

Alton Coal Development, LLC.

Summary of PM₁₀ Data

Collected at Coal Hollow Mine, Utah

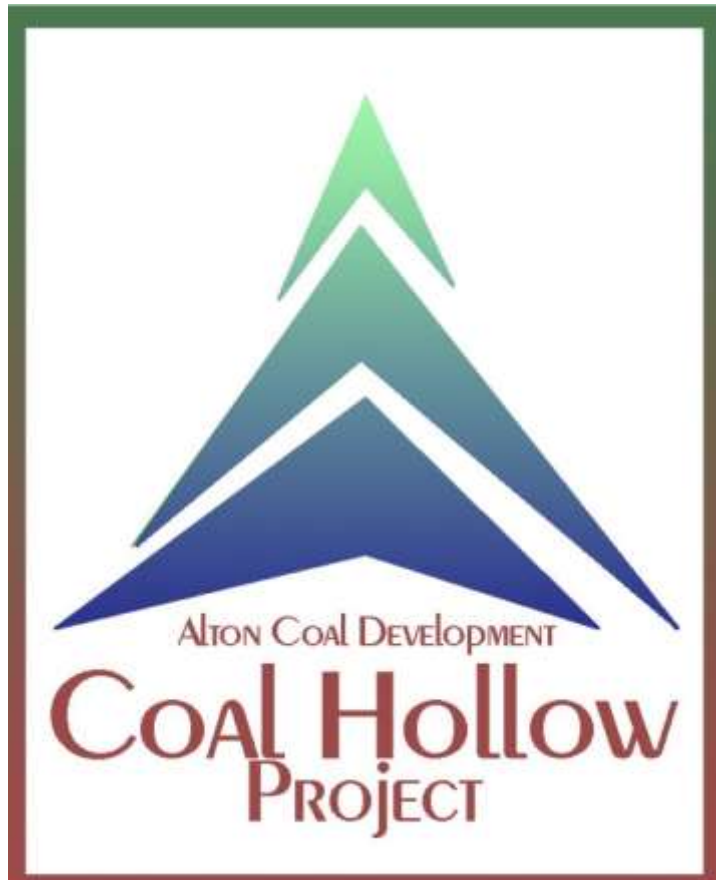
During the First Quarter, 2016

Submitted to:

Utah Division of Environmental Quality
Division of Air Quality
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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 three 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 first quarter of 2016.

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 I 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 compliance monitor for the North Private Lease (NPL) 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.

