
18-22-nov	20:05:08	590	-2.5	-3.8	-1.3	28	16.71
18-22-nov	21:05:08	590	-2.1	-3.3	-1.3	28	16.72
18-22-nov	22:05:08	590	-2.7	-3.8	-1.1	28	16.72
18-22-nov	23:05:08	590	-2.4	-3.5	-1.0	28	16.71

BGI PQ200 Air Sampling System

Downloaded 2018 06 dec 14:25:09

Job Details:

Job Name: 18Dec06D.JOB
Version: 5.62
Serial No: 2366
Pump Time: 4226:44
Flags:

Job Code:

Site Name:

Station Code: 2366D

Operators:

User1: yyyyyyyyyyyyyyyyyyyyyyyyyyyyyyy

User2: yyyyyyyyyyyyyyyyyyyyyyyyyyyyyyy

	Max	Min	Avg	Units
BP	594	591	592	mmHg
TA	0.3	-13.9	-8.4	°C
Q	---	---	16.71	Lpm

Timer Information:

	Date	Time
	dd-mmm	hh:mm:ss
Start:	18-04-dec	0:00:08
Stop:	18-05-dec	0:00:05
ET:	23:59	

Mass Concentration Data:

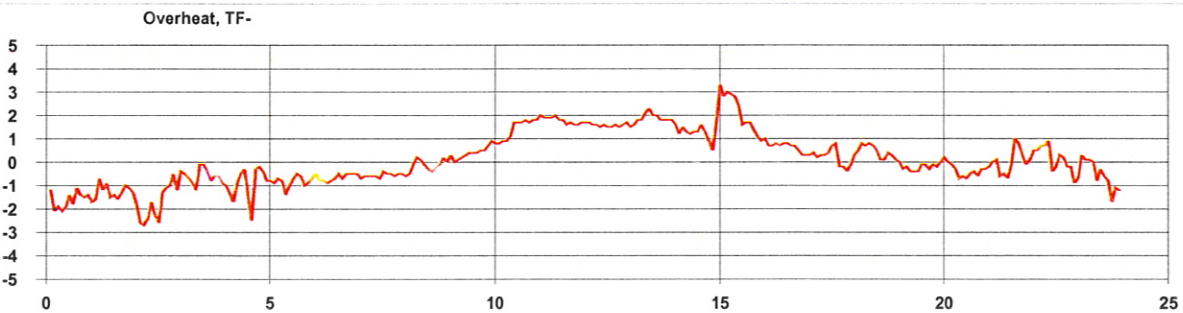
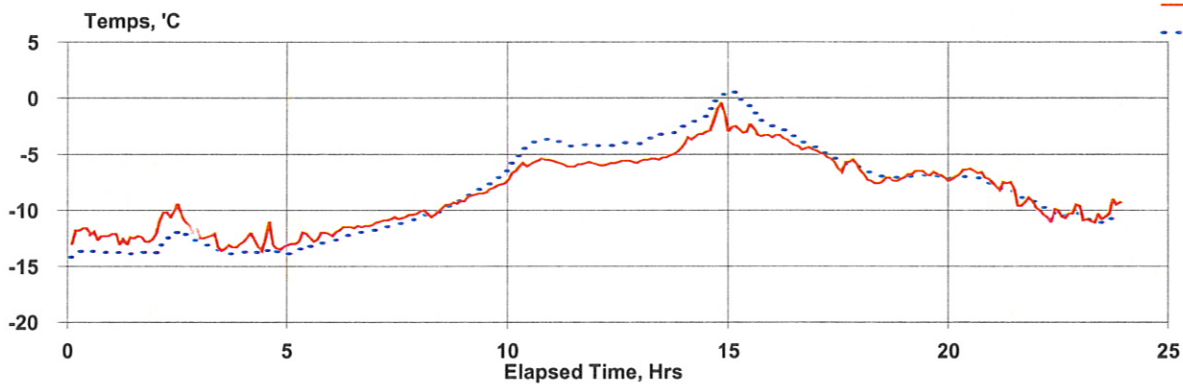
Filter ID:	24	
Final Wt:		mg
Initial Wt:		mg
Delta Wt:	0.000	mg
Total Vol:	24.042	m^3

QCV 0.57 %
Max overheat 3.4 °C
occured 04-dec 14:59:20

Mass Conc: 0 µg/m³

Notes 1:

Notes 2:



Hourly

18-04-dec	0:05:08	592	-12.1	-13.8	-1.6	28	16.71
18-04-dec	1:05:08	592	-12.6	-13.9	-1.3	29	16.71
18-04-dec	2:05:08	592	-10.9	-12.5	-1.7	29	16.72
18-04-dec	3:05:08	592	-12.9	-13.6	-0.6	29	16.71
18-04-dec	4:05:08	592	-12.8	-13.7	-0.9	29	16.71
18-04-dec	5:05:08	592	-12.4	-13.2	-0.8	30	16.71
18-04-dec	6:05:08	593	-11.5	-12.2	-0.7	30	16.71
18-04-dec	7:05:08	593	-10.6	-11.2	-0.6	30	16.72
18-04-dec	8:05:08	593	-9.8	-9.8	-0.1	31	16.72
18-04-dec	9:05:08	594	-8.2	-7.7	0.4	31	16.71
18-04-dec	10:05:08	594	-5.9	-4.4	1.5	31	16.71
18-04-dec	11:05:08	593	-5.9	-4.1	1.8	32	16.71
18-04-dec	12:05:08	593	-5.8	-4.2	1.6	32	16.70
18-04-dec	13:05:08	593	-5.1	-3.3	1.9	32	16.71
18-04-dec	14:05:08	592	-2.6	-1.1	1.4	32	16.70
18-04-dec	15:05:08	592	-3.0	-1.0	1.9	32	16.71
18-04-dec	16:05:08	592	-4.1	-3.5	0.6	32	16.72
18-04-dec	17:05:08	592	-5.7	-5.5	0.2	32	16.71
18-04-dec	18:05:08	592	-7.3	-6.9	0.4	32	16.72
18-04-dec	19:05:08	592	-6.8	-7.0	-0.2	32	16.71
18-04-dec	20:05:08	592	-6.8	-7.2	-0.4	32	16.71
18-04-dec	21:05:08	592	-8.6	-8.5	0.1	32	16.71
18-04-dec	22:05:08	592	-10.3	-10.2	0.1	31	16.72
18-04-dec	23:05:08	592	-10.3	-10.9	-0.5	31	16.71

BGI PQ200 Air Sampling System Downloaded 2018 11 dec 15:12:04

Job Details:

Job Name: 18Dec11D.JOB
Version: 5.62
Serial No: 2366
Pump Time: 4250:43
Flags:

Job Code:

Site Name:

Station Code: 2366D

Operators:

User1: yyyyyyyyyyyyyyyyyyyyyyyyyyyyyyy

User2: yyyyyyyyyyyyyyyyyyyyyyyyyyy

	Max	Min	Avg	Units
BP	596	591	593	mmHg
TA	7.8	-6.7	-0.9	°C
Q	---	---	16.71	Lpm

Timer Information:

	Date	Time
	dd-mmm	hh:mm:ss
Start:	18-10-dec	0:00:08
Stop:	18-11-dec	0:00:05
ET:	23:59	

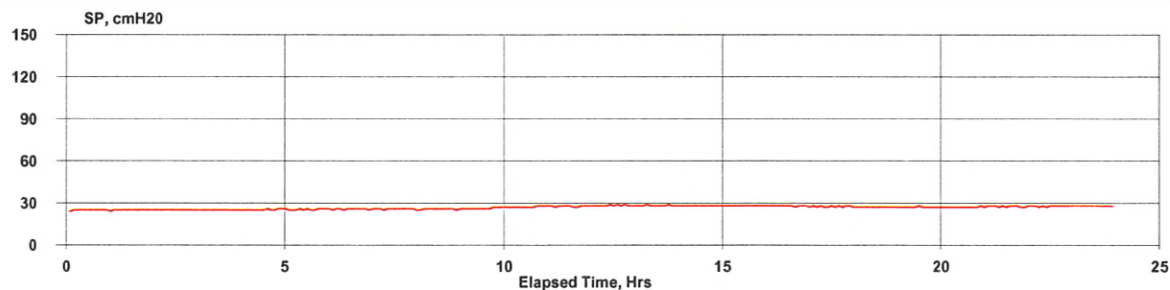
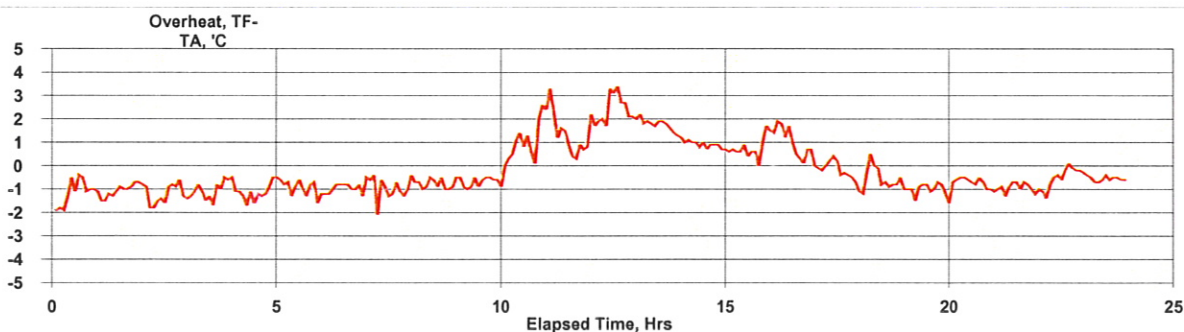
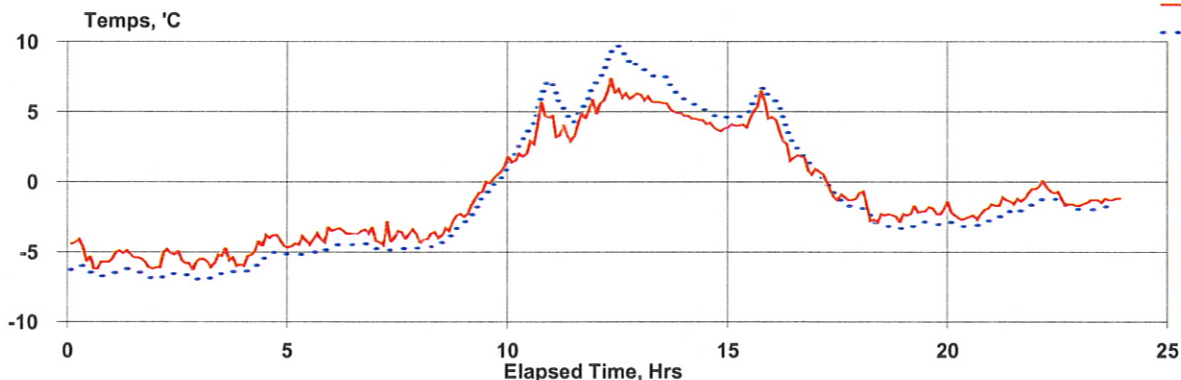
Mass Concentration Data:

Filter ID:	32	
Final Wt:		mg
Initial Wt:		mg
Delta Wt:	0.000	mg
Total Vol:	24.038	m^3
Mass Conc:	0	ug/m3

QCV 0.53 %
Max overheat 3.6 °C
occured 10-dec 12:24:51

Notes 1:

Notes 2:



Hourly

18-10-dec	0:05:08	595	-5.3	-6.4	-1.1	25	16.73
18-10-dec	1:05:08	595	-5.5	-6.5	-1.1	25	16.72
18-10-dec	2:05:08	595	-5.5	-6.7	-1.2	25	16.71
18-10-dec	3:05:08	595	-5.6	-6.6	-1.0	25	16.70
18-10-dec	4:05:08	594	-4.4	-5.6	-1.1	25	16.71
18-10-dec	5:05:08	594	-4.1	-5.0	-1.0	26	16.71
18-10-dec	6:05:08	594	-3.6	-4.5	-0.9	26	16.71
18-10-dec	7:05:08	594	-3.9	-4.8	-1.0	26	16.70
18-10-dec	8:05:08	594	-3.3	-4.1	-0.8	26	16.71
18-10-dec	9:05:08	594	-0.2	-0.9	-0.7	26	16.70
18-10-dec	10:05:08	594	3.2	4.3	1.1	27	16.71
18-10-dec	11:05:08	594	4.1	5.5	1.3	28	16.71
18-10-dec	12:05:08	592	6.2	8.6	2.4	28	16.71
18-10-dec	13:05:08	592	5.4	7.1	1.7	28	16.71
18-10-dec	14:05:08	592	4.1	5.0	0.9	28	16.71
18-10-dec	15:05:08	591	4.7	5.5	0.8	28	16.72
18-10-dec	16:05:08	591	2.0	3.0	0.9	28	16.71
18-10-dec	17:05:08	591	-0.7	-0.9	-0.2	28	16.71
18-10-dec	18:05:08	592	-2.3	-2.9	-0.6	27	16.72
18-10-dec	19:05:08	592	-2.0	-3.1	-1.0	27	16.71
18-10-dec	20:05:08	592	-2.3	-3.1	-0.7	27	16.71
18-10-dec	21:05:08	591	-1.2	-2.1	-0.9	28	16.71
18-10-dec	22:05:08	592	-1.0	-1.5	-0.5	28	16.71
18-10-dec	23:05:08	592	-1.3	-1.9	-0.6	28	16.71

BGI PQ200 Air Sampling System Downloaded 2018 17 dec 09:27:53

Job Details:

Job Name: 18Dec17D.JOB

Version: 5.62

Serial No: 2366

Pump Time: 4274:42

Flags:

Job Code:

Site Name:

Station Code: 2366D

Operators:

User1: yyyyyyyyyyyyyyyyyyyyyyyyyyyyyyy

User2: yyyyyyyyyyyyyyyyyyyyyyyyyyyyyyy

	Max	Min	Avg	Units
BP	595	592	593	mmHg
TA	10.3	-2.8	2.3	°C
Q	---	---	16.71	Lpm

Timer Information:

Date	Time
dd-mmm	hh:mm:ss
Start: 18-16-dec	0:00:08
Stop: 18-17-dec	0:00:05
ET: 23:59	

Mass Concentration Data:

Filter ID:	14	
Final Wt:		mg
Initial Wt:		mg
Delta Wt:	0.000	mg
Total Vol:	24.039	m^3
Mass Conc:	0	µg/m3

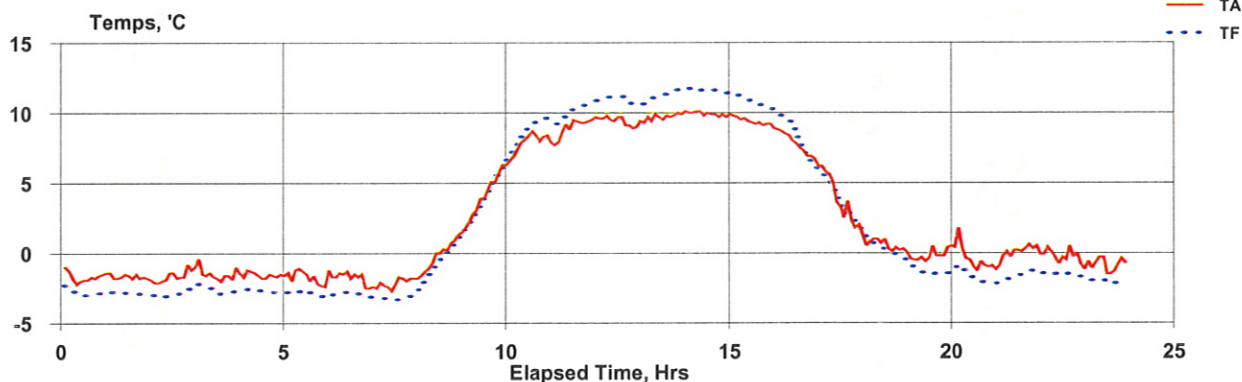
QCV 0.56 %

Max overheat 2.1 °C

occured 16-dec 12:48:01

Notes 1:

Notes 2:



Hourly

18-16-dec	0:05:08	594	-1.7	-2.8	-1.1	26	16.71
18-16-dec	1:05:08	594	-1.7	-2.9	-1.2	26	16.72
18-16-dec	2:05:08	594	-1.6	-2.9	-1.3	26	16.71
18-16-dec	3:05:08	594	-1.5	-2.6	-1.1	26	16.71
18-16-dec	4:05:08	594	-1.6	-2.7	-1.1	26	16.71
18-16-dec	5:05:08	594	-1.7	-2.9	-1.2	26	16.70
18-16-dec	6:05:08	594	-1.8	-2.9	-1.1	26	16.71
18-16-dec	7:05:08	594	-2.1	-3.2	-1.1	26	16.71
18-16-dec	8:05:08	594	0.0	-0.5	-0.5	27	16.71
18-16-dec	9:05:08	594	4.2	4.0	-0.2	28	16.70
18-16-dec	10:05:08	594	7.9	8.7	0.7	28	16.72
18-16-dec	11:05:08	594	9.0	10.1	1.1	28	16.71
18-16-dec	12:05:08	594	9.4	10.9	1.5	29	16.71
18-16-dec	13:05:08	593	9.7	11.2	1.5	29	16.71
18-16-dec	14:05:08	593	9.9	11.6	1.7	29	16.72
18-16-dec	15:05:08	593	9.3	10.8	1.4	29	16.71
18-16-dec	16:05:08	593	7.6	8.2	0.6	29	16.71
18-16-dec	17:05:08	593	3.6	3.7	0.1	28	16.72
18-16-dec	18:05:08	593	0.5	0.3	-0.3	28	16.72
18-16-dec	19:05:08	593	-0.2	-1.4	-1.2	27	16.71
18-16-dec	20:05:08	593	-0.4	-1.7	-1.3	27	16.71
18-16-dec	21:05:08	593	0.1	-1.7	-1.7	27	16.71
18-16-dec	22:05:08	593	-0.3	-1.6	-1.3	27	16.71
18-16-dec	23:05:08	593	-0.8	-2.1	-1.2	27	16.71

BGI PQ200 Air Sampling System

Downloaded 2018 23 dec 14:08:49

Job Details:

Job Name: 18Dec23D.JOB
Version: 5.62
Serial No: 2366
Pump Time: 4298:42
Flags:

Job Code:
Site Name:
Station Code: 2366D
Operators:

User1: yyyyyyyyyyyyyyyyyyyyyyyyyyyyyyy
User2: yyyyyyyyyyyyyyyyyyyyyyyyyyy

	Max	Min	Avg	Units
BP	594	587	590	mmHg
TA	6.8	-4.2	0.4	°C
Q	---	---	16.7	Lpm

QCV 0.47 %
Max overheat 2.5 °C
occured 22-dec 10:43:29

Timer Information:

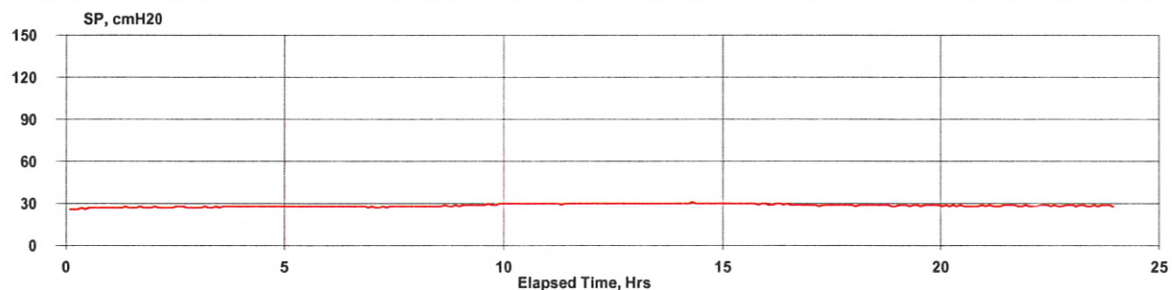
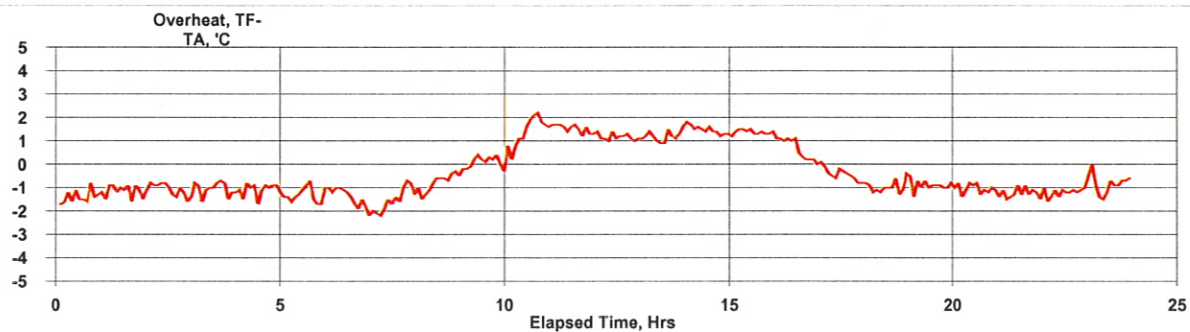
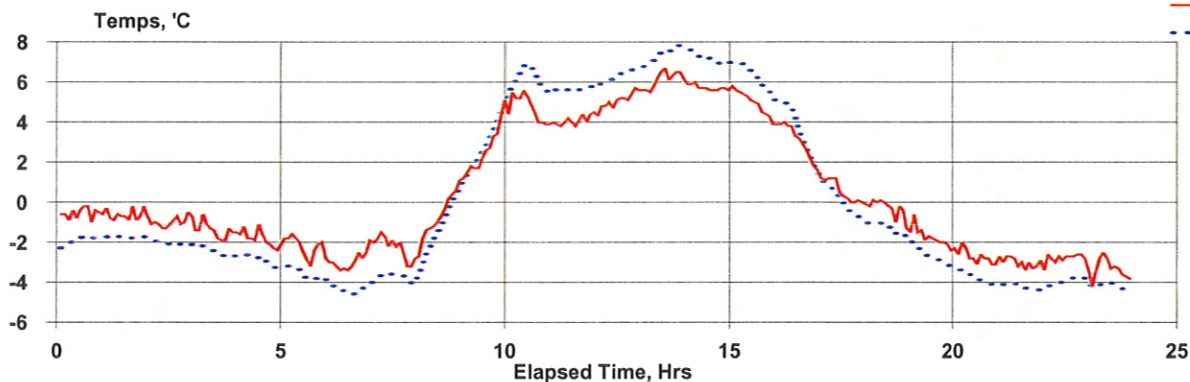
	Date	Time
	dd-mmm	hh:mm:ss
Start:	18-22-dec	0:00:08
Stop:	18-23-dec	0:00:05
ET:	24:00:00	