Figure 1 - Site Location Map

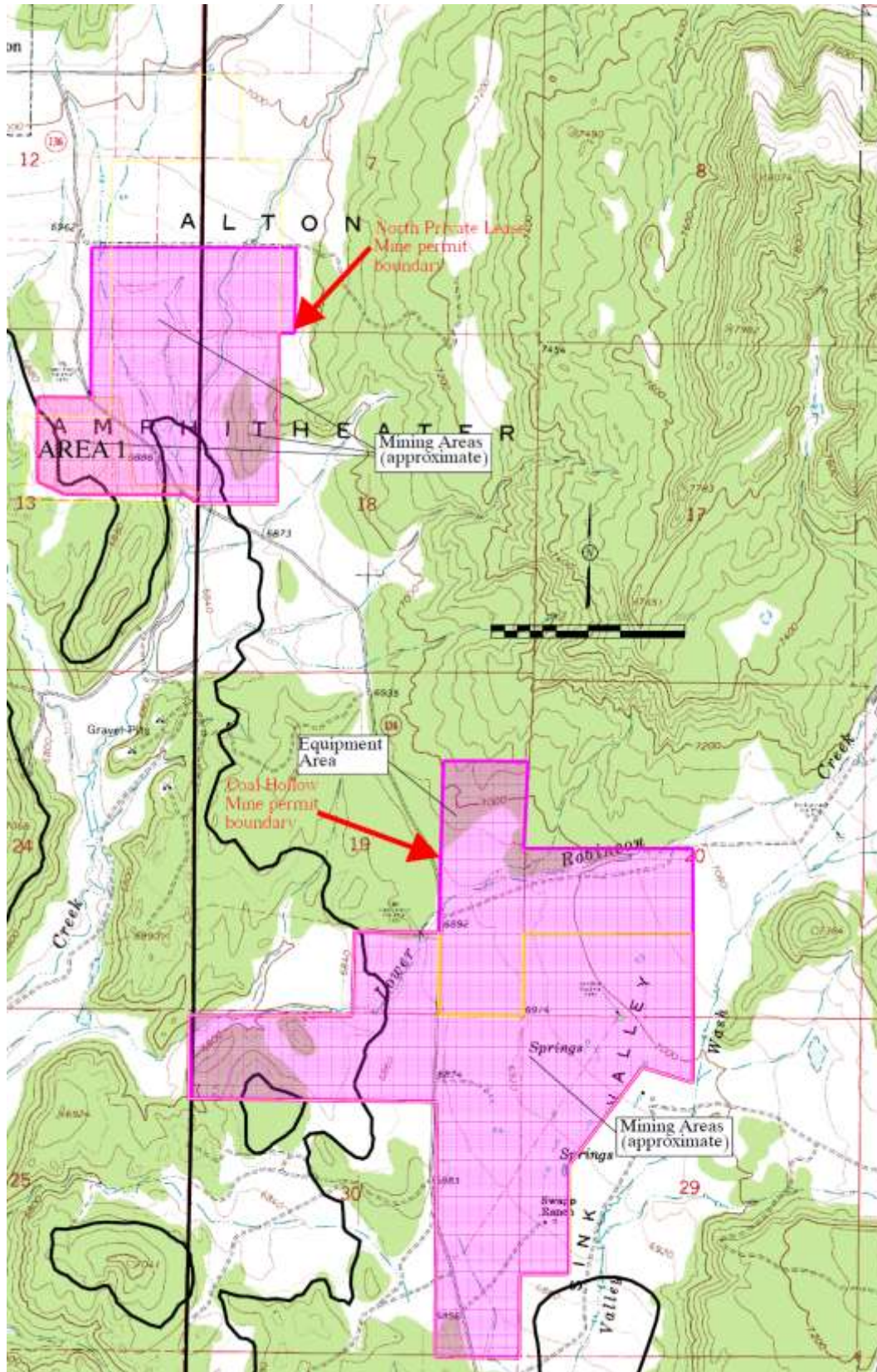


Figure 2 - Satellite View of Monitoring Locations



3.0 AIR QUALITY DATA SUMMARIES

A listing of the measured PM_{10} 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 PM_{10} 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 PM_{10} 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 PM_{10} 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. All measured PM₁₀ concentrations were below the 24-hour National Ambient Air Quality Standard (NAAQS) of 150 µg/m³.

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

RANK	DATE	PM ₁₀ CONCENTRATION
Highest	2/18/2016	7.3
2 nd Highest	3/13/2016	6.9
Monthly Mean	1/1/16-1/31/16	1.1
Monthly Mean	2/1/16-2/29/16	3.6
Monthly Mean	3/1/16-3/31/16	3.8
Quarterly Mean	1/1/16-3/31/16 (16 valid samples)	2.7

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

RANK	DATE	PM ₁₀ CONCENTRATION
Highest	3/25/2016	12.8
2 nd Highest	3/1/2016	11.3
Monthly Mean	1/1/16-1/31/16	4.8
Monthly Mean	2/1/16-2/29/16	6.4
Monthly Mean	3/1/16-3/31/16	7.2
Quarterly Mean	1/1/16-3/31/16 (16 valid samples)	6.1

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

RANK	DATE	PM ₁₀ CONCENTRATION
Highest	1/13/2016	13.2
2 nd Highest	3/25/2016	10.8
Monthly Mean	1/1/16-1/31/16	5.1
Monthly Mean	2/1/16-2/29/16	6.3
Monthly Mean	3/1/16-3/31/16	7.0
Quarterly Mean	1/1/16-3/31/16 (15 valid samples)	6.2

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

RANK	DATE	PM ₁₀ CONCENTRATION
Highest	2/24/2016	12.4
2 nd Highest	3/1/2016	8.6
Monthly Mean	1/1/16-1/31/16	Not Installed
Monthly Mean	2/1/16-2/29/16	10.5
Monthly Mean	3/1/16-3/31/16	5.5
Quarterly Mean	2/18/16-3/31/16 (7 valid samples)	6.5

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

RANK	DATE	PM ₁₀ CONCENTRATION
Highest	2/24/2016	12.7
2 nd Highest	3/25/2016	7.5
Monthly Mean	1/1/16-1/31/16	Not Installed
Monthly Mean	2/1/16-2/29/16	12.7
Monthly Mean	3/1/16-3/31/16	4.8
Quarterly Mean	2/18/16-3/31/16 (7 valid samples)	5.9

Table VI – Mean Quarterly and Monthly Wind Speed

	1st Quarter 2016	Jan.	Feb.	Mar.
Mean Wind Speed (m/s)	3.02	2.48	3.30	3.29

4.0 DATA RECOVERY AND QUALITY ASSURANCE

4.1 Data Recovery

Monitor 962A

Monitor 962A collected 16 of the 16 samples during the quarter. The percent recovery for this quarter is 100%.

Monitor 963B

Monitor 963B collected 16 of the 16 samples during the quarter. The percent recovery for this quarter is 100%.

Monitor 964C

Monitor 964C collected 15 of the 16 samples during the quarter. The percent recovery for this quarter is 94%. For the sample date of Jan. 1st the stop time was programed incorrectly for the monitor, it ran 85:20 hours and was shut down by the operator.

Monitor 2366D

Monitor 2366D collected 7 of the 8 samples during the quarter. The percent recovery for this quarter is 88%. For the sample date of Feb. 18th the monitor ran for an insufficient sample period.

Monitor 2398E

Monitor 2398E collected 7 of the 8 samples during the quarter. The percent recovery for this quarter is 88%. For the sample date of Feb. 18th the monitor ran for an insufficient sample period.

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

Table VIII - Summary of Data Recovery

SAMPLER	POSSIBLE SAMPLES	VALID SAMPLES	PERCENT DATA RECOVERY
962A	16	16	100%
963B	16	16	100%
964C	16	15	94%
2366D	8	7	88%
2398E	8	7	88%

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 11 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 -42.4% to 19.7%. The aggregate coefficient of variability (CV) calculated in accordance with *40 CFR, Part 58*, Appendix A Equation 11 is 18.75%. This value is not within the 10% goal for aggregate CV.

Precision calculations at the North Private Lease were developed based on 6 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 3.6% to 12.7%. The aggregate coefficient of variability (CV) calculated in accordance with *40 CFR, Part 58*, Appendix A Equation 11 is 22.92%. 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 Feb. 22, 2016. A copy of the audit report is presented in Appendix E and is summarized in Table VI. The audit results indicate that the three samplers were operating properly.

Table VII III- Audit Summary

SAMPLER	AUDIT % DIFFERENCE	LIMIT*	DESIGN % DIFFERENCE	LIMIT*
962A	-2.7	±4%	2.8	± 5%
963B	-0.9	±4%	1.0	± 5%

964C	-1.5	±4%	1.6	± 5%
2366D	5.2	±4%	-4.9	± 5%
2398E	5.0	±4%	-4.8	± 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