Mass Concentration Data:

Filter ID:	19	
Final Wt:		mg
Initial Wt:		mg
Delta Wt:	0.000	mg
Total Vol:	24.039	m ³
Mass Conc:	0	µg/m ³

Notes 1:

Notes 2:



Hourly

18-22-dec	0:04:56	588	-0.6	-1.9	-1.4	27	16.70
18-22-dec	1:04:56	588	-0.6	-1.8	-1.1	27	16.71
18-22-dec	2:04:56	589	-1.0	-2.1	-1.1	27	16.71
18-22-dec	3:04:56	589	-1.4	-2.5	-1.1	28	16.71
18-22-dec	4:04:56	589	-1.8	-2.9	-1.1	28	16.72
18-22-dec	5:04:56	589	-2.2	-3.6	-1.3	28	16.72
18-22-dec	6:04:56	589	-2.9	-4.3	-1.4	28	16.72
18-22-dec	7:04:56	589	-2.3	-3.8	-1.5	28	16.71
18-22-dec	8:04:56	590	-0.7	-1.5	-0.8	28	16.71
18-22-dec	9:04:56	591	2.6	2.7	0.1	29	16.71
18-22-dec	10:04:56	591	4.7	6.1	1.4	30	16.71
18-22-dec	11:04:56	591	4.1	5.6	1.5	30	16.71
18-22-dec	12:04:56	591	5.1	6.2	1.2	30	16.71
18-22-dec	13:04:56	591	6.1	7.3	1.2	30	16.72
18-22-dec	14:04:56	591	5.7	7.2	1.5	30	16.70
18-22-dec	15:04:56	591	5.0	6.4	1.4	30	16.71
18-22-dec	16:04:56	592	3.1	3.7	0.7	29	16.72
18-22-dec	17:04:56	592	0.6	0.2	-0.4	29	16.70
18-22-dec	18:04:56	592	-0.3	-1.3	-1.0	29	16.72
18-22-dec	19:04:56	593	-1.7	-2.6	-0.9	29	16.71
18-22-dec	20:04:56	593	-2.7	-3.7	-1.0	28	16.72
18-22-dec	21:04:56	593	-3.0	-4.2	-1.2	29	16.71
18-22-dec	22:04:56	593	-2.8	-4.0	-1.2	29	16.70
18-22-dec	23:04:56	593	-3.3	-4.2	-0.8	29	16.72

BGI PQ200 Air Sampling System Downloaded 2018 29 dec 12:16:30

Job Details:

Job Name: 18Dec29D.JOB
Version: 5.62
Serial No: 2366
Pump Time: 4322:41
Flags:

Job Code:
Site Name:
Station Code: 2366D
Operators:

User1:
User2:

	Max	Min	Avg	Units
BP	590	581	585	mmHg
TA	-4.9	-11.4	-8.7	°C
Q	---	---	16.71	Lpm

Timer Information:

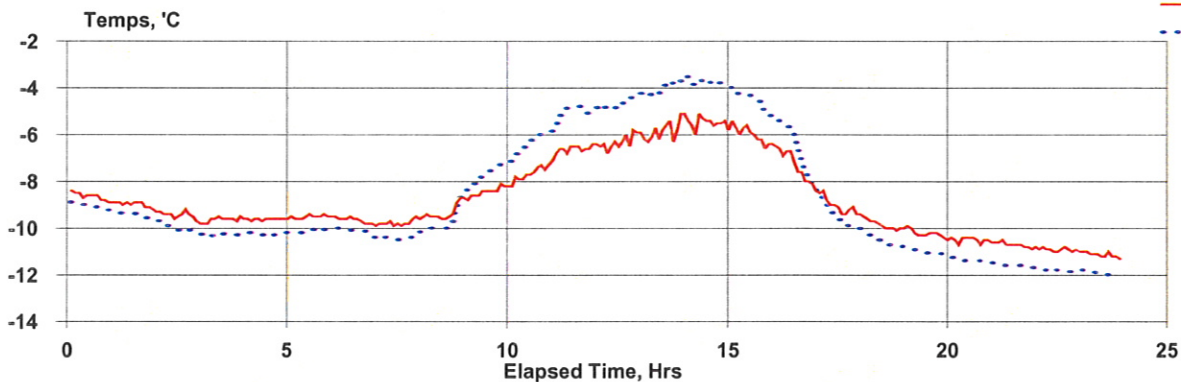
	Date	Time
	dd-mmm	hh:mm:ss
Start:	18-28-dec	0:00:08
Stop:	18-29-dec	0:00:04
ET:	23:59	

Mass Concentration Data:

Filter ID:	JBR1	
Final Wt:		mg
Initial Wt:		mg
Delta Wt:	0.000	mg
Total Vol:	24.038	m^3
Mass Conc:	0	µg/m3

QCV 0.54 %
Max overheat 2.6 °C
occured 28-dec 13:44:35

Notes 1:
Notes 2:



Hourly

18-28-dec	0:05:08	582	-8.7	-9.1	-0.4	27	16.70
18-28-dec	1:05:08	582	-9.0	-9.5	-0.4	27	16.71
18-28-dec	2:05:08	583	-9.5	-10.0	-0.6	27	16.71
18-28-dec	3:05:08	583	-9.6	-10.3	-0.7	27	16.71
18-28-dec	4:05:08	583	-9.6	-10.3	-0.6	27	16.71
18-28-dec	5:05:08	583	-9.5	-10.1	-0.6	28	16.70
18-28-dec	6:05:08	584	-9.7	-10.1	-0.5	28	16.69
18-28-dec	7:05:08	584	-9.8	-10.4	-0.6	28	16.70
18-28-dec	8:05:08	585	-9.3	-9.7	-0.4	28	16.72
18-28-dec	9:05:08	585	-8.4	-7.7	0.7	29	16.71
18-28-dec	10:05:08	585	-7.6	-6.4	1.2	29	16.71
18-28-dec	11:05:08	585	-6.6	-5.0	1.6	29	16.72
18-28-dec	12:05:08	585	-6.3	-4.6	1.6	30	16.72
18-28-dec	13:05:08	585	-5.8	-4.0	1.8	30	16.71
18-28-dec	14:05:08	586	-5.5	-3.8	1.7	30	16.71
18-28-dec	15:05:08	586	-6.0	-4.5	1.5	30	16.72
18-28-dec	16:05:08	587	-7.4	-6.5	0.8	30	16.71
18-28-dec	17:05:08	587	-9.1	-9.5	-0.4	29	16.72
18-28-dec	18:05:08	588	-9.9	-10.6	-0.7	29	16.71
18-28-dec	19:05:08	588	-10.2	-11.0	-0.8	29	16.71
18-28-dec	20:05:08	589	-10.5	-11.4	-0.9	29	16.72
18-28-dec	21:05:08	589	-10.7	-11.6	-0.9	29	16.71
18-28-dec	22:05:08	589	-10.9	-11.8	-0.9	29	16.71
18-28-dec	23:05:08	590	-11.1	-12.0	-0.8	29	16.71

Collocated Monitor 2398E

PM₁₀ Sampler Summary

October 1, 2018 - December 31, 2018

Network: Alton Coal Development

Site: Coal Hollow

Sampler ID: Coal Hollow-E

AQS ID:

Sampler Type: BGI FRM Single

Date	Filter ID	Concentration (µg/m ³) LTP	Concentration (µg/m ³) STP	Sample Period (hr:min)	Sample Volume (m ³)	Std Volume (m ³)	Tare (mg)	Mass Gross (mg)	Net (mg)	Flag	Comments
10/05/18	P2950127	5.0	6.2	23:59	24.0	19.7	394.3662	394.4886	0.1224		
10/11/18	P2950421	5.5	6.6	23:59	24.0	19.9	391.4853	391.6185	0.1332		
10/17/18	P2950426	14.3	17.0	23:59	24.0	20.2	390.7927	391.1371	0.3444		
10/23/18	P2951632	3.9	4.7	23:59	24.0	19.9	392.2438	392.3389	0.0951		
10/29/18	P2951637	Invalid - AG	Invalid - AG	13:29	13.5	11.1	394.0511	395.2278	1.1767	SP	
11/04/18	P2951920	4.7	5.7	23:59	24.0	19.9	397.8135	397.9287	0.1152		
11/10/18	P2951925	40.6	48.4	23:59	24.0	20.2	396.4090	397.3857	0.9767		
11/16/18	P2951930	24.9	29.9	23:59	24.0	20.0	395.2014	395.8006	0.5992		
11/22/18	P2952184	11.0	13.1	24:00	24.0	20.3	392.3320	392.5988	0.2668		
11/28/18	P2952191	176.1	211.2	23:59	24.0	20.0	398.3554	402.5907	4.2353		
12/04/18	P2952458	2.7	3.1	23:59	24.0	21.1	396.9192	396.9851	0.0659		
12/10/18	P2952463	7.9	9.3	23:59	24.0	20.5	393.7009	393.8929	0.1920		
12/16/18	P2952670	6.5	7.7	23:59	24.0	20.3	384.2918	384.4488	0.1570		
12/22/18	P2952675	12.0	14.1	24:00	24.0	20.3	395.2557	395.5444	0.2887		
12/28/18	P2952680	18.6	21.5	23:59	24.0	20.8	399.2334	399.6819	0.4485		
11/26/18	P2952190	Field Blank					395.5004	395.5174	0.0170		
# Valid		Recovery	Average	St. Dev.	Max	Min					
14		93%	28.5	54.0	211.2	3.1					

Inter-Mountain Laboratories' (IML) data validation is limited by the provided information. Data have been validated based on laboratory QC, field observations and other information available to IML. Additional data validation based on information not provided to IML may be required. According to 40 CFR 58.15 final responsibilities for data review and validation lies with each agency submitting data to AQS.

BGI PQ200 Air Sampling System Downloaded 2018 02 oct 12:40:06

Job Details:

Job Name: 18Oct02E.JOB
Version: 5.62
Serial No: 2398
Pump Time: 1607:19
Flags:

Job Code:

Site Name:

Station Code:

Operators:

User1: yyyyyyyyyyyyyyyyyyyyyyyyyyyyyyy

User2: yyyyyyyyyyyyyyyyyyyyyyyyyyyyyyy

	Max	Min	Avg	Units
BP	593	589	591	mmHg
TA	24.7	6.3	16.3	°C
Q	---	---	16.71	Lpm

Timer Information:

Date Time
dd-mmm hh:mm:ss
Start: 18-29-sep 0:00:08
Stop: 18-30-sep 0:00:05
ET: 23:59

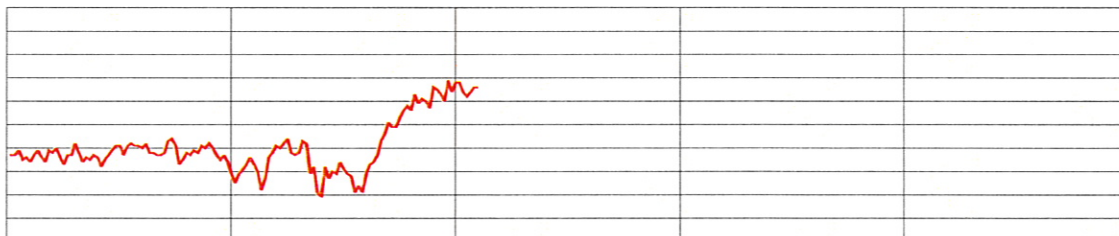
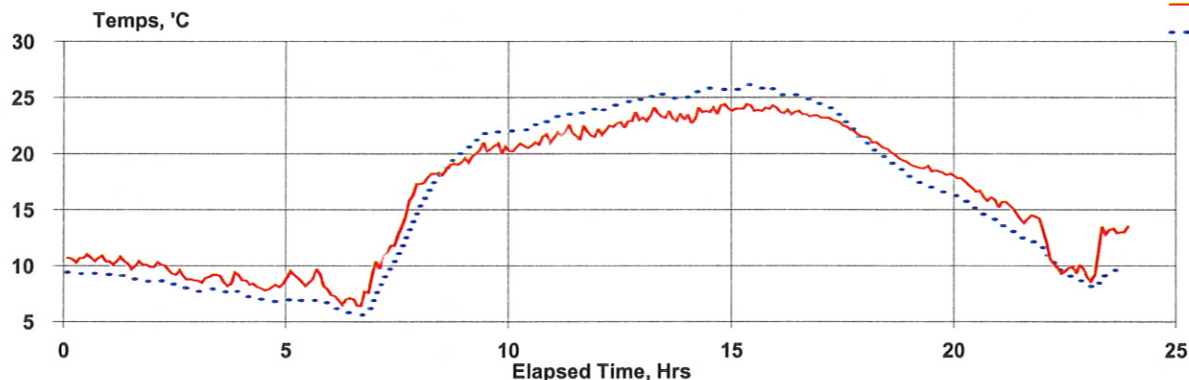
Mass Concentration Data:

Filter ID: 20
Final Wt: mg
Initial Wt: mg
Delta Wt: 0.000 mg
Total Vol: 24.041 m³
Mass Conc: 0 µg/m³

QCV 0.53 %
Max overheat 2.8 °C
occured 01-oct 12:39:06

Notes 1:

Notes 2:



Hourly

18-29-sep	0:05:08	591	10.6	9.3	-1.3	30	16.71
18-29-sep	1:05:08	591	10.2	8.8	-1.3	31	16.71
18-29-sep	2:05:08	591	9.3	8.2	-1.1	31	16.71
18-29-sep	3:05:08	591	8.9	7.7	-1.1	32	16.71
18-29-sep	4:05:08	591	8.3	7.0	-1.3	32	16.70
18-29-sep	5:05:08	591	8.7	6.9	-1.8	33	16.71
18-29-sep	6:05:08	591	7.5	6.0	-1.5	33	16.71
18-29-sep	7:05:08	592	13.6	11.4	-2.2	33	16.70
18-29-sep	8:05:08	592	18.6	18.3	-0.3	34	16.71
18-29-sep	9:05:08	593	20.3	21.6	1.3	36	16.71
18-29-sep	10:05:08	592	20.9	22.4	1.5	36	16.71
18-29-sep	11:05:08	592	21.9	23.6	1.7	36	16.71
18-29-sep	12:05:08	592	22.7	24.4	1.7	36	16.71
18-29-sep	13:05:08	592	23.4	25.0	1.7	36	16.71
18-29-sep	14:05:08	591	23.8	25.6	1.8	37	16.70
18-29-sep	15:05:08	591	24.1	25.8	1.8	37	16.70
18-29-sep	16:05:08	591	23.5	25.0	1.5	37	16.72
18-29-sep	17:05:08	591	22.4	22.9	0.5	36	16.71
18-29-sep	18:05:08	590	20.2	19.4	-0.8	36	16.71
18-29-sep	19:05:08	591	18.5	17.0	-1.5	36	16.70
18-29-sep	20:05:08	591	16.6	15.1	-1.6	36	16.70
18-29-sep	21:05:08	591	14.6	12.6	-2.0	36	16.70
18-29-sep	22:05:08	591	9.9	9.5	-0.5	36	16.71
18-29-sep	23:05:08	591	12.2	9.1	-3.1	35	16.72

BGI PQ200 Air Sampling System

Downloaded 2018 18 oct 13:02:17

Job Details:

Job Name: 18Oct18E.JOB
Version: 5.62
Serial No: 2398
Pump Time: 1679:16
Flags:

Job Code:
Site Name: 2398e
Station Code:
Operators: kn

User1:
User2:

	Max	Min	Avg	Units
BP	596	592	594	mmHg
TA	8.3	-1.1	4	°C
Q	---	---	16.71	Lpm

QCV 0.54 %

Max overheat 4.2 °C
occured 18-oct 12:12:11

Timer Information:

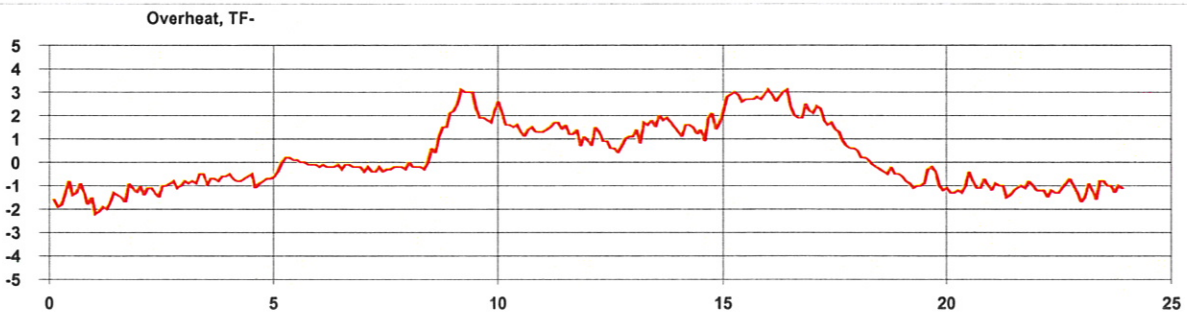
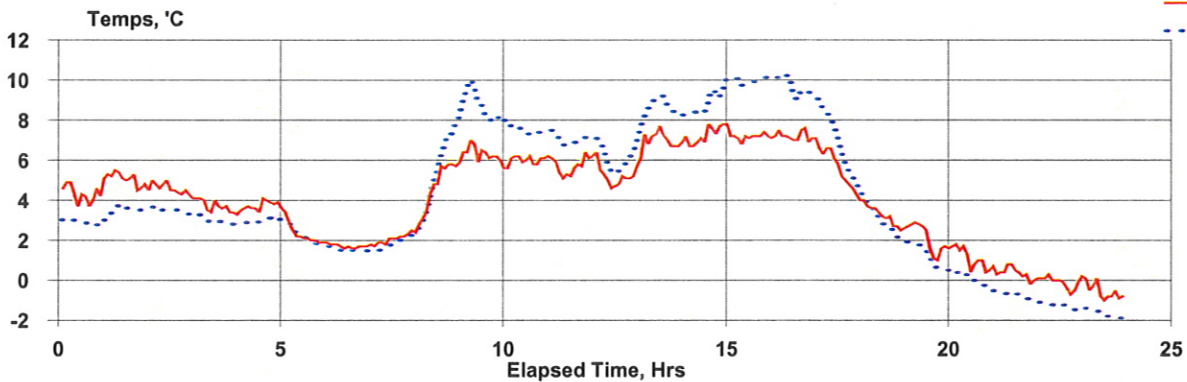
	Date	Time
	dd-mmm	hh:mm:ss
Start:	18-17-oct	0:00:08
Stop:	18-18-oct	0:00:05
ET:	23:59	

Mass Concentration Data:

Filter ID:	25
Final Wt:	mg
Initial Wt:	mg
Delta Wt:	0.000 mg
Total Vol:	24.04 m ³
Mass Conc:	0 µg/m ³

Notes 1:

Notes 2:



Hourly

18-17-oct	0:05:08	594	4.4	2.9	-1.5	25	16.72
18-17-oct	1:05:08	594	5.0	3.5	-1.5	26	16.71
18-17-oct	2:05:08	594	4.6	3.5	-1.1	26	16.71
18-17-oct	3:05:08	594	3.7	3.0	-0.7	26	16.71
18-17-oct	4:05:08	594	3.7	3.0	-0.7	26	16.71
18-17-oct	5:05:08	594	2.3	2.2	0.0	26	16.71
18-17-oct	6:05:08	595	1.7	1.5	-0.2	26	16.71
18-17-oct	7:05:08	595	2.1	1.8	-0.3	26	16.70
18-17-oct	8:05:08	595	4.8	5.5	0.7	27	16.72
18-17-oct	9:05:08	595	6.3	8.7	2.4	28	16.70
18-17-oct	10:05:08	595	6.0	7.5	1.5	28	16.71
18-17-oct	11:05:08	595	5.7	7.0	1.3	28	16.71
18-17-oct	12:05:08	595	5.2	6.1	0.9	28	16.71
18-17-oct	13:05:08	595	7.0	8.6	1.6	28	16.71
18-17-oct	14:05:08	595	7.3	8.8	1.6	28	16.71
18-17-oct	15:05:08	595	7.2	10.0	2.8	28	16.72
18-17-oct	16:05:08	595	7.2	9.7	2.5	28	16.71
18-17-oct	17:05:08	595	5.5	6.8	1.3	28	16.71
18-17-oct	18:05:08	595	3.2	3.0	-0.2	27	16.71
18-17-oct	19:05:08	595	2.1	1.3	-0.8	27	16.71
18-17-oct	20:05:08	595	1.1	0.0	-1.0	27	16.72
18-17-oct	21:05:08	595	0.3	-0.8	-1.1	27	16.72
18-17-oct	22:05:08	595	-0.1	-1.3	-1.2	27	16.71
18-17-oct	23:05:08	595	-0.6	-1.7	-1.1	27	16.70

BGI PQ200 Air Sampling System

Downloaded 2018 13 oct 11:46:58

Job Details:

Job Name: 18Oct13E.JOB
Version: 5.62
Serial No: 2398
Pump Time: 1655:17
Flags:

Job Code:
Site Name: 2398E
Station Code:
Operators: KN

User1: yyyyyyyyyyyyyyyyyyyyyyyyyyy
User2: yyyyyyyyyyyyyyyyyyyyyyy

	Max	Min	Avg	Units
BP	592	586	589	mmHg
TA	12.8	0.7	5.7	°C
Q	---	---	16.71	Lpm

QCV 0.55 %

Max overheat 4 °C
occured 11-oct 14:51:26

Timer Information:

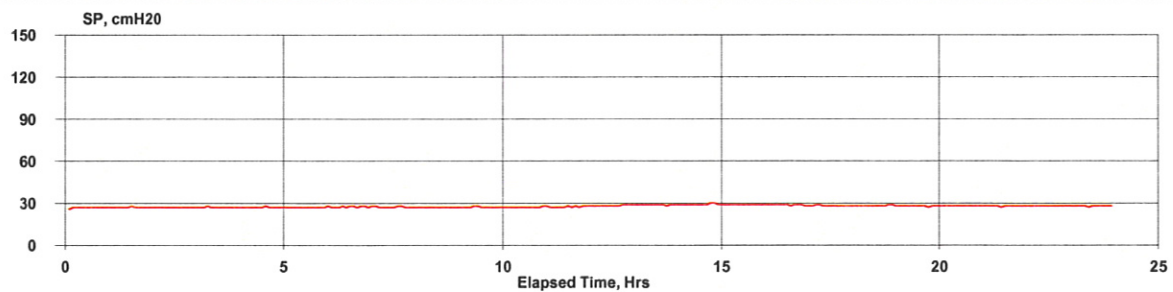
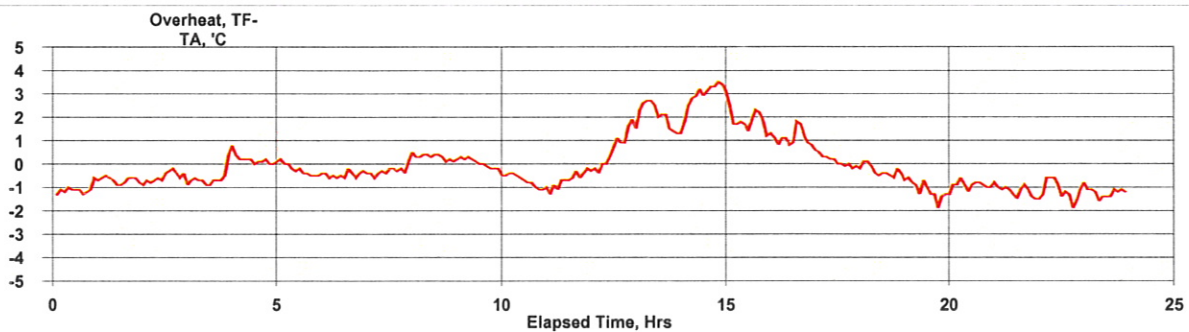
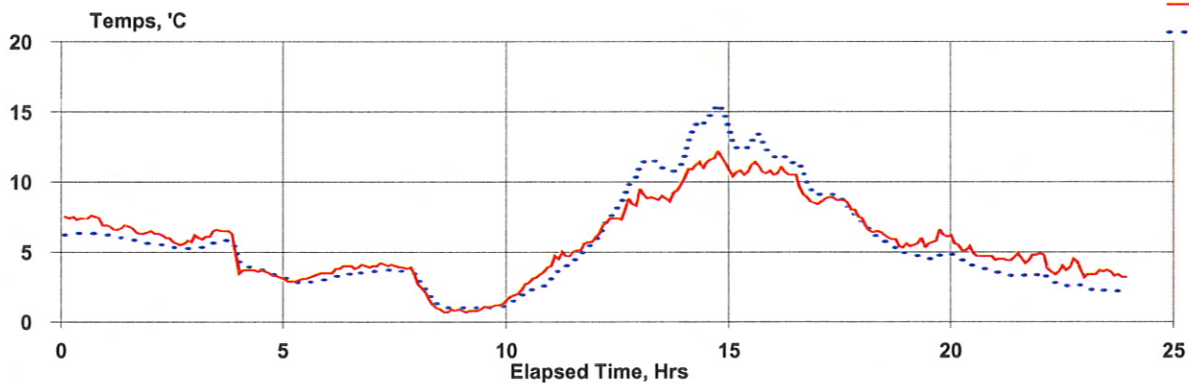
	Date	Time
	dd-mmm	hh:mm:ss
Start:	18-11-oct	0:00:08
Stop:	18-12-oct	0:00:05
ET:	23:59	

Mass Concentration Data:

Filter ID:	8
Final Wt:	mg
Initial Wt:	mg
Delta Wt:	0.000 mg
Total Vol:	24.042 m ³
Mass Conc:	0 µg/m ³

Notes 1:

Notes 2:



Hourly

18-11-oct	0:05:08	588	7.4	6.3	-1.1	27	16.71
18-11-oct	1:05:08	588	6.6	5.9	-0.7	27	16.71
18-11-oct	2:05:08	588	5.9	5.4	-0.6	27	16.71
18-11-oct	3:05:08	588	6.0	5.5	-0.5	27	16.72
18-11-oct	4:05:08	588	3.5	3.7	0.1	27	16.71
18-11-oct	5:05:08	588	3.2	2.9	-0.3	27	16.71
18-11-oct	6:05:08	589	3.9	3.4	-0.5	28	16.71
18-11-oct	7:05:08	589	3.8	3.6	-0.2	27	16.72
18-11-oct	8:05:08	590	1.2	1.5	0.3	27	16.71
18-11-oct	9:05:08	590	1.0	1.0	0.0	27	16.72
18-11-oct	10:05:08	590	2.9	2.2	-0.7	27	16.71
18-11-oct	11:05:08	590	5.2	4.5	-0.6	27	16.71
18-11-oct	12:05:08	590	7.7	8.4	0.7	28	16.71
18-11-oct	13:05:08	589	9.1	11.2	2.0	29	16.71
18-11-oct	14:05:08	589	11.3	14.3	3.0	29	16.72
18-11-oct	15:05:08	589	10.8	12.6	1.8	29	16.71
18-11-oct	16:05:08	589	9.8	10.8	1.1	29	16.71
18-11-oct	17:05:08	589	8.4	8.5	0.1	28	16.71
18-11-oct	18:05:08	590	6.1	5.7	-0.3	28	16.71
18-11-oct	19:05:08	590	5.8	4.7	-1.2	28	16.72
18-11-oct	20:05:08	591	5.0	4.1	-0.9	28	16.71
18-11-oct	21:05:08	591	4.6	3.4	-1.2	28	16.71
18-11-oct	22:05:08	591	3.9	2.8	-1.1	28	16.71
18-11-oct	23:05:08	591	3.4	2.2	-1.3	28	16.71

BGI PQ200 Air Sampling System

Downloaded 2018 18 oct 13:02:17

Job Details:

Job Name: 18Oct18E.JOB
Version: 5.62
Serial No: 2398
Pump Time: 1679:16
Flags:

Job Code:
Site Name: 2398e
Station Code:
Operators: kn

User1: yyyyyyyyyyyyyyyyyyyyyyyyyyyyyyy
User2: yyyyyyyyyyyyyyyyyyyyyyyyyyy

	Max	Min	Avg	Units
BP	596	592	594	mmHg
TA	8.3	-1.1	4	°C
Q	---	---	16.71	Lpm

QCV 0.54 %
Max overheat 4.2 °C
occured 18-oct 12:12:11

Timer Information:

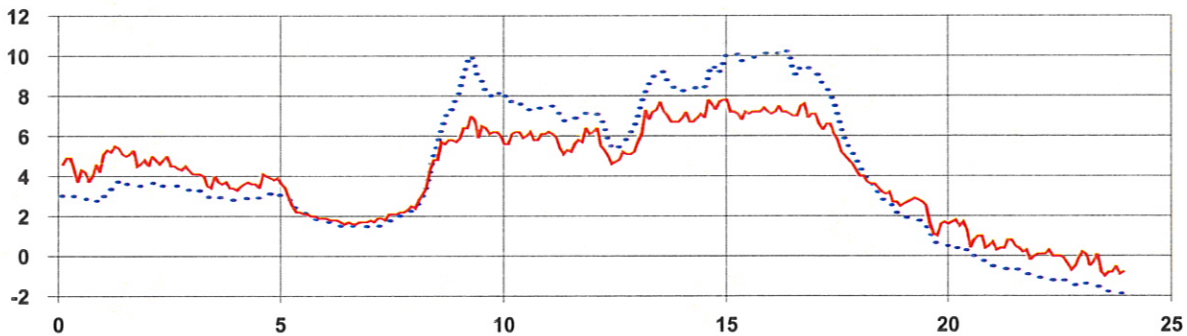
	Date	Time
	dd-mmm	hh:mm:ss
Start:	18-17-oct	0:00:08
Stop:	18-18-oct	0:00:05
ET:	23:59	

Mass Concentration Data:

Filter ID:	25	
Final Wt:		mg
Initial Wt:		mg
Delta Wt:	0.000	mg
Total Vol:	24.04	m ³
Mass Conc:	0	µg/m ³

Notes 1:

Notes 2:



Overheat, TF-

Hourly

18-17-oct	0:05:08	594	4.4	2.9	-1.5	25	16.72
18-17-oct	1:05:08	594	5.0	3.5	-1.5	26	16.71
18-17-oct	2:05:08	594	4.6	3.5	-1.1	26	16.71
18-17-oct	3:05:08	594	3.7	3.0	-0.7	26	16.71
18-17-oct	4:05:08	594	3.7	3.0	-0.7	26	16.71
18-17-oct	5:05:08	594	2.3	2.2	0.0	26	16.71
18-17-oct	6:05:08	595	1.7	1.5	-0.2	26	16.71
18-17-oct	7:05:08	595	2.1	1.8	-0.3	26	16.70
18-17-oct	8:05:08	595	4.8	5.5	0.7	27	16.72
18-17-oct	9:05:08	595	6.3	8.7	2.4	28	16.70
18-17-oct	10:05:08	595	6.0	7.5	1.5	28	16.71
18-17-oct	11:05:08	595	5.7	7.0	1.3	28	16.71
18-17-oct	12:05:08	595	5.2	6.1	0.9	28	16.71
18-17-oct	13:05:08	595	7.0	8.6	1.6	28	16.71
18-17-oct	14:05:08	595	7.3	8.8	1.6	28	16.71
18-17-oct	15:05:08	595	7.2	10.0	2.8	28	16.72
18-17-oct	16:05:08	595	7.2	9.7	2.5	28	16.71
18-17-oct	17:05:08	595	5.5	6.8	1.3	28	16.71
18-17-oct	18:05:08	595	3.2	3.0	-0.2	27	16.71
18-17-oct	19:05:08	595	2.1	1.3	-0.8	27	16.71
18-17-oct	20:05:08	595	1.1	0.0	-1.0	27	16.72
18-17-oct	21:05:08	595	0.3	-0.8	-1.1	27	16.72
18-17-oct	22:05:08	595	-0.1	-1.3	-1.2	27	16.71
18-17-oct	23:05:08	595	-0.6	-1.7	-1.1	27	16.70

BGI PQ200 Air Sampling System

Downloaded 2018 24 oct 13:31:39

Job Details:

Job Name: 18Oct24E.JOB
Version: 5.62
Serial No: 2398
Pump Time: 1703:15
Flags:

Job Code:

Site Name:

Station Code:

Operators:

User1: yyyyyyyyyyyyyyyyyyyyyyyyyyyyyyy

User2: yyyyyyyyyyyyyyyyyyyyyyyyyyyyyyy

	Max	Min	Avg	Units
BP	593	590	591	mmHg
TA	14.5	1.7	7.2	°C
Q	---	---	16.71	Lpm

QCV 0.59 %

Max overheat 3 °C
occured 23-oct 14:56:07

Timer Information:

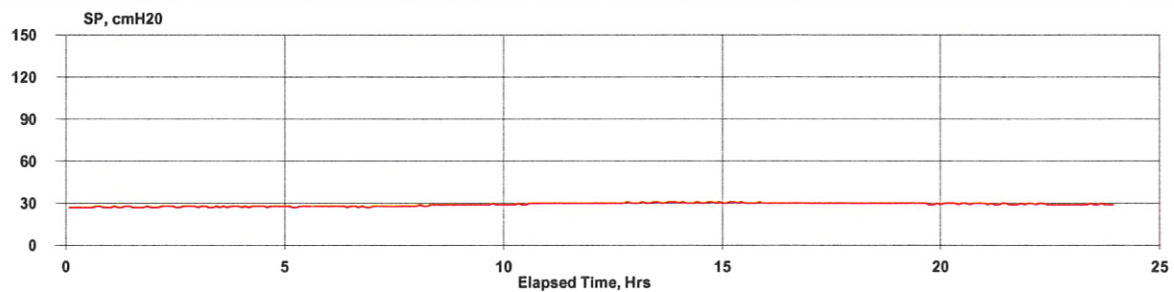
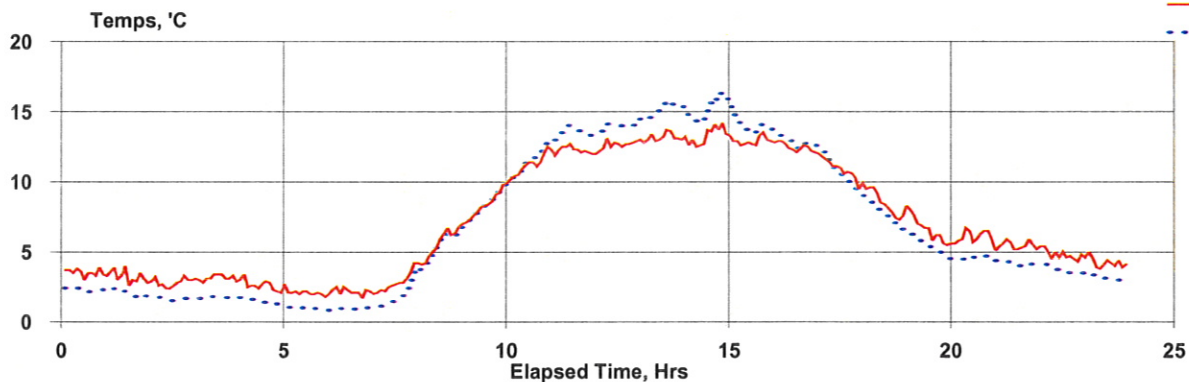
	Date	Time
	dd-mmm	hh:mm:ss
Start:	18-23-oct	0:00:08
Stop:	18-24-oct	0:00:05
ET:	23:59	

Mass Concentration Data:

Filter ID:	
Final Wt:	mg
Initial Wt:	mg
Delta Wt:	0.000 mg
Total Vol:	24.044 m ³
Mass Conc:	0 µg/m ³

Notes 1:

Notes 2:



Hourly

18-23-oct	0:05:08	592	3.5	2.3	-1.2	27	16.72
18-23-oct	1:05:08	592	3.2	2.0	-1.2	27	16.71
18-23-oct	2:05:08	592	2.8	1.6	-1.2	28	16.73
18-23-oct	3:05:08	592	3.1	1.7	-1.4	28	16.72
18-23-oct	4:05:08	592	2.6	1.5	-1.1	28	16.72
18-23-oct	5:05:08	592	2.1	1.0	-1.1	28	16.73
18-23-oct	6:05:08	592	2.2	1.0	-1.2	28	16.72
18-23-oct	7:05:08	592	2.9	1.9	-1.0	28	16.73
18-23-oct	8:05:08	593	5.7	5.4	-0.3	29	16.72
18-23-oct	9:05:08	593	8.4	8.3	-0.1	29	16.73
18-23-oct	10:05:08	593	11.3	11.4	0.2	30	16.71
18-23-oct	11:05:08	593	12.2	13.5	1.2	30	16.72
18-23-oct	12:05:08	592	12.7	14.0	1.3	30	16.71
18-23-oct	13:05:08	592	13.2	15.1	2.0	31	16.72
18-23-oct	14:05:08	592	13.3	15.2	1.9	30	16.71
18-23-oct	15:05:08	591	12.9	14.0	1.1	30	16.71
18-23-oct	16:05:08	591	12.4	12.8	0.4	30	16.72
18-23-oct	17:05:08	591	10.8	10.6	-0.2	30	16.72
18-23-oct	18:05:08	591	8.4	7.7	-0.8	30	16.71
18-23-oct	19:05:08	592	6.5	5.4	-1.1	30	16.73
18-23-oct	20:05:08	592	6.0	4.6	-1.5	30	16.72
18-23-oct	21:05:08	592	5.5	4.1	-1.3	29	16.72
18-23-oct	22:05:08	592	4.8	3.7	-1.1	29	16.73
18-23-oct	23:05:08	592	4.2	3.1	-1.1	29	16.70

BGI PQ200 Air Sampling System Downloaded 2018 30 oct 13:44:22

Job Details:

Job Name: 18Oct30E.JOB
Version: 5.62
Serial No: 2398
Pump Time: 1716:44
Flags: T

Job Code:

Site Name:

Station Code:

Operators:

User1: yyyyyyyyyyyyyyyyyyyyyyyyyyyyyyy

User2: yyyyyyyyyyyyyyyyyyyyyyyyyyyyyyy

	Max	Min	Avg	Units
BP	593	591	592	mmHg
TA	18	2.9	8.6	°C
Q	---	---	16.71	Lpm

Timer Information:

	Date	Time
	dd-mmm	hh:mm:ss
Start:	18-29-oct	0:00:08
Stop:	18-30-oct	0:00:13
ET:	13:29	

Mass Concentration Data:

Filter ID:	JBR7	
Final Wt:		mg
Initial Wt:		mg
Delta Wt:	0.000	mg
Total Vol:	13.51	m^3
Mass Conc:	0	ug/m3

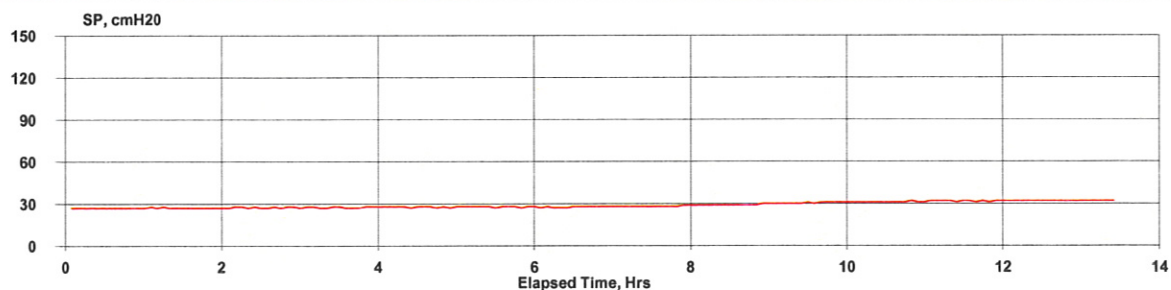
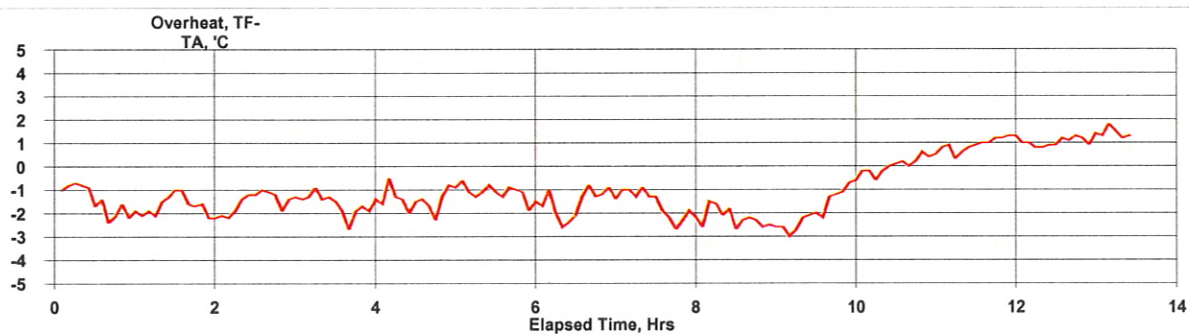
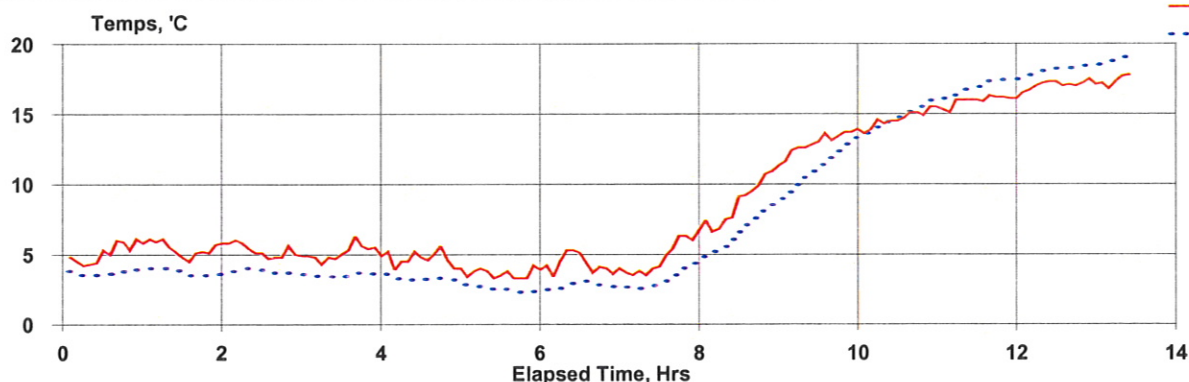
QCV 0 %

Max overheat 2.5 °C

occured 29-oct 17:46:50

Notes 1:

Notes 2:



Hourly

18-29-oct	0:05:08	593	5.1	3.7	-1.5	27	16.72
18-29-oct	1:05:08	593	5.4	3.7	-1.7	27	16.72
18-29-oct	2:05:08	592	5.3	3.8	-1.5	28	16.71
18-29-oct	3:05:08	592	5.1	3.5	-1.6	28	16.72
18-29-oct	4:05:08	592	4.7	3.3	-1.4	28	16.71
18-29-oct	5:05:08	592	3.6	2.5	-1.1	28	16.71
18-29-oct	6:05:08	592	4.3	2.7	-1.6	28	16.71
18-29-oct	7:05:08	592	4.9	3.2	-1.7	28	16.71
18-29-oct	8:05:08	592	8.9	6.6	-2.2	29	16.71
18-29-oct	9:05:08	593	13.0	11.2	-1.8	31	16.72
18-29-oct	10:05:08	592	14.7	14.8	0.1	31	16.71
18-29-oct	11:05:08	592	15.9	16.9	0.9	32	16.70
18-29-oct	12:05:08	592	17.1	18.1	1.0	32	16.72
18-29-oct	13:05:08	591	17.4	18.8	1.4	32	16.72

BGI PQ200 Air Sampling System Downloaded 2018 05 nov 12:04:56

Job Details:

Job Name: 18Nov05E.JOB
Version: 5.62
Serial No: 2398
Pump Time: 1740:43
Flags:

Job Code:
Site Name: 2398
Station Code:
Operators: BH

User1:
User2:

	Max	Min	Avg	Units
BP	592	587	589	mmHg
TA	13.6	0	5.6	°C
Q	---	---	16.71	Lpm

QCV 0.45 %
Max overheat 3.7 °C
occured 04-nov 14:32:40

Timer Information:

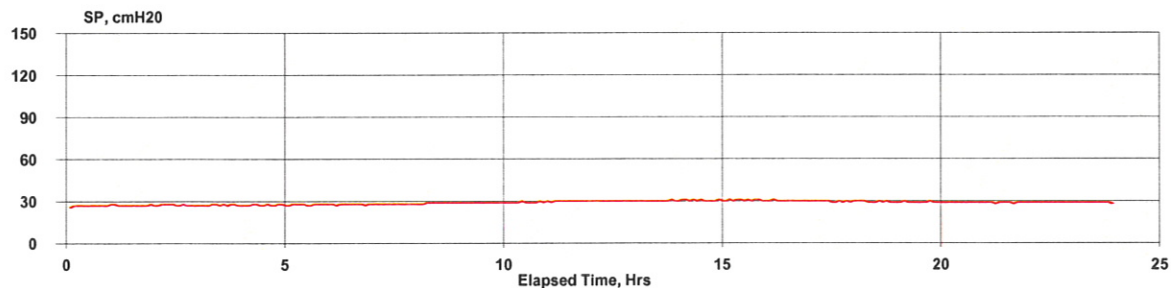
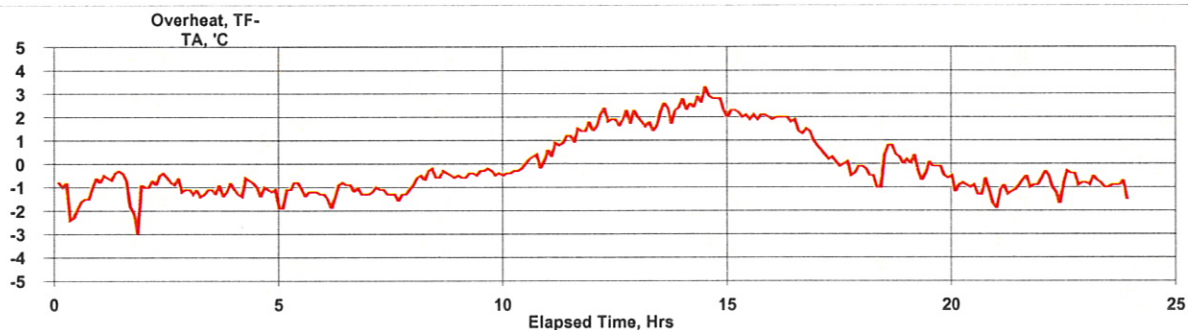
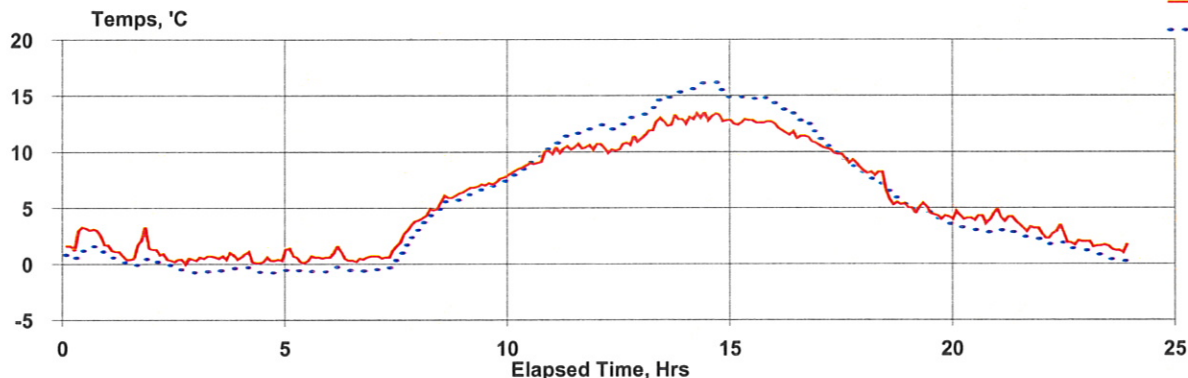
Date Time
dd-mmm hh:mm:ss
Start: 18-04-nov 0:00:08
Stop: 18-05-nov 0:00:04
ET: 23:59

Mass Concentration Data:

Filter ID: 15
Final Wt: mg
Initial Wt: mg
Delta Wt: 0.000 mg
Total Vol: 24.041 m³
Mass Conc: 0 µg/m³

Notes 1:

Notes 2:



Hourly

18-04-nov	0:05:08	592	2.4	1.1	-1.4	27	16.71
18-04-nov	1:05:08	592	1.3	0.2	-1.0	27	16.70
18-04-nov	2:05:08	592	0.5	-0.3	-0.8	27	16.72
18-04-nov	3:05:08	591	0.6	-0.5	-1.2	27	16.71
18-04-nov	4:05:08	591	0.5	-0.6	-1.1	27	16.71
18-04-nov	5:05:08	591	0.6	-0.6	-1.2	28	16.71
18-04-nov	6:05:08	591	0.7	-0.5	-1.2	28	16.71
18-04-nov	7:05:08	591	2.0	0.8	-1.2	28	16.71
18-04-nov	8:05:08	591	5.4	5.0	-0.5	29	16.70
18-04-nov	9:05:08	591	7.2	6.8	-0.4	29	16.71
18-04-nov	10:05:08	591	9.0	9.0	0.0	29	16.71
18-04-nov	11:05:08	591	10.4	11.5	1.1	30	16.71
18-04-nov	12:05:08	590	10.6	12.5	2.0	30	16.72
18-04-nov	13:05:08	589	12.5	14.6	2.1	30	16.71
18-04-nov	14:05:08	589	13.1	15.7	2.6	30	16.71
18-04-nov	15:05:08	589	12.6	14.7	2.1	31	16.71
18-04-nov	16:05:08	588	11.4	13.0	1.6	30	16.71
18-04-nov	17:05:08	588	9.5	9.5	0.0	30	16.71
18-04-nov	18:05:08	588	6.6	6.6	0.0	29	16.71
18-04-nov	19:05:08	588	4.6	4.3	-0.2	29	16.71
18-04-nov	20:05:08	588	4.2	3.1	-1.1	29	16.72
18-04-nov	21:05:08	588	3.5	2.6	-0.9	29	16.72
18-04-nov	22:05:08	588	2.3	1.6	-0.8	29	16.71
18-04-nov	23:05:08	588	1.5	0.6	-0.9	29	16.70

BGI PQ200 Air Sampling System Downloaded 2018 12 nov 13:28:54

Job Details:

Job Name: 18Nov12E.JOB
Version: 5.62
Serial No: 2398
Pump Time: 1764:42
Flags:

Job Code:
Site Name: 2398E
Station Code:
Operators: KN

User1:
User2:

	Max	Min	Avg	Units
BP	592	587	588	mmHg
TA	11.2	-5.3	1.6	°C
Q	---	---	16.71	Lpm

Timer Information:

Date Time
dd-mmm hh:mm:ss
Start: 18-10-nov 0:00:08
Stop: 18-11-nov 0:00:04
ET: 23:59

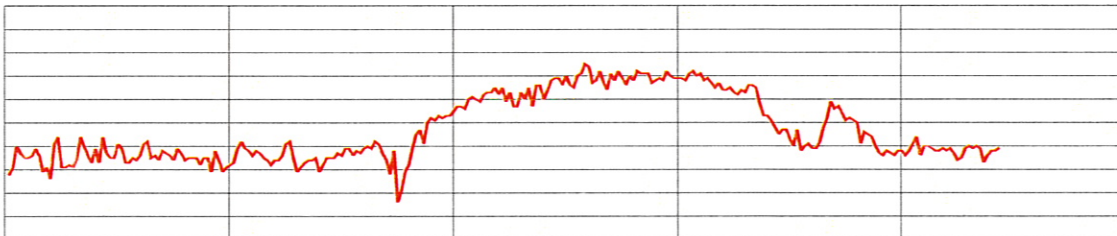
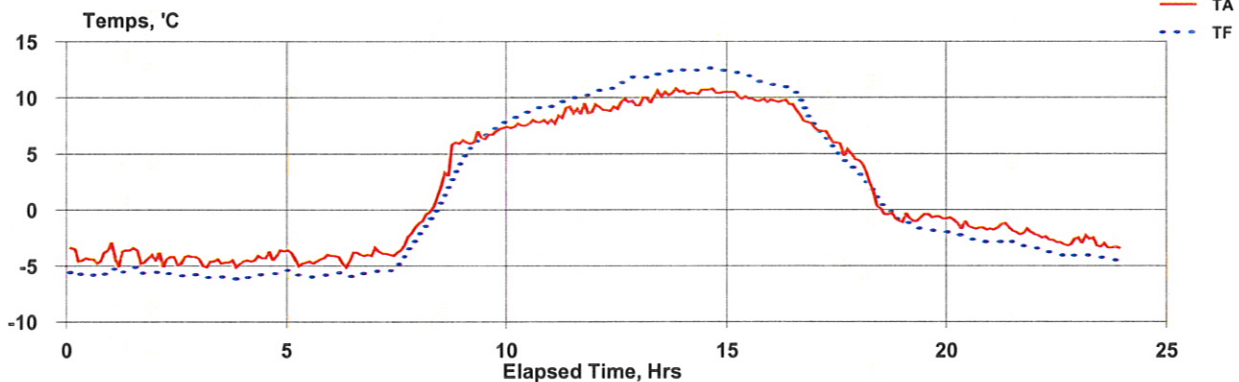
Mass Concentration Data:

Filter ID: 20
Final Wt: mg
Initial Wt: mg
Delta Wt: 0.000 mg
Total Vol: 24.039 m³
Mass Conc: 0 µg/m³

QCV 0.54 %
Max overheat 2.7 °C
occured 10-nov 12:55:58

Notes 1:

Notes 2:



Hourly

18-10-nov	0:05:08	592	-4.1	-5.7	-1.6	26	16.71
18-10-nov	1:05:08	591	-4.2	-5.5	-1.4	26	16.72
18-10-nov	2:05:08	591	-4.4	-5.8	-1.4	27	16.72
18-10-nov	3:05:08	590	-4.7	-6.1	-1.3	27	16.71
18-10-nov	4:05:08	590	-4.1	-5.8	-1.7	27	16.73
18-10-nov	5:05:08	590	-4.5	-5.8	-1.4	27	16.71
18-10-nov	6:05:08	590	-4.2	-5.7	-1.6	27	16.71
18-10-nov	7:05:08	589	-3.1	-4.5	-1.4	28	16.72
18-10-nov	8:05:08	590	2.7	1.0	-1.7	29	16.71
18-10-nov	9:05:08	590	6.7	6.6	-0.1	30	16.71
18-10-nov	10:05:08	590	7.7	8.7	1.0	31	16.71
18-10-nov	11:05:08	589	8.7	9.9	1.2	31	16.73
18-10-nov	12:05:08	589	9.3	11.2	1.9	31	16.71
18-10-nov	13:05:08	588	10.3	12.1	1.9	31	16.72
18-10-nov	14:05:08	588	10.5	12.5	2.0	31	16.70
18-10-nov	15:05:08	587	10.0	11.8	1.8	31	16.72
18-10-nov	16:05:08	587	8.8	10.0	1.2	31	16.70
18-10-nov	17:05:08	587	5.8	5.2	-0.6	30	16.72
18-10-nov	18:05:08	587	0.7	0.8	0.1	30	16.70
18-10-nov	19:05:08	587	-0.7	-1.7	-1.0	30	16.71
18-10-nov	20:05:08	587	-1.4	-2.5	-1.1	30	16.72
18-10-nov	21:05:08	587	-1.8	-3.1	-1.3	30	16.70
18-10-nov	22:05:08	587	-2.7	-3.9	-1.2	30	16.71
18-10-nov	23:05:08	587	-3.0	-4.3	-1.2	29	16.71

BGI PQ200 Air Sampling System Downloaded 2018 19 nov 10:47:27

Job Details:

Job Name: 18Nov19E.JOB
Version: 5.62
Serial No: 2398
Pump Time: 1788:41
Flags:

Job Code:
Site Name: 2398E
Station Code:
Operators: KN

User1: yyyyyyyyyyyyyyyyyyyyyyyyyyyyyyy
User2: yyyyyyyyyyyyyyyyyyyyyyyyyyy

	Max	Min	Avg	Units
BP	592	589	590	mmHg
TA	14.2	-2.2	4.8	°C
Q	---	---	16.71	Lpm

Timer Information:

Date Time
dd-mmm hh:mm:ss
Start: 18-16-nov 0:00:08
Stop: 18-17-nov 0:00:04
ET: 23:59

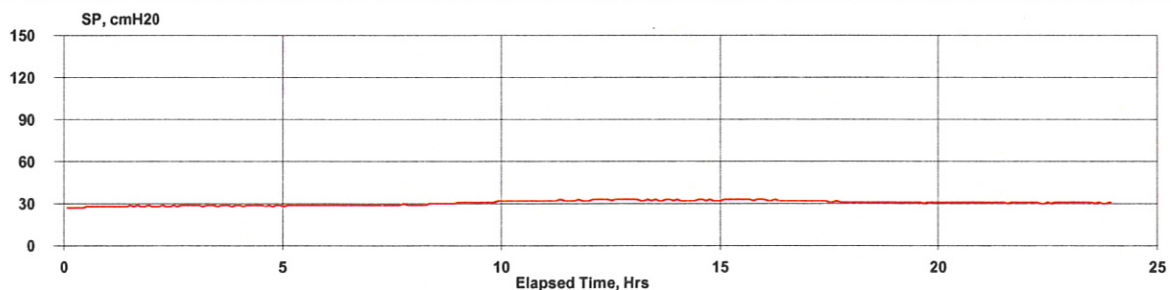
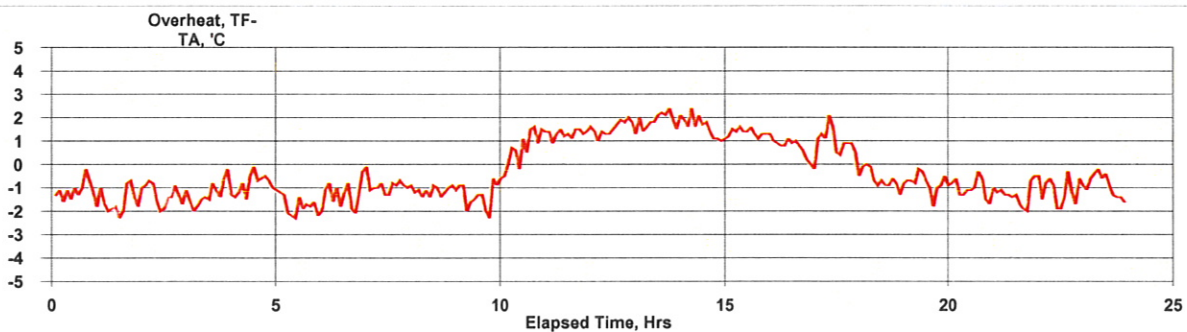
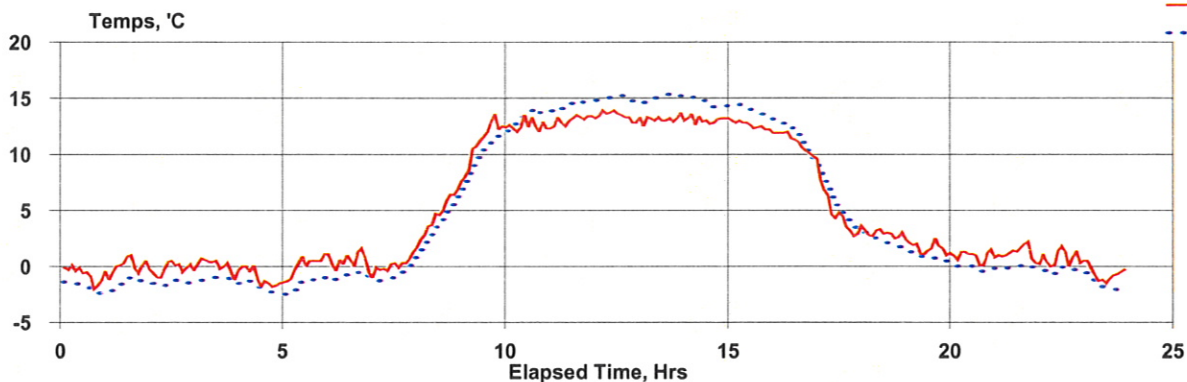
Mass Concentration Data:

Filter ID: 40
Final Wt: mg
Initial Wt: mg
Delta Wt: 0.000 mg
Total Vol: 24.041 m³
Mass Conc: 0 µg/m³

QCV 0.56 %
Max overheat 4 °C
occured 18-nov 18:00:30

Notes 1:

Notes 2:



Hourly

18-16-nov	0:05:08	592	-0.7	-1.8	-1.2	28	16.72
18-16-nov	1:05:08	592	0.0	-1.5	-1.5	28	16.71
18-16-nov	2:05:08	592	-0.2	-1.5	-1.3	29	16.71
18-16-nov	3:05:08	591	0.1	-1.2	-1.3	29	16.72
18-16-nov	4:05:08	591	-1.0	-1.9	-0.8	29	16.71
18-16-nov	5:05:08	591	0.2	-1.6	-1.8	29	16.72
18-16-nov	6:05:08	591	0.4	-0.8	-1.2	29	16.71
18-16-nov	7:05:08	591	0.3	-0.7	-1.0	29	16.71
18-16-nov	8:05:08	592	5.0	3.9	-1.1	30	16.73
18-16-nov	9:05:08	592	11.4	10.0	-1.3	31	16.72
18-16-nov	10:05:08	592	12.5	13.3	0.8	32	16.72
18-16-nov	11:05:08	591	13.1	14.4	1.3	32	16.71
18-16-nov	12:05:08	591	13.4	15.0	1.5	33	16.72
18-16-nov	13:05:08	590	13.1	15.0	1.9	33	16.71
18-16-nov	14:05:08	590	13.1	14.6	1.6	32	16.71
18-16-nov	15:05:08	590	12.5	13.9	1.4	33	16.72
18-16-nov	16:05:08	590	11.0	11.7	0.7	32	16.71
18-16-nov	17:05:08	590	4.6	5.5	0.9	32	16.72
18-16-nov	18:05:08	590	2.9	2.2	-0.7	31	16.72
18-16-nov	19:05:08	590	1.6	0.8	-0.8	31	16.72
18-16-nov	20:05:08	590	0.9	-0.1	-1.0	31	16.71
18-16-nov	21:05:08	590	1.2	-0.1	-1.2	31	16.72
18-16-nov	22:05:08	590	0.8	-0.4	-1.1	31	16.71
18-16-nov	23:05:08	590	-0.7	-1.6	-0.9	31	16.72

Downloaded 2018 30 nov 17:12:20

Job Details:

Job Name: 18Nov30E.JOB

Version: 5.62

Serial No: 2398

Pump Time: 1836:40

Flags:

Job Code:

Site Name:

Station Code: 2398E

Operators:

```
User1: yyyyyyyyyyyyyyyyyyyyyyyyyyyyyyyyyyyyyyy
```

User2: ~~~~~

	Max	Min	Avg	Units
BP	590	586	587	mmHg
TA	9.6	-2.3	3	°C
Q	---	---	16.71	Lpm

Timer Information:

Date _____

Time

dd-mm

hh:mm:ss

Start: 18-28-nov

0:00:08

Stop: 18-29-nov

0:00:05

ET:

23:59

Mass Concentration Data:

Filter ID: JBR8

Final Wt: mg

Initial Wt: mg

Delta Wt: 0.000 mg

Total Vol: 24.04 m³

Mass Conc: $\mu\text{g}/\text{m}^3$

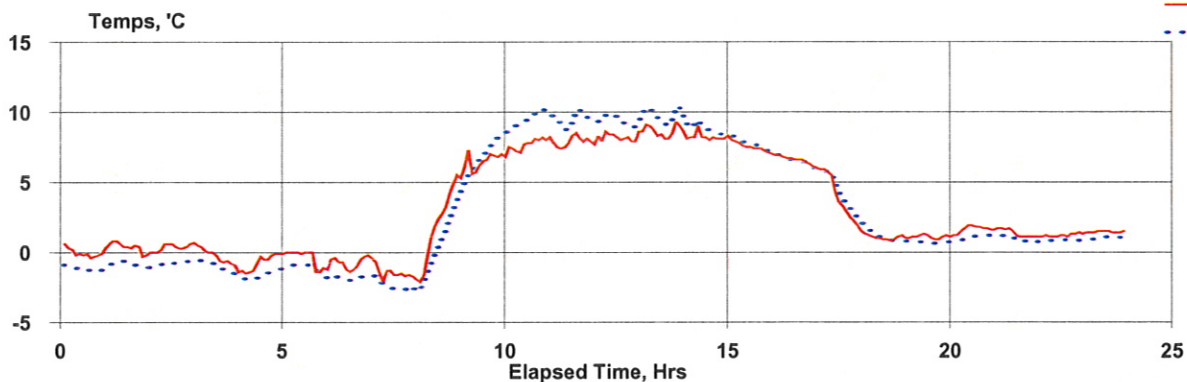
QCV	0.54 %
-----	--------

Max overheat	3.1 °C
--------------	--------

occured 30-nov 16:06:34

Notes 1:

Notes 2:

[illegible]

Hourly

18-28-nov	0:05:08	589	0.0	-1.2	-1.2	29	16.70
18-28-nov	1:05:08	589	0.4	-0.9	-1.2	30	16.70
18-28-nov	2:05:08	589	0.4	-0.8	-1.2	31	16.71
18-28-nov	3:05:08	588	-0.4	-1.0	-0.7	31	16.72
18-28-nov	4:05:08	588	-0.7	-1.6	-1.0	31	16.71
18-28-nov	5:05:08	588	-0.4	-1.1	-0.7	32	16.72
18-28-nov	6:05:08	588	-0.7	-1.8	-1.1	32	16.72
18-28-nov	7:05:08	587	-1.5	-2.4	-0.9	31	16.73
18-28-nov	8:05:08	588	2.3	0.6	-1.7	32	16.71
18-28-nov	9:05:08	588	6.5	6.9	0.3	34	16.71
18-28-nov	10:05:08	588	7.8	9.5	1.8	34	16.71
18-28-nov	11:05:08	588	7.9	9.5	1.6	34	16.69
18-28-nov	12:05:08	587	8.2	9.4	1.2	34	16.71
18-28-nov	13:05:08	586	8.6	9.8	1.1	34	16.70
18-28-nov	14:05:08	586	8.2	8.8	0.5	34	16.72
18-28-nov	15:05:08	586	7.5	7.7	0.2	34	16.71
18-28-nov	16:05:08	587	6.6	6.5	0.0	34	16.72
18-28-nov	17:05:08	587	3.8	4.2	0.5	34	16.71
18-28-nov	18:05:08	587	1.0	1.1	0.1	34	16.71
18-28-nov	19:05:08	587	1.1	0.7	-0.4	34	16.71
18-28-nov	20:05:08	587	1.6	1.0	-0.7	33	16.72
18-28-nov	21:05:08	587	1.3	0.9	-0.4	33	16.70
18-28-nov	22:05:08	587	1.2	0.8	-0.4	34	16.70
18-28-nov	23:05:08	586	1.4	1.0	-0.5	34	16.71

BGI PQ200 Air Sampling System Downloaded 2018 06 dec 14:28:53

Job Details:

Job Name: 18Dec06E.JOB
Version: 5.62
Serial No: 2398
Pump Time: 1860:39
Flags:

Job Code:
Site Name:
Station Code: 2398E
Operators:

User1: yyyyyyyyyyyyyyyyyyyyyyyyyyyyyy
User2: yyyyyyyyyyyyyyyyyyyyyyyyyyyyyy

	Max	Min	Avg	Units
BP	595	591	593	mmHg
TA	0.1	-13.4	-7.8	°C
Q	---	---	16.71	Lpm

Timer Information:

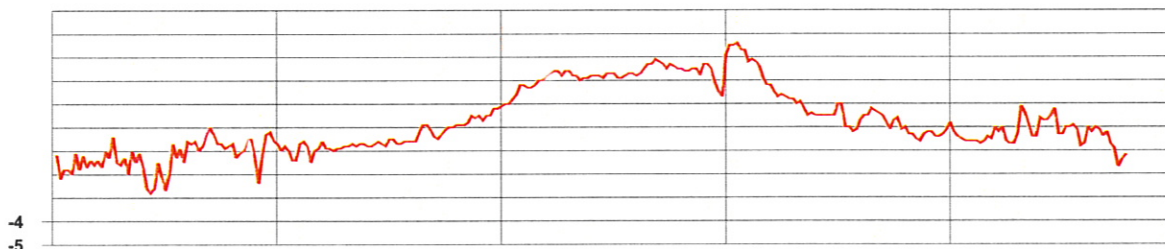
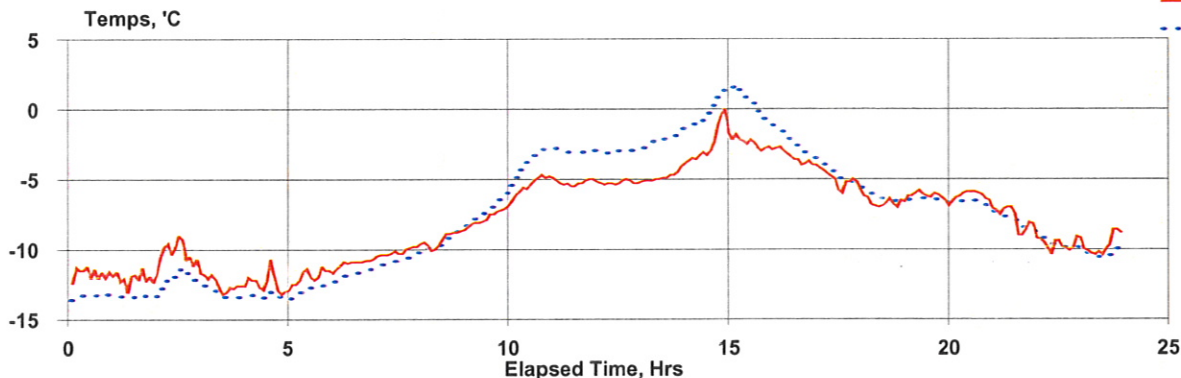
Date	Time
dd-mmm	hh:mm:ss
Start: 18-04-dec	0:00:08
Stop: 18-05-dec	0:00:05
ET: 23:59	

Mass Concentration Data:

Filter ID:	25	
Final Wt:		mg
Initial Wt:		mg
Delta Wt:	0.000	mg
Total Vol:	24.042	m ³
Mass Conc:	0	µg/m ³

QCV 0.55 %
Max overheat 3.9 °C
occured 04-dec 15:11:58

Notes 1:
Notes 2:



Hourly

18-04-dec	0:05:08	593	-11.7	-13.3	-1.6	26	16.72
18-04-dec	1:05:08	593	-12.1	-13.4	-1.3	26	16.71
18-04-dec	2:05:08	592	-10.3	-12.1	-1.8	27	16.71
18-04-dec	3:05:08	593	-12.5	-13.1	-0.6	27	16.72
18-04-dec	4:05:08	593	-12.4	-13.3	-0.9	27	16.72
18-04-dec	5:05:08	593	-11.9	-12.8	-1.0	27	16.71
18-04-dec	6:05:08	593	-10.9	-11.7	-0.8	27	16.71
18-04-dec	7:05:08	593	-10.1	-10.8	-0.6	27	16.72
18-04-dec	8:05:08	594	-9.3	-9.4	-0.2	28	16.72
18-04-dec	9:05:08	594	-7.7	-7.2	0.5	28	16.72
18-04-dec	10:05:08	594	-5.4	-3.7	1.6	29	16.71
18-04-dec	11:05:08	594	-5.3	-3.0	2.2	29	16.71
18-04-dec	12:05:08	594	-5.3	-3.0	2.2	29	16.72
18-04-dec	13:05:08	594	-4.8	-2.1	2.6	29	16.72
18-04-dec	14:05:08	593	-2.4	-0.1	2.3	30	16.71
18-04-dec	15:05:08	593	-2.5	0.4	2.8	30	16.71
18-04-dec	16:05:08	593	-3.5	-2.5	1.0	29	16.73
18-04-dec	17:05:08	593	-5.1	-4.7	0.4	29	16.71
18-04-dec	18:05:08	593	-6.7	-6.3	0.4	29	16.71
18-04-dec	19:05:08	593	-6.2	-6.5	-0.3	29	16.72
18-04-dec	20:05:08	593	-6.2	-6.7	-0.5	29	16.71
18-04-dec	21:05:08	592	-7.9	-8.1	-0.1	28	16.72
18-04-dec	22:05:08	593	-9.7	-9.7	0.0	28	16.71
18-04-dec	23:05:08	592	-9.7	-10.4	-0.6	28	16.71

BGI PQ200 Air Sampling System

Downloaded 2018 11 dec 15:15:13

Job Details:

Job Name: 18Dec11E.JOB
Version: 5.62
Serial No: 2398
Pump Time: 1884:38
Flags:

Job Code:
Site Name:
Station Code: 2398E
Operators:

User1: yyyyyyyyyyyyyyyyyyyyyyyyyyyyyyy
User2: yyyyyyyyyyyyyyyyyyyyyyyyyyyyyyy

	Max	Min	Avg	Units
BP	597	592	594	mmHg
TA	8.1	-6.1	-0.4	°C
Q	---	---	16.7	Lpm

QCV 0.53 %
Max overheat 4.4 °C
occured 10-dec 12:25:47

Timer Information:

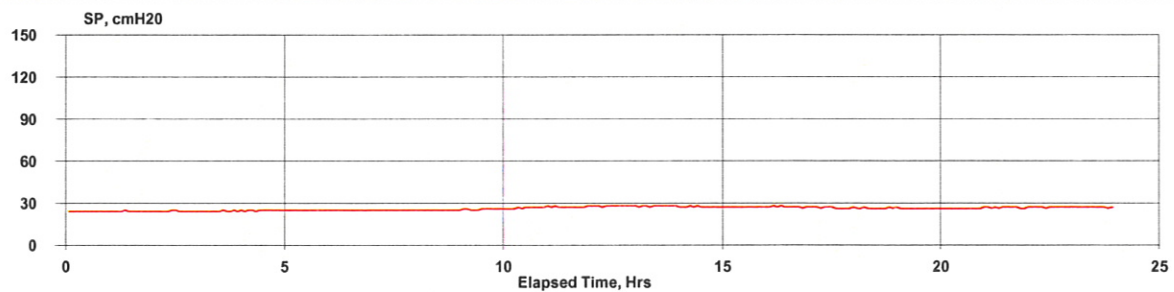
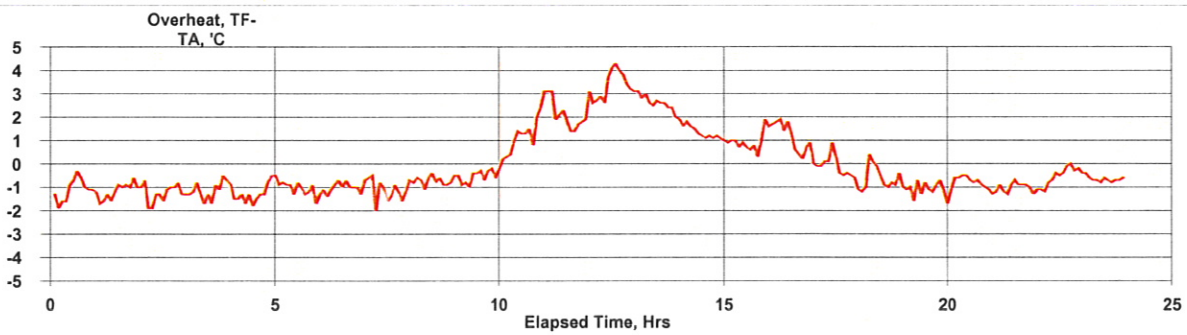
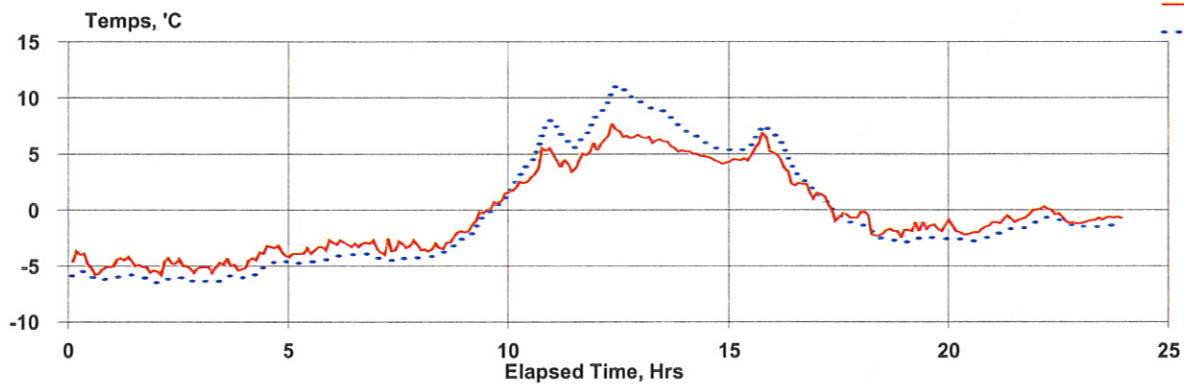
	Date	Time
	dd-mmm	hh:mm:ss
Start:	18-10-dec	0:00:08
Stop:	18-11-dec	0:00:04
ET:	23:59	

Mass Concentration Data:

Filter ID:	33
Final Wt:	mg
Initial Wt:	mg
Delta Wt:	0.000 mg
Total Vol:	24.039 m ³
Mass Conc:	0 µg/m ³

Notes 1:

Notes 2:



Hourly

18-10-dec	0:05:08	596	-4.9	-6.0	-1.1	24	16.70
18-10-dec	1:05:08	596	-4.9	-6.0	-1.2	24	16.71
18-10-dec	2:05:08	596	-5.0	-6.3	-1.3	24	16.71
18-10-dec	3:05:08	595	-5.1	-6.2	-1.1	24	16.70
18-10-dec	4:05:08	595	-3.9	-5.1	-1.3	25	16.71
18-10-dec	5:05:08	595	-3.5	-4.6	-1.1	25	16.71
18-10-dec	6:05:08	595	-3.0	-4.0	-1.0	25	16.72
18-10-dec	7:05:08	595	-3.3	-4.4	-1.1	25	16.71
18-10-dec	8:05:08	595	-2.9	-3.6	-0.7	25	16.71
18-10-dec	9:05:08	595	0.1	-0.5	-0.5	26	16.71
18-10-dec	10:05:08	596	3.5	4.8	1.3	27	16.72
18-10-dec	11:05:08	595	4.6	6.7	2.1	27	16.70
18-10-dec	12:05:08	594	6.7	10.0	3.4	28	16.71
18-10-dec	13:05:08	594	5.9	8.4	2.6	28	16.71
18-10-dec	14:05:08	593	4.6	5.9	1.3	27	16.72
18-10-dec	15:05:08	593	5.2	6.2	1.0	27	16.71
18-10-dec	16:05:08	593	2.7	3.7	1.1	27	16.71
18-10-dec	17:05:08	593	-0.1	-0.3	-0.2	27	16.72
18-10-dec	18:05:08	593	-1.8	-2.4	-0.6	26	16.71
18-10-dec	19:05:08	593	-1.5	-2.6	-1.1	26	16.72
18-10-dec	20:05:08	593	-1.8	-2.6	-0.8	26	16.72
18-10-dec	21:05:08	593	-0.7	-1.7	-1.0	27	16.72
18-10-dec	22:05:08	593	-0.5	-1.1	-0.5	27	16.71
18-10-dec	23:05:08	593	-0.8	-1.5	-0.7	27	16.71

BGI PQ200 Air Sampling System Downloaded 2018 17 dec 09:30:48

Job Details:

Job Name: 18Dec17E.JOB
Version: 5.62
Serial No: 2398
Pump Time: 1908:37
Flags:

Job Code:
Site Name:
Station Code: 2398E
Operators:

User1: yyyyyyyyyyyyyyyyyyyyyyyyyyy
User2: yyyyyyyyyyyyyyyyyyyyyyyyyyy

	Max	Min	Avg	Units
BP	596	593	594	mmHg
TA	10.9	-2.3	2.9	°C
Q	---	---	16.7	Lpm

QCV 0.53 %
Max overheat 2.7 °C
occured 16-dec 12:49:08

Timer Information:

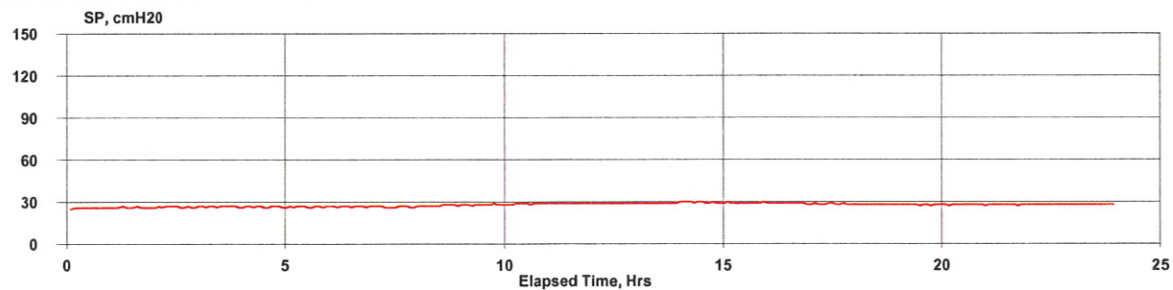
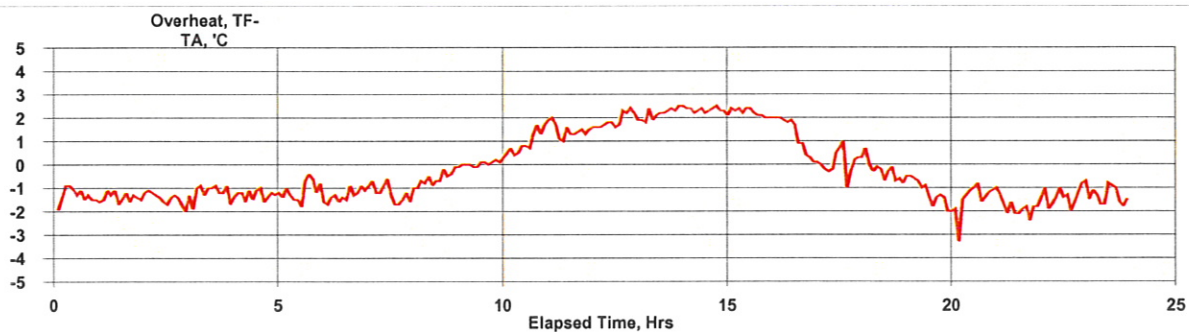
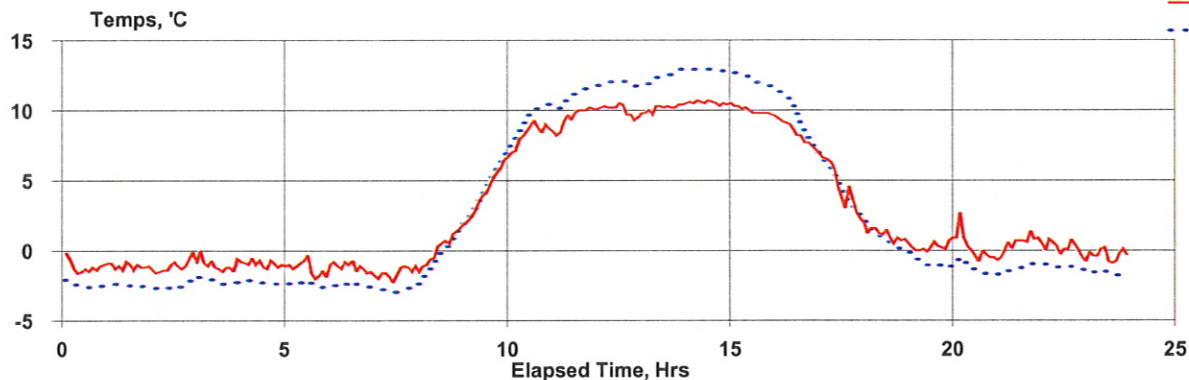
Date Time
dd-mmm hh:mm:ss
Start: 18-16-dec 0:00:08
Stop: 18-17-dec 0:00:05
ET: 23:59

Mass Concentration Data:

Filter ID: 15
Final Wt: mg
Initial Wt: mg
Delta Wt: 0.000 mg
Total Vol: 24.038 m³
Mass Conc: 0 µg/m³

Notes 1:

Notes 2:



Hourly

18-16-dec	0:05:08	595	-1.1	-2.5	-1.3	26	16.71
18-16-dec	1:05:08	595	-1.2	-2.5	-1.4	26	16.71
18-16-dec	2:05:08	595	-1.1	-2.5	-1.5	27	16.71
18-16-dec	3:05:08	595	-1.0	-2.2	-1.2	27	16.71
18-16-dec	4:05:08	595	-1.0	-2.2	-1.3	27	16.72
18-16-dec	5:05:08	595	-1.3	-2.4	-1.2	27	16.71
18-16-dec	6:05:08	595	-1.2	-2.5	-1.3	27	16.71
18-16-dec	7:05:08	595	-1.6	-2.8	-1.2	27	16.71
18-16-dec	8:05:08	595	0.4	-0.1	-0.6	27	16.72
18-16-dec	9:05:08	596	4.4	4.5	0.1	28	16.72
18-16-dec	10:05:08	596	8.4	9.4	1.0	29	16.71
18-16-dec	11:05:08	596	9.6	11.0	1.4	29	16.72
18-16-dec	12:05:08	595	10.0	11.9	1.9	29	16.72
18-16-dec	13:05:08	595	10.2	12.4	2.2	29	16.70
18-16-dec	14:05:08	595	10.5	12.9	2.3	30	16.72
18-16-dec	15:05:08	595	9.9	12.1	2.2	29	16.71
18-16-dec	16:05:08	594	8.2	9.4	1.2	29	16.71
18-16-dec	17:05:08	595	4.3	4.4	0.1	28	16.71
18-16-dec	18:05:08	594	1.0	0.7	-0.3	28	16.71
18-16-dec	19:05:08	594	0.3	-1.0	-1.3	28	16.71
18-16-dec	20:05:08	594	0.1	-1.3	-1.4	28	16.70
18-16-dec	21:05:08	594	0.5	-1.3	-1.8	28	16.71
18-16-dec	22:05:08	594	0.1	-1.2	-1.3	28	16.71
18-16-dec	23:05:08	594	-0.3	-1.7	-1.4	28	16.71

BGI PQ200 Air Sampling System Downloaded 2018 23 dec 14:13:33

Job Details:

Job Name: 18Dec23E.JOB
Version: 5.62
Serial No: 2398
Pump Time: 1932:37
Flags:

Job Code:
Site Name:
Station Code: 2398E
Operators:

User1: xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx
User2: xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx

	Max	Min	Avg	Units
BP	594	587	591	mmHg
TA	7.4	-3.8	0.9	°C
Q	---	---	16.71	Lpm

Timer Information:

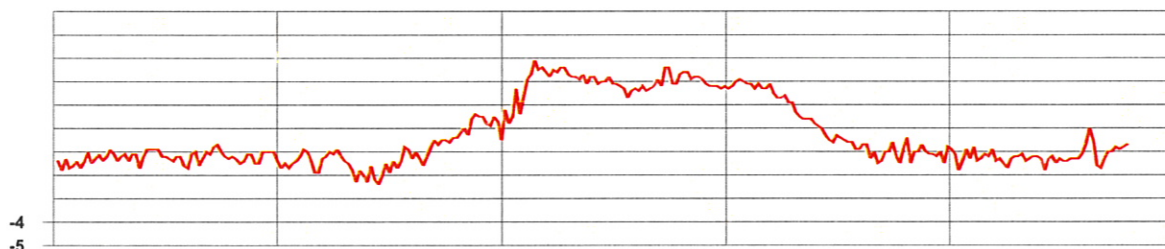
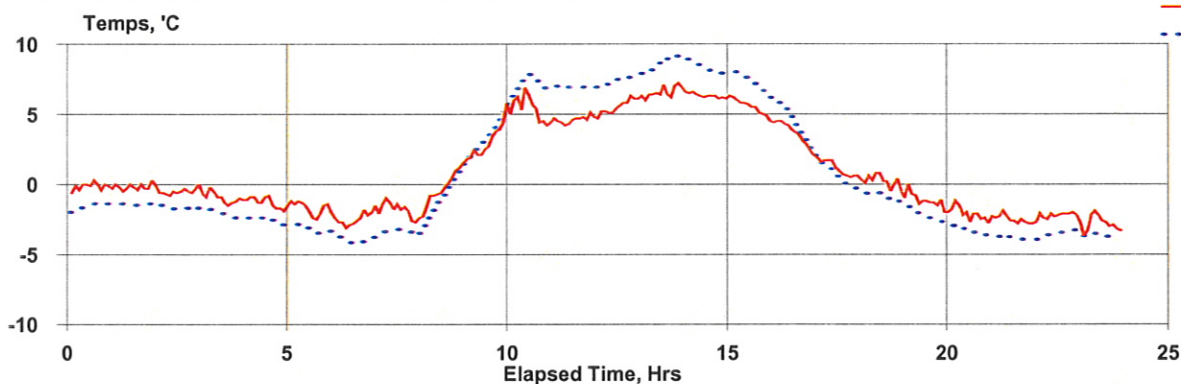
Date	Time
dd-mmm	hh:mm:ss
Start: 18-22-dec	0:00:08
Stop: 18-23-dec	0:00:04
ET: 24:00:00	

Mass Concentration Data:

Filter ID:	20
Final Wt:	mg
Initial Wt:	mg
Delta Wt:	0.000 mg
Total Vol:	24.041 m ³
Mass Conc:	0 µg/m ³

QCV 0.53 %
Max overheat 3 °C
occured 22-dec 10:44:26

Notes 1:
Notes 2:



Hourly

18-22-dec	0:04:46	589	-0.1	-1.6	-1.4	29	16.69
18-22-dec	1:04:46	589	-0.2	-1.4	-1.2	30	16.71
18-22-dec	2:04:46	589	-0.5	-1.7	-1.2	30	16.71
18-22-dec	3:04:46	589	-1.0	-2.1	-1.1	30	16.71
18-22-dec	4:04:46	589	-1.3	-2.5	-1.2	30	16.70
18-22-dec	5:04:46	590	-1.7	-3.2	-1.5	30	16.71
18-22-dec	6:04:46	590	-2.4	-4.0	-1.5	30	16.72
18-22-dec	7:04:46	590	-1.8	-3.4	-1.6	30	16.72
18-22-dec	8:04:46	591	-0.2	-1.0	-0.8	31	16.70
18-22-dec	9:04:46	591	3.1	3.3	0.2	32	16.71
18-22-dec	10:04:46	592	5.4	7.0	1.7	33	16.70
18-22-dec	11:04:46	593	4.6	6.9	2.3	33	16.71
18-22-dec	12:04:46	592	5.5	7.4	1.9	33	16.71
18-22-dec	13:04:46	592	6.6	8.5	2.0	33	16.70
18-22-dec	14:04:46	592	6.3	8.3	2.0	33	16.71
18-22-dec	15:04:46	593	5.5	7.4	1.9	33	16.71
18-22-dec	16:04:46	593	3.6	4.5	0.9	32	16.70
18-22-dec	17:04:46	593	1.1	0.7	-0.5	31	16.71
18-22-dec	18:04:46	593	0.2	-0.8	-1.1	31	16.71
18-22-dec	19:04:46	593	-1.1	-2.2	-1.0	31	16.71
18-22-dec	20:04:46	594	-2.1	-3.3	-1.2	31	16.71
18-22-dec	21:04:46	594	-2.5	-3.8	-1.3	31	16.71
18-22-dec	22:04:46	594	-2.2	-3.6	-1.4	31	16.71
18-22-dec	23:04:46	594	-2.8	-3.7	-0.9	31	16.70

BGI PQ200 Air Sampling System Downloaded 2018 29 dec 12:19:08

Job Details:

Job Name: 18Dec29E.JOB
Version: 5.62
Serial No: 2398
Pump Time: 1956:36
Flags:

Job Code:
Site Name:
Station Code: 2398E
Operators:

User1:
User2:

	Max	Min	Avg	Units
BP	590	580	585	mmHg
TA	-4.5	-10.9	-8.2	°C
Q	---	---	16.71	Lpm

Timer Information:

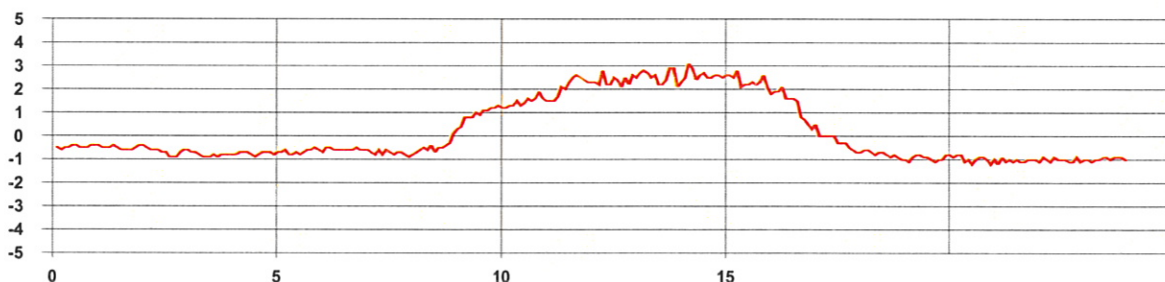
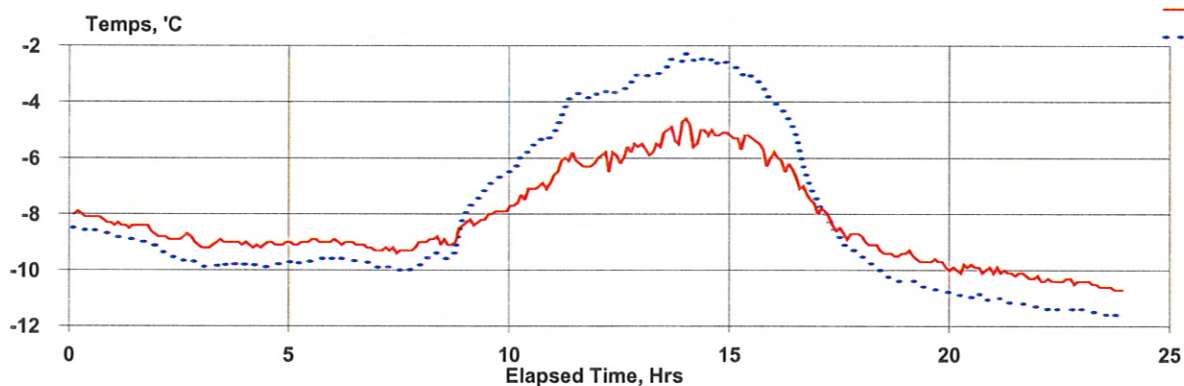
Date	Time
dd-mmm	hh:mm:ss
Start: 18-28-dec	0:00:08
Stop: 18-29-dec	0:00:05
ET: 23:59	

Mass Concentration Data:

Filter ID:	JBR7
Final Wt:	mg
Initial Wt:	mg
Delta Wt:	0.000 mg
Total Vol:	24.038 m ³
Mass Conc:	0 ug/m ³

QCV 0.52 %
Max overheat 3.3 °C
occured 28-dec 13:45:33

Notes 1:
Notes 2:



Hourly

18-28-dec	0:05:08	582	-8.1	-8.6	-0.5	25	16.71
18-28-dec	1:05:08	582	-8.5	-9.0	-0.5	25	16.70
18-28-dec	2:05:08	583	-8.9	-9.6	-0.7	26	16.72
18-28-dec	3:05:08	583	-9.0	-9.9	-0.8	26	16.71
18-28-dec	4:05:08	583	-9.1	-9.8	-0.7	26	16.70
18-28-dec	5:05:08	583	-9.0	-9.7	-0.7	26	16.71
18-28-dec	6:05:08	584	-9.1	-9.7	-0.6	26	16.71
18-28-dec	7:05:08	584	-9.2	-10.0	-0.7	26	16.71
18-28-dec	8:05:08	584	-8.8	-9.2	-0.4	26	16.70
18-28-dec	9:05:08	585	-8.1	-7.1	1.0	27	16.70
18-28-dec	10:05:08	585	-7.2	-5.7	1.5	28	16.71
18-28-dec	11:05:08	585	-6.2	-4.0	2.1	28	16.72
18-28-dec	12:05:08	585	-5.8	-3.5	2.4	28	16.73
18-28-dec	13:05:08	586	-5.3	-2.8	2.5	28	16.70
18-28-dec	14:05:08	586	-5.2	-2.5	2.6	28	16.71
18-28-dec	15:05:08	587	-5.6	-3.3	2.3	28	16.72
18-28-dec	16:05:08	587	-6.9	-5.6	1.3	28	16.71
18-28-dec	17:05:08	587	-8.5	-8.8	-0.3	27	16.71
18-28-dec	18:05:08	588	-9.3	-10.1	-0.8	27	16.71
18-28-dec	19:05:08	588	-9.7	-10.6	-0.9	27	16.71
18-28-dec	20:05:08	589	-10.0	-10.9	-1.0	27	16.72
18-28-dec	21:05:08	589	-10.1	-11.2	-1.1	27	16.72
18-28-dec	22:05:08	590	-10.4	-11.4	-1.0	27	16.71
18-28-dec	23:05:08	590	-10.6	-11.5	-1.0	27	16.72

APPENDIX C

Precision and Single-Point Flow Rate Checks

Alton Coal Development

Coal Hollow

Precision Report For Collocated Samplers

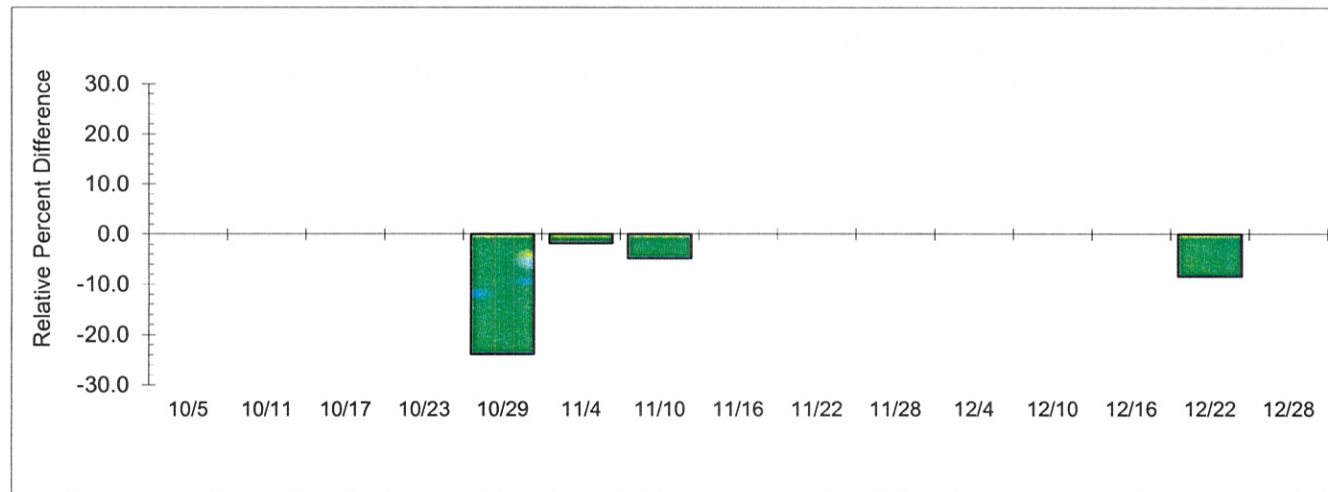
STP PM10 Concentrations($\mu\text{g}/\text{m}^3$)
October 1, 2018 - December 31, 2018

Date	10/5	10/11	10/17	10/23	10/29	11/4	11/10	11/16	11/22	11/28	12/4	12/10	12/16	12/22	12/28
Coal Hollow-B					19.2	5.6	8.0			6.5	2.4	7.3	1.7	5.7	4.1
Coal Hollow-C	3.9	4.5	5.8	5.2	24.4	5.7	8.4						1.8	6.2	
Rel. %Diff.	*	*	*	*	-23.9	-1.8	-4.9	*	*	*	*	*	*	-8.4	*

Relative Percent Difference = $((X - Y) / ((X + Y) / 2)) * 100$

X=Coal Hollow-B

Y =Coal Hollow-C



Statistical Calculations:

n= 4.0 S Dev= 9.8 %
Mean= -9.7 ** CV= 15.7 %

* Both sample concentrations must be greater than or equal to $3 \mu\text{g}/\text{m}^3$ to be used for these precision calculations.

For a detailed discussion of these precision calculations, refer to 40 CFR 58, Appendix A.

** CV - Upper 90% Confidence bound for Coefficient of Variation

Alton Coal Development

Coal Hollow

Precision Report For Collocated Samplers

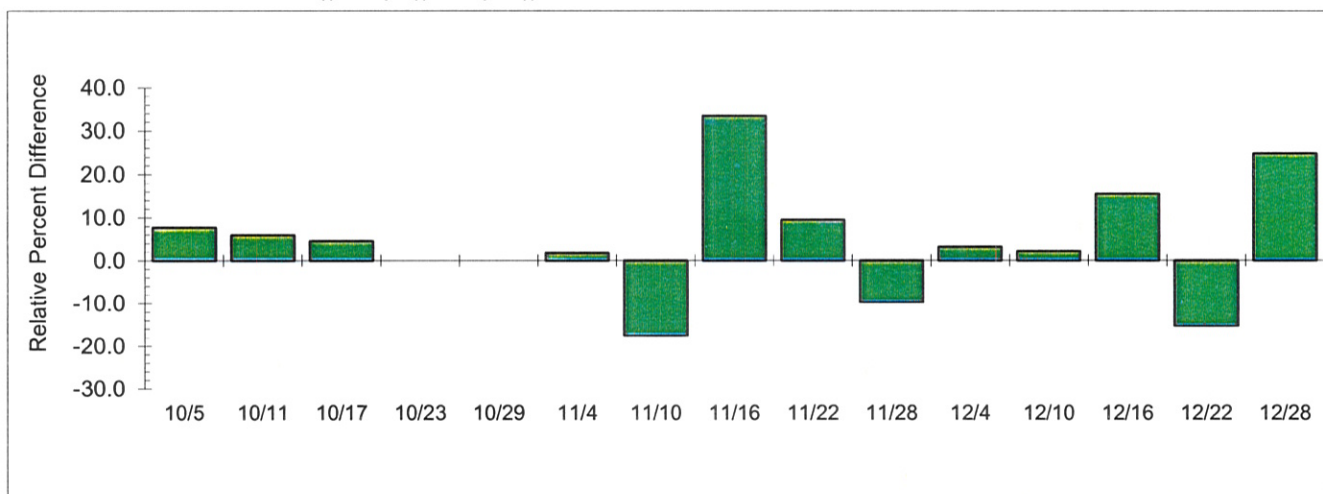
STP PM10 Concentrations($\mu\text{g}/\text{m}^3$)
October 1, 2018 - December 31, 2018

Date	10/5	10/11	10/17	10/23	10/29	11/4	11/10	11/16	11/22	11/28	12/4	12/10	12/16	12/22	12/28
Coal Hollow-D	6.7	7.0	17.8		93.1	5.8	40.6	41.9	14.4	191.6	3.2	9.5	9.0	12.1	27.6
Coal Hollow-E	6.2	6.6	17.0	4.7		5.7	48.4	29.9	13.1	211.2	3.1	9.3	7.7	14.1	21.5
Rel. %Diff.	7.8	5.9	4.6	*	*	1.7	-17.5	33.4	9.5	-9.7	3.2	2.1	15.6	-15.3	24.8

Relative Percent Difference = $((X - Y) / ((X + Y) / 2)) * 100$

X=Coal Hollow-D

Y =Coal Hollow-E



Statistical Calculations:

n= 13.0 S Dev= 14.4 %
Mean= 5.1 ** CV= 14.1 %

* Both sample concentrations must be greater than or equal to 3 $\mu\text{g}/\text{m}^3$ to be used for these precision calculations.

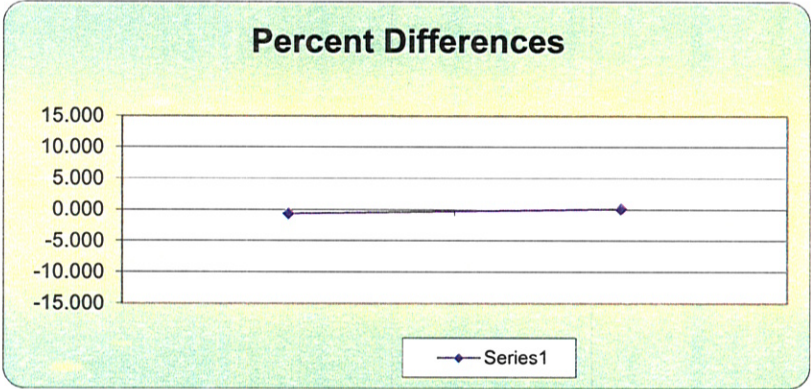
For a detailed discussion of these precision calculations, refer to 40 CFR 58, Appendix A.

** CV - Upper 90% Confidence bound for Coefficient of Variation

Alton Coal Development, LLC - Coal Hollow Mine

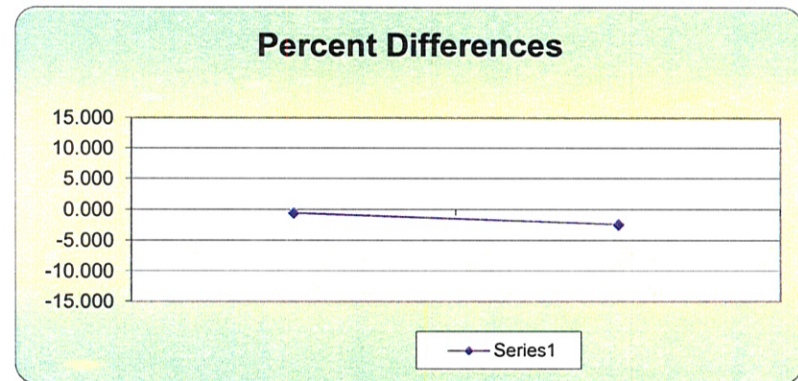
One-Point Flow Rate Bias Estimate

Site ID: Monitor 962A		Pollutant type:		Bias (%)			
Meas Val (Y)	Audit Val (X)	d (Eqn. 1)	25th Percentile	d ²	d	d ²	
16.7	16.8	-0.595	-0.401	0.354	0.595	0.354	
16.7	16.67	0.180	75th Percentile	0.032	0.180	0.032	
			-0.014				
		n	Σ d	"AB" (Eqn 4)			
		2	0.775			0.388	
		n-1	Σ d ²	"AS" (Eqn 5)			
		1	0.387			0.294	
		Bias (%) (Eqn 3)		Both Signs Positive			
		1.7		FALSE			
		Signed Bias (%)		Both Signs Negative			
		-1.7		TRUE			



Alton Coal Development, LLC - Coal Hollow Mine
One-Point Flow Rate Bias Estimate

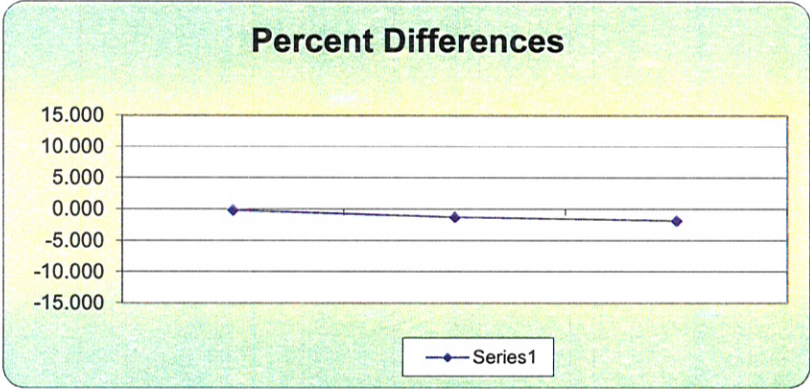
Site ID: Monitor 963B		Pollutant type:			Bias (%)				
Meas Val (Y)	Audit Val (X)	d (Eqn. 1)	25th Percentile	d ²	d	d ²			
16.7	16.78	-0.477	-1.874	0.227	0.477	0.227			
16.7	17.1	-2.339	75th Percentile	5.472	2.339	5.472			
			-0.942						
		n	Σ d			"AB" (Eqn 4)			
		2	2.816					1.408	
		n-1	Σ d ²			"AS" (Eqn 5)			
		1	5.699					1.317	
		Bias (%) (Eqn 3)		7.29		Both Signs Positive		FALSE	
		Signed Bias (%)		-7.29		Both Signs Negative		TRUE	



Alton Coal Development, LLC - Coal Hollow Mine

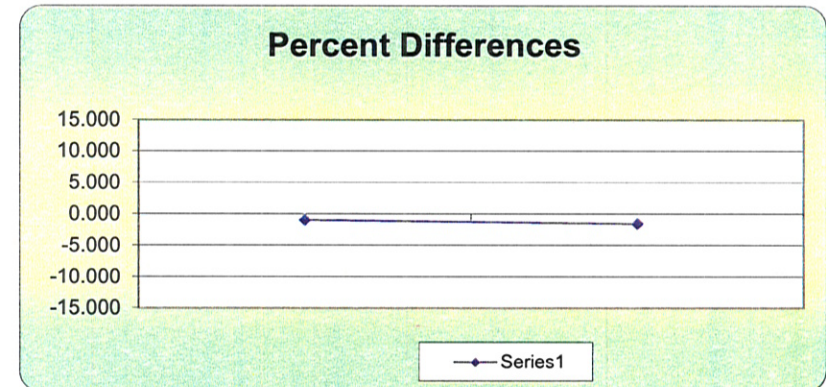
One-Point Flow Rate Bias Estimate

Site ID: Monitor 964C		Pollutant type:		Bias (%)			
Meas Val (Y)	Audit Val (X)	d (Eqn. 1)	25th Percentile	d ²	d	d ²	
16.7	16.72	-0.120	-1.532	0.014	0.120	0.014	
16.7	16.91	-1.242	75th Percentile	1.542	1.242	1.542	
16.7	17.01	-1.822	-0.681	3.321	1.822	3.321	
				n	Σ d	"AB" (Eqn 4)	
				3	3.184	1.061	
				n-1	Σ d ²	"AS" (Eqn 5)	
				2	4.878	0.866	
				Bias (%) (Eqn 3)		Both Signs Positive	
				2.52		FALSE	
				Signed Bias (%)		Both Signs Negative	
				-2.52		TRUE	



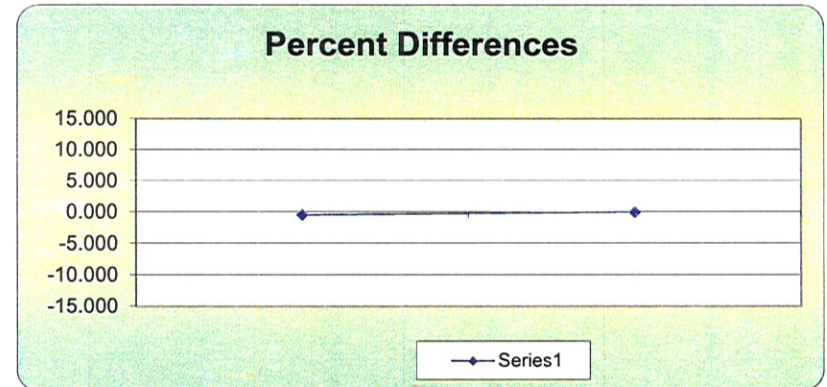
Alton Coal Development, LLC - Coal Hollow Mine
One-Point Flow Rate Bias Estimate

Site ID: Monitor 2366D		Pollutant type:		Bias (%)				
Meas Val (Y)	Audit Val (X)	d (Eqn. 1)	25th Percentile	d ²	d	d ²		
16.7	16.85	-0.890	-1.183	0.792	0.890	0.792	n	Σ d
16.7	16.95	-1.475	75th Percentile	2.175	1.475	2.175		
16.7	16.62	0.481	-0.204	0.232	0.481	0.232		
							n-1	Σ d ²
							2	3.200
							"AB" (Eqn 4)	
							0.949	
							"AS" (Eqn 5)	
							0.499	
							Bias (%) (Eqn 3)	
							1.79	
							Signed Bias (%)	
							-1.79	
							Both Signs Positive	
							FALSE	
							Both Signs Negative	
							TRUE	



Alton Coal Development, LLC - Coal Hollow Mine
One-Point Flow Rate Bias Estimate

Site ID: Monitor 2398E		Pollutant type:		Bias (%)				
Meas Val (Y)	Audit Val (X)	d (Eqn. 1)	25th Percentile	d ²	d	d ²		
16.7	16.77	-0.417	-0.209	0.174	0.417	0.174		
16.7	16.7	0.000	75th Percentile	0.000	0.000	0.000		
16.7	16.64	0.361	0.180	0.130	0.361	0.130		
							n	Σ d
							3	0.778
							n-1	Σ d ²
							2	0.304
							"AB" (Eqn 4)	
							0.259	
							"AS" (Eqn 5)	
							0.226	
							Bias (%) (Eqn 3)	
							0.64	
							Signed Bias (%)	
							+/-0.64	
							Both Signs Positive	
							FALSE	
							Both Signs Negative	
							FALSE	



APPENDIX D

Field Data Sheets

Background Monitor 962A

Table I - Every 6th Day Sampling

Date	Time	Displayed Date	Displayed Time	Collected Filter ID#	New Filter ID#	Sample Start Time	Sample Start Date	Sampler Initials
10-02-18	1310	10-02-18	1211	10	21	M-M	10-05-18	JKSR
10-08-18	1512	10-08-18	1411	21	4	M-M	10-11-18	JKSR
10-13-18	1215	10-13-18	1114	4	9	M-M	10-17-18	KN
10-18-18	1103	10-18-18	1002	9	26	M-M	10-23-18	BA
10-24-18	1404	10-24-18	1302	26	34	M-M	10-29-18	JKSR
10-30-18	1415	10-30-18	1313	34	10	M-M	11-4-18	BA
			1313					
11-5-18	1059	11-5-18	1059	10	16	M-M	11-10-18	BA
11-12-18	1248	11-12-18	1246	16	36	M-M	11-16-18	KN
11-19-18	0936	11-19-18	0841	36	4	M-M	11-22-18	KN
11-26-18	1034	11-26-18	1032	4	21	M-M	11-28-18	KN
11-30-18	1040	11-30-18	1039	21	9	M-M	12/4/18	BA
12/6/18	1327	12/6/18	1324	9	31	M-M	12/10/18	BA
12/11/18	1438	12/11/18	1435	31	10	M-M	12/16/18	BA
12/17/18	900	12/17/18	857	10	16	M-M	12/22/18	BA
12/23/18	1246	12/23/18	1243	16	34	M-M	12/28/18	BA
12/29/18	1147	12/29/18	1144	34	4	M-M	1/2/19	BA
		1/1		A	29	M-M	1/8/19	

Table II - Monthly Leak Test

Date	Time	Initial SP Value	Final SP Value	Pass/Fail	Initials	Maintenance
12/14/18	1119	134	132	P	BA	Cleaned manifold

Table III - Monthly Flow Rate Verification

Date	Time	Monitor Flow (Q Lpm)	Monitor Baro Pressure (mmHg)	Delta Cal Baro Pressure (mmHg)	Monitor Temp (A)	Delta Cal Temp (Ta)	Delta Cal Flow (Qs)	Delta Cal Flow (Qa)	Accuracy	Initials
12/14/18	1123	16.7	589	590	3.1	5.0	13.97	16.80	-0.60	BA

01

Compliance Monitor 963B

Table I - Every 6th Day Sampling

[illegible]

PT code

Did Not Run

No Line

Installed New Pump motor

Table II - Monthly Leak Test

Date	Time	Initial SP Value	Final SP Value	Pass/Fail	Initials	Maintenance
10-18-13	103	95	92	P	BA	Clear manifold
12/13/13	1435	95.14	110	P	Brt	Revised Manifold

Table III - Monthly Flow Rate Verification

[illegible]

Co-located Monitor 964C

Table I - Every 6th Day Sampling

[illegible]

QTA/6:10 Routine

QT Flags

Table II - Monthly Leak Test

Date	Time	Initial SP Value	Final SP Value	Pass/Fail	Initials	Maintenance
10-18-18	1:23	111	110	Pass	BA	Checked mem. file
12/13/18	1458	96	95	P	BA	Checked Mem. file

Table III - Monthly Flow Rate Verification

[illegible]

Compliance Monitor 2366D

Table I - Every 6th Day Sampling

Date	Time	Displayed Date	Displayed Time	Collected Filter ID#	New Filter ID#	Sample Start Time	Sample Start Date	Sampler Initials
10-02-18	1339	10-02-18	1237	2019	29	M-M	10-05-18	JKSR
10-08-18	1606	10-08-18	1504	29	7	M-M	10-11-18	JKSR
10-13-18	1244	10-13-18	1142	7	24	M-M	10-17-18	KN
10-18-18	1103	10-18-18	1012	9	26	M-M	10-23-18	BA
10-18-18	153	10-18-18	1250	24	32	M-M	10-23-18	BA
10-24-18	1432	10-24-18	1330	32	JBR1	M-M	10-29-18	JKSR
10-30-18	1442	10-30-18	1341	JBR1	14	M-M	11-4-18	BA
11-5-18	1204	11-5-18	1201	14	19	M-M	11-10-18	BA
11-12-18	1329	11-12-18	13:26	19	29	M-M	11-16-18	KN
11-18-18	1229	11-18-18	1226	29	30	M-M	11-23-18	KN
11-26-18	1239	11-26-18	1236	7	29	M-M	12-2-18	KN
11-26-18	1242	11-26-18	1238	29	30	M-M	12-28-18	KN
11-30-18	1712	11-30-18	1708	30	24	M-M	12/4/18	BA
12/6/18	1429	12/6/18	1425	24	32	M-M	12/10/18	BA
12/11/18	1516	12/11/18	1512	32	14	M-M	12/16/18	BA
12/17/18	932	12/17/18	928	14	19	M-M	12/22/18	BA
12/23/18	1413	12/23/18	1409	19	JBR1	M-M	12/28/18	BA
12/29/18	1221	12/29/18	1216	JBR1	7	M-M	1/2/19	BA
				7	38	M-M	1/8/19	BA

Table II - Monthly Leak Test

Date	Time	Initial SP Value	Final SP Value	Pass/Fail	Initials	Maintenance
10-18-18	1108	95	92	Pass	KN	Clean Manifold
10-18-18	156	101	97	P	BA	Clean Manifold
12/17/18	1053	113	110	P	BA	Clean Manifold

Table III - Monthly Flow Rate Verification

Date	Time	Monitor Flow (Q Lpm)	Monitor Baro Pressure (mmHg)	Delta Cal Baro Pressure (mmHg)	Monitor Temp (A)	Delta Cal Temp (Ta)	Delta Cal Flow (Qs)	Delta Cal Flow (Qa)	Accuracy	Initials
10-18-18	1112	16.70	593	594	10.5	11.1	13.8	16.78		KN
10/18/18	2023	16.70	592	593	10.0	11.2	13.76	16.83	-0.89	BA
12/17/18	1058	16.7	592	592.5	4.1	9.8	13.65	16.62	0.48	BA

Table I - Every 6th Day Sampling

Fire/Black

Date	Time	Initial SP Value	Final SP Value	Pass/Fail	Initials	Maintenance
10/18/18	1412	101	100	P	EH	Clean Manifold
12/17/18	1102	97	95	P	EH	Cleaned Manifold

[illegible]

9

APPENDIX E

Independent PM₁₀ Sampler Performance Audit Report

**AUDIT REPORT
FOR
ALTON COAL DEVELOPMENT, LLC
COAL HOLLOW MINE
ALTON, UTAH
FOURTH QUARTER 2018**

Prepared for

Kirk Nicholes
Alton Coal Development, LLC
463 N 100 W
Cedar City, Utah, 84721

Prepared by



1901 Sharp Point Drive, Suite F Fort
Collins, CO 80525
970-484-7941

Site Audited: November 19, 2018

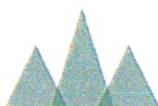


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1.0 INTRODUCTION

Air Resource Specialists, Inc. (ARS) conducted a performance audit of Alton Coal Development, LLC ambient air quality monitoring systems on November 19, 2018. The monitoring sites are located at the Coal Hollow Mine near Alton, Utah.

Table 1-1

Site Location Information

	Primary CHM	Background	Primary NPL	Meteorological
Latitude	37° 24' 5.0" N	37° 24' 20.9" N	37° 24' 43" N	37° 23' 53.2" N
Longitude	112° 27' 21.0" W	112° 26' 1.1" W	112° 27' 30.6" W	112° 26' 43.1" W
UTM	12S 371147 4140396	12S 373119 4140856	12S 370928 4141570	12S 372073 4140018
Elevation	6,890 feet MSL	7,158 feet MSL	6,959 feet MSL	7,007 feet MSL

Audit results for the particulate samplers are summarized in Table 1-2. Audit results for the meteorological measurements are summarized in Table 1-3. Detailed discussions of performance audit findings and other findings can be found in Section 3.0.

Table 1-2

Summary of Particulate Sampler Audit Results

	Parameter	Instrument	Within Accuracy Goal
Primary CHM	PM ₁₀	BGI PQ200S	No
	PM ₁₀ (collocated)	BGI PQ200S	Yes
Background #1	PM ₁₀	BGI PQ200S	Yes
Primary NPL	PM ₁₀	BGI PQ200	Yes
	PM ₁₀ (collocated)	BGI PQ200	Yes

Table 1-3

Summary of Meteorological Audit Results

Parameter	Sensor	Within Accuracy Goal
Wind Speed	Met-One 34B	Yes
Wind Direction	Met-One 34B	Yes
Temperature	Campbell Scientific 107	Yes
Precipitation	Hydrological Services TB4	Yes

Details of the audit are presented in the following sections:

Section 2.0	Audit Methods and Equipment
Section 3.0	Audit Results
Appendix A	Audit Data Forms
Appendix B	Audit Standards Certifications

Any questions related to this audit or audit report should be addressed to:

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E-mail: ckirk@air-resource.com

2.0 AUDIT METHODS

Audit procedures, audit challenge ranges, and acceptance criteria are described below. These ranges and limits conform to EPA's PSD guidelines. Audit results were verbally communicated to the site operator prior to departure from the site. A follow-up e-mail summarizing audit findings was also sent to Alton Coal Development, LLC personnel. Audit details are provided in Appendix A.

Guidance from the following EPA documents was used to establish the audit procedures:

- 40 CFR 58, Appendix B. *Quality Assurance Requirements for Prevention of Significant Deterioration (PSD) Air Monitoring*
- EPA *Quality Assurance Handbook for Air Pollution Measurement Systems*:
 - *Volume I. A Field Guide to Environmental Quality Assurance*
 - *Volume II. Ambient Air Quality Monitoring Program*
 - *Volume IV. Meteorological Measurements*
- EPA *Meteorological Monitoring Guidance for Regulatory Modeling Applications*

2.1 PARTICULATE SAMPLERS (FRM PM₁₀)

The filter-based FRM PM₁₀ particulate samplers are audited in their normal operating mode. ARS audits the samplers with a BGI deltaCal audit standard which measures flow, temperature, and barometric pressure. Prior to conducting the flow audit, a system leak check is performed in accordance with the manufacturer's specifications. The observed volumetric operational flow and design flow of the sampler are compared to the audit flows measured by the audit standard. Differences between the operational sampler flow and audit flow that are greater than $\pm 10\%$ are considered out of tolerance. Differences between the designated design flow and the audit flow greater than $\pm 10\%$ are considered out of tolerance. In addition to the flow audits, observed ambient temperature, filter temperature, and barometric pressure measurements of the particulate samplers are also audited by comparison to the audit standard. A temperature difference greater than $\pm 2^\circ\text{C}$ and a barometric pressure difference greater than $\pm 10\text{mm Hg}$ are considered out of tolerance. Audit methods and acceptable criteria for the particulate samplers are summarized in Table 2-1.

Table 2-1

Particulate Samplers Audit Acceptance Criteria

Parameter	Audit Method	Acceptance Criteria
FRM PM ₁₀	Leak Check	Manufacturer specs
	Audit flow to actual sampler flow	$\leq \pm 10\%$
	Design criteria flow to audit flow	$\leq \pm 10\%$
	Audit temperature to sampler temperature	$\leq \pm 2^\circ\text{C}$
	Audit temperature to sampler filter temperature	$\leq \pm 2^\circ\text{C}$
	Audit barometric pressure to sampler pressure	$\leq \pm 10\text{mm Hg}$

Table 2-2
Particulate Samplers
Audit Equipment

References	Manufacturer	Model Number	Serial Number	Expiration Date
FRM Flow	BGI	DeltaCal	141170	5/22/2019

2.2 METEOROLOGICAL PARAMETERS

Meteorological measurement systems are audited in accordance with (and accuracy goals were obtained from) the EPA's *Quality Assurance Handbook for Air Pollution Measurement Systems: Volume IV – Meteorological Measurements*, (March 2008). ARS uses National Institute of Standards and Technologies (NIST) traceable test equipment for all meteorological parameters. All equipment is recertified annually. Audit ranges and acceptable criteria for each parameter are summarized in Table 2-3.

2.2.1 Wind Speed

Wind speed sensors are audited using an R.M. Young model 18802 (high RPM) or 18811 (low RPM) pulsed motor wind speed calibrator. Each sensor is tested at zero and five shaft revolution speeds. The equivalent wind speed is calculated corresponding to the sensor manufacturer's specified values for shaft speed versus wind velocity and compared to readings obtained from the on-site datalogger.

2.2.2 Wind Direction

Wind direction sensor audits include the verification of sensor orientation, linearity, and starting threshold (bearing integrity). The sensor orientation accuracy is verified by a reference. The reference can be an internal reference (a tower-mounted alignment vane) or external (pointing at landmarks from the sensor). Accuracy of the references is verified by the solar azimuth method for the determination of true north. Using a compass and the site latitude and longitude, a computer model outputs the sun's azimuth for that exact time of day. The compass is adjusted to that azimuth, effectively correcting for the compass to the local magnetic declination (which may include local magnetic field disturbances). The sensor orientation accuracy is checked by aligning the wind direction vane to and from each landmark reference, recording sensor responses from the on-site datalogger.

Potentiometer linearity is tested by verifying the change in response between two successive orientations across eight points on a calibrated disc mounted atop the sensor. For example, any two adjacent orientations on the eight-point disc are separated by 45 degrees. The difference in the datalogger response for these two adjacent orientations is compared to this value.

2.2.3 Ambient Temperature

Temperature sensors that are non-immersible are audited by collocation of the audit sensor under ambient conditions utilizing similar methods of sensor aspiration. Collocated comparisons are typically carried out using hourly averages. Audit data are collected by a datalogger provided by the auditor. Temperature sensors that are immersible are audited by comparison to the audit sensor in water baths. The test baths are typically at 0°C, near ambient conditions (or approximately 25°C), and near the full scale of the sensor (typically near 50°C). Data observed on the on-site datalogger are used to assess the accuracy of sensors. Sensor aspirators are inspected for proper function, including fan function and flow direction.

2.2.4 Precipitation

The tipping bucket style precipitation gauges are audited with a volumetric precipitation gauge calibrator by transferring a known amount of water through the gauge orifice at a maximum rate equivalent to 2.0 inches/hour of precipitation. The total values from the on-site datalogger values are compared to the actual introduced volume. The level and cleanliness of the sensor is observed where possible.

Table 2-3
Meteorological Sensors
Audit Ranges and Acceptance Criteria

Parameter	Audit Method	Acceptance Criteria
Wind Speed	Accuracy at five speeds with anemometer drive	$\leq \pm 0.2$ m/s
	Starting threshold with torque gauge	Manufacturer specs
Wind Direction	Accuracy with compass	$\leq \pm 5^\circ$
	Linearity	$\leq \pm 5^\circ$
	Starting threshold with torque gauge	Manufacturer specs
Ambient Temperature (non-immersible sensor)	Accuracy via collocation in ambient conditions	$\leq \pm 0.5^\circ$
Ambient Temperature (immersible sensor)	Accuracy via collocation in three water baths	$\leq \pm 0.5^\circ$
Precipitation	Accuracy via known volume of water	$\leq \pm 10\%$

Table 2-4

Meteorological Audit Equipment

References	Manufacturer	Model Number	Serial Number	Expiration Date
Wind Speed (low rpm)	R.M. Young	18811	CA03912	12/14/2018
Wind Direction Orientation	Brunton	Transit	5103212072	N/A
Temperature (immersible)	Eutechnics	4400	307635	2/28/2019
Precipitation	R.M. Young	52260	N/A	N/A

3.0 AUDIT RESULTS

Audit findings and recommendations are discussed below. Detailed audit results are provided in Appendix A.

Performance Audit Results

The Primary CHM PM₁₀ instrument (serial number 963B) did not pass the flow performance audit and was found with a non-functional pump.

APPENDIX A

AUDIT DATA FORMS



TEMPERATURE / DELTA-TEMPERATURE SYSTEM AUDIT

ABBR.	n/a	CLIENT	Alton Coal	AUDITOR	M Gosselin	DATE	11/19/2018
SITE NAME		Alton Coal- Coal Hollow					
Network type		Alton Coal- Coal Hollow					

Temperature Reference	MANUFACTURER	MODEL	SERIAL NUMBER	EXPIRATION DATE
	Eutechnics	4400	307635	2/28/2019

2m Temperature Sensor	
Manufacturer	Campbell Scientific
Model	107
Serial Number	10755-14/WO #1272

List sensors according to height on tower, from highest to lowest.

Temp. Deltas	

CALIBRATION ACCEPTANCE CRITERIA (<=)	
Ambient Temperature Difference (°C)	0.5
Vertical Temperature Difference (°C)	0.1

AS FOUND	2m Temperature								
Bath Temp (°C)	DAS	Difference							
0.11	0.25	0.14	PASS						
30.49	30.38	-0.11	PASS						
21.19	21.38	0.19	PASS						
MAX ABS Difference		0.19	PASS						

MAX ABS Difference					

Aspirator fan functional 2m?	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input checked="" type="checkbox"/> N/A
	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A
	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A
	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A

Each sensor was verified against its data channel ?	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input checked="" type="checkbox"/> N/A
Each Temperature Difference = Upper - Lower ?	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input checked="" type="checkbox"/> N/A

NOTES:



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WIND SPEED SENSOR AUDIT

ABBR.	n/a	CLIENT	Alton Coal	FIELD SPECIALIST	M Gosselin	DATE	11/19/2018
SITE NAME	Alton Coal- Coal Hollow						
Network type	Alton Coal- Coal Hollow						

	MANUFACTURER	MODEL	SERIAL NUMBER	EXPIRATION DATE
Wind Speed Reference				
Wind Speed Torque Gauge	RM Young	18310		

Manufacturer and Model	Met One - 034B
Sensor Serial #	E2281
Cups Serial #	

AUDIT CRITERIA (<=)	
Wind Speed Difference (m/s)	0.20
Wind Speed Difference (%)	N/A

Select UNITS	m/s
--------------	-----

Motor Speed (rpm)	Target Speed	Wind Speed			
		DAS	Difference		
0	0.000	0.000	N/A	N/A	N/A
100	2.943	2.920	-0.02		PASS
200	5.607	5.630	0.02		PASS
300	8.270	8.300	0.03		PASS
600	16.260				
1800	48.220				

Starting Threshold	TORQUE
Torque <= 0.2 g-cm	0.2
	NO ACTION REQUIRED

Heater sleeve functional? ☐ Yes ☐ No ☒ N/A

NOTES:



Air Resource SPECIALISTS

WIND DIRECTION AUDIT

ABBR.	n/a	CLIENT	Alton Coal	AUDITOR	M Gosselin	DATE	11/19/2018
SITE NAME		Alton Coal- Coal Hollow					
Network type		Alton Coal- Coal Hollow					

	MANUFACTURER	MODEL	SERIAL NUMBER	EXPIRATION DATE
Direction Alignment Reference	Brunton	Transit	5103212072	
Direction Linearity Reference	RM Young	18212	n/a	
Direction Torque Gauge	RM Young	18331	n/a	

Manufacturer & Model	Met One - 034B
Sensor Serial #	E2281
Vane Serial #	

Local Magnetic Declination (degrees)	11.5
Method	solar azimuth

Mag. Dec. from NOAA (deg/min/sec)				0.00
-----------------------------------	--	--	--	------

<http://www.ngdc.noaa.gov/geomag-web/#declination>

AUDIT CRITERIA (<=)	
Cross-arm Alignment Error (degrees)	2
Total Align. Diff (degrees)	5
Sensor Linearity (degrees)	5

Landmarks	Degrees
building to the east	338
from building to the east	158
from center of right rock saddle	73
to center of right rock saddle	253

Reference Alignment Error (degrees)	0.0	PASS
-------------------------------------	-----	------

SENSOR ALIGNMENT			
Reference	Degrees	DAS	Difference
From the North	0		
From the South	180		
From the East	90		
From the West	270		
Total Alignment MAX ABS Diff			

OR

SENSOR ALIGNMENT			
Landmark	Degrees	DAS	Difference
building to the east	338	339.0	0.9
from building to the east	158	156.0	-2.0
from center of right rock saddle	73	74.1	1.1
to center of right rock saddle	253	251.0	-2.0
Total Alignment MAX ABS Diff		2.0	PASS

SENSOR LINEARITY		
Point	DAS	Difference
1		N/A
2		
3		
4		
5		
6		
7		
8		
1		
MAX Difference		

Starting Threshold	TORQUE
Torque <=	6.5 g-cm

Heater sleeve functional?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A
---------------------------	--

NOTES:



PRECIPITATION SENSOR AUDIT

ABBR.	n/a	CLIENT	Alton Coal	AUDITOR	M Gosselin	DATE	11/19/2018
SITE NAME		Alton Coal- Coal Hollow					
Network type		Alton Coal- Coal Hollow					

	MANUFACTURER	MODEL	SERIAL NUMBER	EXPIRATION DATE
Precipitation Reference	RM Young	52260	n/a	

Manufacturer	Hydrological Services
Model	TB4
Serial Number	05-94

AUDIT CRITERIA (<=)	
Difference from Input Volume (%)	10%

Reference Chart			Input Volume (mL)		1000
Manufacturer	Model	Diameter (in.)	mm/tip	mL/tip	DAS target
Met One	385	12	0.254	18.53	13.71
RM Young	52202	6.2825	0.100	2.00	50.00
Climatronics	100097-1-G0-H0	8	0.254	8.24	30.84
Climatronics	100508	9.66	0.100	4.73	21.15
X Hydrological Serv.	TB4	8	0.254	8.24	30.84

Conversions			
Value	Units	Value	Units
1.000	inch	25.40	mm
30.84	mm	1.214	inch

		Precipitation	
Reference (mL)	Target (mm)	DAS (mm)	Difference
1000	30.84	29.72	-3.6%
		PASS	

Heater functional?	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input checked="" type="checkbox"/> N/A
--------------------	------------------------------	-----------------------------	---

NOTES:	
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Air Resource SPECIALISTS

FRM AUDIT (PM₁₀)

ABBR.	n/a	CLIENT	Alton Coal	AUDITOR	M Gosselin	DATE	11/19/2018
SITE NAME		Alton Coal- Coal Hollow					
Network type		Alton Coal- Coal Hollow					

	MANUFACTURER	MODEL	SERIAL NUMBER	EXPIRATION DATE
PM Flow Standard #1	BGI	DeltaCal	141170	5/22/2019
PM Temperature Standard #1	BGI	DeltaCal	141170	5/22/2019
PM Barometric Pressure Standard #1	BGI	DeltaCal	141170	5/22/2019

MANUFACTURER	BGI
MODEL	PQ200S
SERIAL NUMBER	N963B

Date and Time correct?
<input type="checkbox"/> Yes <input type="checkbox"/> No
If no, time off by:
0 min

SETTINGS	
Total Flow	16.70

Automated LEAK CHECK	
Vacuum Loss Rate	Pass/Fail

FLOW VERIFICATION				
	Reference	Instrument	Actual Diff	Design Diff
Total Flow				

AUDIT CRITERIA (<=)	
Actual Flow % Diff	10%
Design Flow % Diff	10%

AMBIENT TEMPERATURE SENSOR (°C)		
Reference	Instrument	Difference

AUDIT CRITERIA (<=)	
Temperature Difference (°C)	2

FILTER TEMPERATURE SENSOR (°C)		
Reference	Instrument	Difference

AUDIT CRITERIA (<=)	
Temperature Difference (°C)	2

PRESSURE SENSOR (mmHg)		
Reference	Instrument	Difference

AUDIT CRITERIA (<=)	
Pressure Difference (mmHg)	10

NOTES: pump dead, failed leak and flow checks.



Air Resource SPECIALISTS

FRM AUDIT (PM₁₀)

ABBR.	n/a	CLIENT	Alton Coal	AUDITOR	M Gosselin	DATE	11/19/2018
SITE NAME		Alton Coal- Coal Hollow					
Network type		Alton Coal- Coal Hollow					

	MANUFACTURER	MODEL	SERIAL NUMBER	EXPIRATION DATE
PM Flow Standard #1	BGI	DeltaCal	141170	5/22/2019
PM Temperature Standard #1	BGI	DeltaCal	141170	5/22/2019
PM Barometric Pressure Standard #1	BGI	DeltaCal	141170	5/22/2019

MANUFACTURER	BGI
MODEL	PQ200S
SERIAL NUMBER	N964C

Date and Time correct?

☐ Yes ☐ No

If no, time off by:

-2 min

SETTINGS	
Total Flow	16.70

Automated LEAK CHECK		
Vacuum Loss Rate		Pass/Fail
1.0		PASS

FLOW VERIFICATION					
	Reference	Instrument	Actual Diff	Design Diff	
Total Flow	16.91	16.70	-1.2%	1.3%	PASS

AUDIT CRITERIA (<=)	
Actual Flow % Diff	10%
Design Flow % Diff	10%

AMBIENT TEMPERATURE SENSOR (°C)			
Reference	Instrument	Difference	
7.1	6.8	-0.3	PASS

AUDIT CRITERIA (<=)	
Temperature Difference (°C)	2

FILTER TEMPERATURE SENSOR (°C)			
Reference	Instrument	Difference	
6.9	6.8	-0.1	PASS

AUDIT CRITERIA (<=)	
Temperature Difference (°C)	2

PRESSURE SENSOR (mmHg)			
Reference	Instrument	Difference	
593.0	595.0	2.0	PASS

AUDIT CRITERIA (<=)	
Pressure Difference (mmHg)	10

NOTES: erradict flow 16.65-16.82



Air Resource SPECIALISTS

FRM AUDIT (PM₁₀)

ABBR.	n/a	CLIENT	Alton Coal	AUDITOR	M Gosselin	DATE	11/19/2018
SITE NAME		Alton Coal- Coal Hollow					
Network type		Alton Coal- Coal Hollow					

	MANUFACTURER	MODEL	SERIAL NUMBER	EXPIRATION DATE
PM Flow Standard #1	BGI	DeltaCal	141170	5/22/2019
PM Temperature Standard #1	BGI	DeltaCal	141170	5/22/2019
PM Barometric Pressure Standard #1	BGI	DeltaCal	141170	5/22/2019

MANUFACTURER	BGI
MODEL	PG200S
SERIAL NUMBER	N962

Date and Time correct?

☐ Yes ☐ No

If no, time off by:

-2 min

SETTINGS	
Total Flow	16.70

Automated LEAK CHECK		
Vacuum Loss Rate		Pass/Fail
4.0		PASS

FLOW VERIFICATION					
	Reference	Instrument	Actual Diff	Design Diff	
Total Flow	17.14	16.67	-2.7%	2.6%	PASS

AUDIT CRITERIA (<=)	
Actual Flow % Diff	10%
Design Flow % Diff	10%

AMBIENT TEMPERATURE SENSOR (°C)			
	Reference	Instrument	Difference
	5.5	5.7	0.2
			PASS

AUDIT CRITERIA (<=)	
Temperature Difference (°C)	2

FILTER TEMPERATURE SENSOR (°C)			
	Reference	Instrument	Difference
	3.0	2.0	-1.0
			PASS

AUDIT CRITERIA (<=)	
Temperature Difference (°C)	2

PRESSURE SENSOR (mmHg)			
	Reference	Instrument	Difference
	587.0	586.0	-1.0
			PASS

AUDIT CRITERIA (<=)	
Pressure Difference (mmHg)	10

NOTES:

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Air Resource SPECIALISTS

FRM AUDIT (PM₁₀)

ABBR.	n/a	CLIENT	Alton Coal	AUDITOR	M Gosselin	DATE	11/19/2018
SITE NAME		Alton Coal- Coal Hollow					
Network type		Alton Coal- Coal Hollow					

	MANUFACTURER	MODEL	SERIAL NUMBER	EXPIRATION DATE
PM Flow Standard #1	BGI	DeltaCal	141170	5/22/2019
PM Temperature Standard #1	BGI	DeltaCal	141170	5/22/2019
PM Barometric Pressure Standard #1	BGI	DeltaCal	141170	5/22/2019

MANUFACTURER	BGI
MODEL	PQ200
SERIAL NUMBER	2366D

Date and Time correct?

☐ Yes ☐ No

If no, time off by:

0 min

SETTINGS	
Total Flow	16.70

Automated LEAK CHECK		
Vacuum Loss Rate	Pass/Fail	
4.0	PASS	

FLOW VERIFICATION					
	Reference	Instrument	Actual Diff	Design Diff	
Total Flow	16.72	16.95	1.4%	0.1%	PASS

AUDIT CRITERIA (<=)	
Actual Flow % Diff	10%
Design Flow % Diff	10%

AMBIENT TEMPERATURE SENSOR (°C)			
	Reference	Instrument	Difference
	8.1	8.0	-0.1
			PASS

AUDIT CRITERIA (<=)	
Temperature Difference (°C)	2

FILTER TEMPERATURE SENSOR (°C)			
	Reference	Instrument	Difference
	8.4	8.8	0.4
			PASS

AUDIT CRITERIA (<=)	
Temperature Difference (°C)	2

PRESSURE SENSOR (mmHg)			
	Reference	Instrument	Difference
	592.5	593.0	0.5
			PASS

AUDIT CRITERIA (<=)	
Pressure Difference (mmHg)	10

NOTES:

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Air Resource SPECIALISTS

FRM AUDIT (PM₁₀)

ABBR.	n/a	CLIENT	Alton Coal	AUDITOR	M Gosselin	DATE	11/19/2018
SITE NAME		Alton Coal- Coal Hollow					
Network type		Alton Coal- Coal Hollow					

	MANUFACTURER	MODEL	SERIAL NUMBER	EXPIRATION DATE
PM Flow Standard #1	BGI	DeltaCal	141170	5/22/2019
PM Temperature Standard #1	BGI	DeltaCal	141170	5/22/2019
PM Barometric Pressure Standard #1	BGI	DeltaCal	141170	5/22/2019

MANUFACTURER	BGI
MODEL	PQ200
SERIAL NUMBER	2398E

Date and Time correct?

☐ Yes ☒ No

If no, time off by:

-3 min

SETTINGS	
Total Flow	16.70

Automated LEAK CHECK		
Vacuum Loss Rate		Pass/Fail
3.0		PASS

FLOW VERIFICATION					
	Reference	Instrument	Actual Diff	Design Diff	
Total Flow	16.87	16.70	-1.0%	1.0%	PASS

AUDIT CRITERIA (<=)	
Actual Flow % Diff	10%
Design Flow % Diff	10%

AMBIENT TEMPERATURE SENSOR (°C)			
	Reference	Instrument	Difference
	9.4	9.6	0.2
			PASS

AUDIT CRITERIA (<=)	
Temperature Difference (°C)	2

FILTER TEMPERATURE SENSOR (°C)			
	Reference	Instrument	Difference
	7.4	6.7	-0.7
			PASS

AUDIT CRITERIA (<=)	
Temperature Difference (°C)	2

PRESSURE SENSOR (mmHg)			
	Reference	Instrument	Difference
	592.5	594.0	1.5
			PASS

AUDIT CRITERIA (<=)	
Pressure Difference (mmHg)	10

NOTES:

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SITE INFORMATION

ABBR.	n/a	CLIENT	Alton Coal	AUDITOR	M Gosselin	DATE	11/19/2018
SITE NAME		Alton Coal- Coal Hollow					
NETWORK TYPE		Alton Coal- Coal Hollow					

		Deg	Min	Sec		Decimal
LATITUDE	North	37	23	50	--CALCULATE-->	37.3972
LONGITUDE	West	112	27	9		112.4525

Decimal	--CALCULATE-->	Deg	Min	Sec

	Meters	--CALCULATE-->	Feet
ELEVATION			

Feet	--CALCULATE-->	Meters

Please verify site standards used by the site operator

SITE STANDARDS	MANUFACTURER	MODEL	SERIAL #	Calibration Expiration Date
PM Flow Reference				

NOTES:



Air Resource
SPECIALISTS

CALIBRATION AND VERIFICATION STANDARDS

ABBR.	n/a	CLIENT	Alton Coal	AUDITOR	M Gosselin	DATE	11/19/2018
SITE NAME		Alton Coal- Coal Hollow					
Network type		Alton Coal- Coal Hollow					

			MANUFACTURER	MODEL	SERIAL #	Calibration Expiration Date
Ozone Transfer Standard						
Gas Dilution Transfer Standard						
MFC High Flow Reference						
MFC Low Flow Reference						
Temperature Reference			Eutechnics	4400	307635	2/28/2019
AT/RH Sensor Reference						
Barometric Pressure Reference						
Wind Speed Reference (high rpm)						
Wind Speed Reference (low rpm)			RM Young	18811	CA03912	12/14/2018
Wind Speed Torque Gauge			RM Young	18310		
Wind Direction Alignment Reference			Brunton	Transit	5103212072	
Wind Direction Linearity Reference			RM Young	18212	n/a	
Wind Direction Torque Gauge			RM Young	18331	n/a	
Solar Radiation Reference						
Multiplier		W/m2 / mV				
UV Radiation Reference						
Multiplier		W/m2 / mV				
Precipitation Reference						
Volume	1000	mL	RM Young	52260	n/a	

PM Flow Standard #1	BGI	DeltaCal	141170	5/22/2019
PM Flow Standard #2				
PM Flow Standard #3				
PM Flow Standard #4				

PM Temperature Standard #1	BGI	DeltaCal	141170	5/22/2019
PM Temperature Standard #2				
PM Temperature Standard #3				
PM Temperature Standard #4				

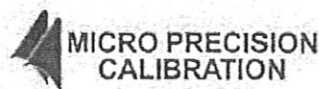
PM Barometric Pressure Standard #1	BGI	DeltaCal	141170	5/22/2019
PM Barometric Pressure Standard #2				
PM Barometric Pressure Standard #3				
PM Barometric Pressure Standard #4				

TEOM MTV Standard				
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HiVol Direct Flow Reference				
Orifice				
ΔP orifice manometer				

APPENDIX B

AUDIT STANDARDS CERTIFICATIONS



MICRO PRECISION CALIBRATION
22835 INDUSTRIAL PLACE
GRASS VALLEY CA 95949
530-268-1860

Certificate of Calibration

Date: Feb 28, 2018

Cert No. 512200813278800

Customer:

AIR RESOURCE SPECIALIST, INC
1901 SHARP POINT DRIVE, SUITE F
FORT COLLINS CO 80525

MPC Control #: AX7278
Asset ID: N/A
Gage Type: DIGITAL THERMOMETER
Manufacturer: EUTECHNICS
Model Number: 4400
Size: -20 to 130 Deg C
Temp/RH: 70.0°F / 45.0%
Location: Calibration performed at MPC facility

Work Order #: SAC-70093204
Purchase Order #: a32178
Serial Number: 307635
Department: N/A
Performed By: TODD MORRIS
Received Condition: IN TOLERANCE
Returned Condition: IN TOLERANCE
Cal. Date: February 28, 2018
Cal. Interval: 12 MONTHS
Cal. Due Date: February 28, 2019

Calibration Notes:

Standards Used to Calibrate Equipment

I.D.	Description.	Model	Serial	Manufacturer	Cal. Due Date	Traceability #
CR6700	DOUBLE WELL BATH	7013	79006	HART SCIENTIFIC	Sep 30, 2018	512200813015067
DA8367	PRECISION PLATINUM RESISTANCE THERMOMETER SPRT W/ CASE	8167-25	1803221	LEEDS & NORTHRUP CO.	Aug 1, 2019	512200812443997
N1741	ICE POINT CELL	K140-4	802125	KAYE INSTRUMENTS	Jan 31, 2020	512200813197782

Procedures Used in this Event

Procedure Name
MPC-TEM-001

Description
Temperature Sensor and Indicators, General, Oct-31-2017, rev01

Calibrating Technician:

TODD MORRIS

QC Approval:

BRIAN GOLD

The reported expanded uncertainty of measurement is stated as the standard uncertainty of measurement multiplied by the coverage factor $k=2$, which for normal distribution corresponds to a coverage probability of approximately 95%. The standard uncertainty of measurement has been determined in accordance with EA's Publication and NIST Technical Note 1297, 1994 Edition. Services rendered conform with ISO/IEC 17025:2005, ANSI/NCSL Z540-1-1994, ANSI/NCSL Z540.3-2006, MPC Quality Manual, MPC CSD and with customer purchase order instructions.

Calibration cycles and resulting due dates were submitted/approved by the customer. Any number of factors may cause an instrument to drift out of tolerance before the next scheduled calibration. Recalibration cycles should be based on frequency of use, environmental conditions and customer's established systematic accuracy. The information on this report, pertains only to the instrument identified.

All standards are traceable to SI through the National Institute of Standards and Technology (NIST) and/or recognized national or international standards laboratories. Services rendered include proper manufacturer's service instruction and are warranted for no less than thirty (30) days. This report may not be reproduced in part or in a whole without the prior written approval of the issuing MPC lab.



R.M. Young Company
2801 Aero Park Drive
Traverse City, Michigan 49686 USA

CERTIFICATE OF CALIBRATION AND TESTING

Model: 18811
Serial Number: CA03912

Description: Anemometer Drive - 20 to 990 RPM
(Comprised of 18820A Control Unit and 18831A Motor Assembly)

R. M. Young Company certifies that the above equipment was inspected and calibrated prior to shipment in accordance with established manufacturing and testing procedures. Standards established by R.M. Young Company for calibrating the measuring and test equipment used in controlling product quality are traceable to the National Institute of Standards and Technology.

Nominal Motor RPM RPM	27106D Output Frequency Hz (1)	Calculated RPM (2)	Indicated RPM (3)
30.0	5	30.0	30.0
150.0	25	150.0	150.0
300.0	50	300.0	300.0
450.0	75	450.0	450.0
600.0	100	600.0	600.0
750.0	125	750.0	750.0
990.0	165	990.0	990.0
<input checked="" type="checkbox"/> Clockwise and Counterclockwise rotation verified.			

- (1) Measured output frequency of YOUNG model 27106D standard anemometer attached to motor shaft.
- (2) YOUNG model 27106D produces 10 pulsed per revolution of the anemometer shaft.
- (3) Indicated on the Control Unit LCD.

* Indicates out of tolerance.

☐ New Unit

☒ Service / Repair Unit

☒ As found

☒ No calibration adjustments required

☐ As left

Traceable frequency meter used for calibration:

Model: 34405A

Serial Number: 53020093

Date: 14 December 2017

Calibration Interval: One year

Tested By :

SS

M E T E O R O L O G I C A L I N S T R U M E N T S

Tel: 231-946-3980 Fax: 231-946-4772 Email: met.sales@youngusa.com Website: youngusa.com

ISO 9001:2008 CERTIFIED



CERTIFICATE OF CALIBRATION - NIST TRACEABILITY

(Refer to instruction manual for further details of calibration)

deltaCal Serial Number: 141170

DATE: 25-Apr-2018

Calibration Operator: E. Albuja

Critical Venturi Flow Meter: Max Uncertainty = 0.346%

Serial Number: 1 CEESI NVLAP NIST Data File 04BGI151

Serial Number: 2 CEESI NVLAP NIST Data File 04BGI152

Serial Number: 3 CEESI NVLAP NIST Data File 04BGI153

Serial Number: 4 CEESI NVLAP NIST Data File 02BGI004

Room Temperature: $\pm 0.03^{\circ}\text{C}$ from -5°C - 70°C Room Temp: 24.3 $^{\circ}\text{C}$

Brand: Telatemp

Serial Number:

358654

Std Cal Date

23-Oct-17

Std Cal Due Date

23-Oct-18

deltaCal:

Ambient Temperature (set): 24.3 $^{\circ}\text{C}$

Aux (filter) Temperature (set): 24.3 $^{\circ}\text{C}$

Barometric Pressure and Absolute Pressure

Vaisala Model PTB330(50-1100) Digital Accuracy: 0.03371%

Serial Number

C4310002

Std Cal Date

26-Mar-18

Std Cal Due Date

26-Mar-19

deltaCal:

Barometric pressure (set): 742.5 mm of Hg

Results of Venturi Calibration

Flow Rate (Q) vs. Pressure Drop (ΔP).

Where: Q=Lpm, ΔP = Cm of H₂O

Q= 3.81660 $\Delta P^{0.53680}$

Overall Uncertainty: 0.35%

Q= 3.86245 $\Delta P^{0.52151}$

Overall Uncertainty: 0.35%

Date Placed In Service 5/22/18

(To be filled in by operator upon receipt)

Recommended Recalibration Date 5/22/19

(12 months from date placed in service)

Revised: March 2016
Cal102-01T1 Rev D

To Check a deltaCal

E. Albuja

Date

25-Apr-2018 Pre recert

1.5-19.5 VER 4.00

BP= 743 mm of Hg

Maximum allowable error at any flow rate is .75%.

Serial No. 141170

	Reading		CV	Qa deltaCal Indicated	% Error
	Abs. P Crit. Vent. mm of Hg	Room Temp			
# 2	122.19	22.60	1.369	1.557	13.72
	218.85	22.60	2.490	2.585	3.80
	296.35	22.60	3.390	3.400	0.31
	382.58	22.60	4.390	4.424	0.78
	466.61	22.60	5.365	5.399	0.64
# 1	170.46	22.60	6.733	6.795	0.92
	252.99	22.60	10.091	10.075	-0.16
	327.64	22.60	13.128	13.125	-0.02
	387.45	22.60	15.561	16.075	3.30
	478.02	22.60	19.246	19.351	0.55
				Average %	2.38

To Check a deltaCal

E. Albuja

Date

25-Apr-2018

1.5-19.5 VER 4.00

BP= 742.5 mm of Hg

Maximum allowable error at any flow rate is .75%.

Serial No. 141170

	Reading		CV	Qa deltaCal Indicated	% Error
	Abs. P Crit. Vent. mm of Hg	Room Temp	Qa Flow Lpm		
# 2	149.87	24.30	1.701	1.698	-0.18
	194.06	24.30	2.217	2.204	-0.59
	279.78	24.30	3.218	3.198	-0.62
	356.20	24.30	4.110	4.138	0.68
	464.51	24.30	5.375	5.402	0.51
# 1	156.23	24.30	6.194	6.227	0.53
	272.79	24.30	10.967	10.981	0.13
	343.84	24.30	13.876	13.899	0.17
	431.97	24.30	17.484	17.517	0.19
	478.28	24.30	19.380	19.452	0.37
Average %				0.12	