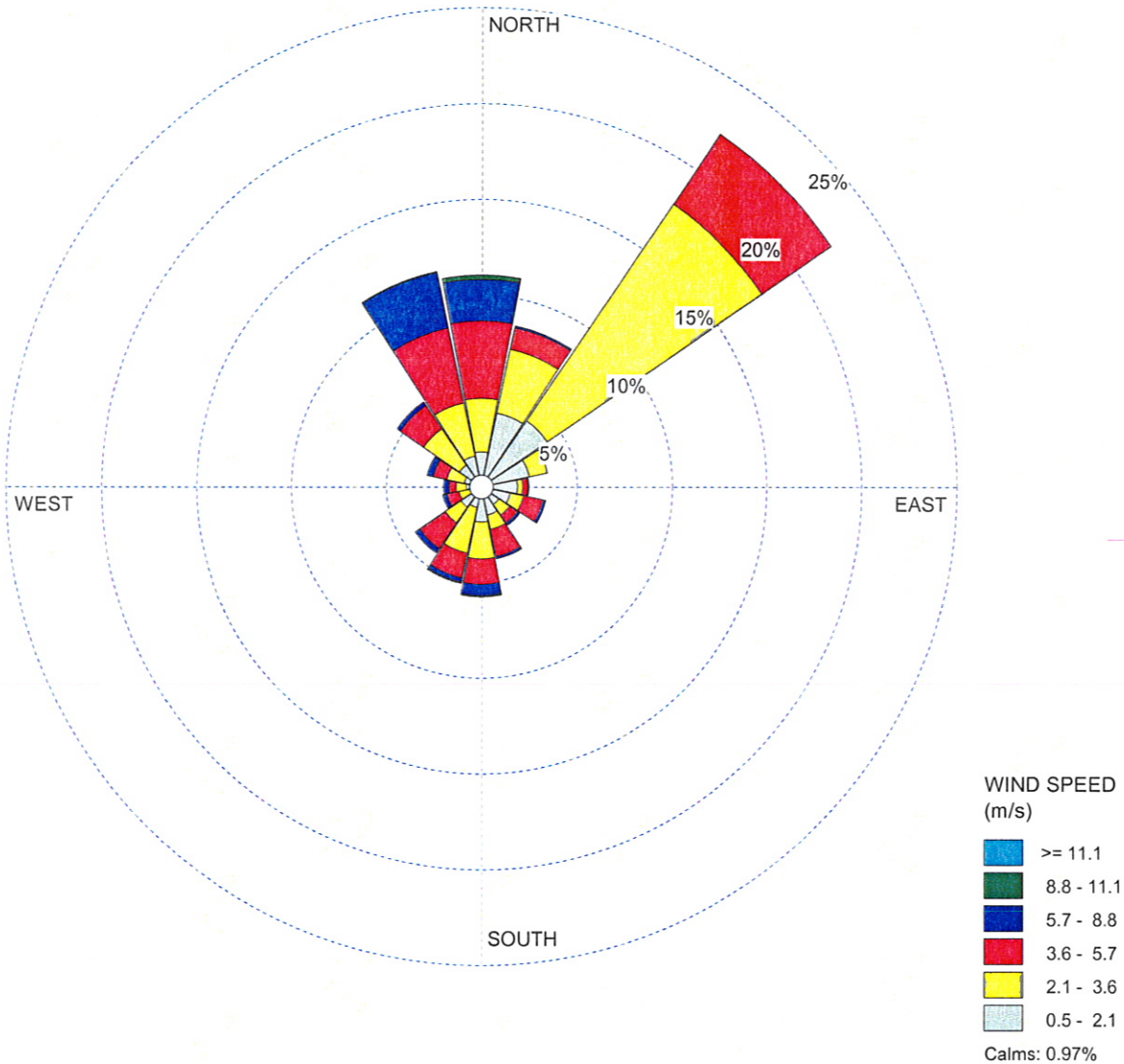
Windrose

WIND ROSE PLOT:

Alton Coal Development , Alton, Utah
2016 1st Quarter

DISPLAY:

Wind Speed
Direction (blowing from)



COMMENTS:

DATA PERIOD:

Start Date: 1/1/2016 - 00:00
End Date: 3/31/2016 - 23:00

COMPANY NAME:

Alton Coal Development, LLC - Coal Hollow Mine

MODELER:

K. Nicholes

CALM WINDS:

0.97%

TOTAL COUNT:

2184 hrs.

AVG. WIND SPEED:

3.02 m/s

DATE:

4/19/2016

PROJECT NO.:



Station ID: 1
 Start Date: 1/1/2016 - 00:00
 End Date: 3/31/2016 - 23:00

Run ID:

Frequency Distribution
 (Count)

	Wind Direction (Blowing From) / Wind Speed (m/s)						
	0.5 - 2.1	2.1 - 3.6	3.6 - 5.7	5.7 - 8.8	8.8 - 11.1	>= 11.1	Total
348.75-11.25	40	61	88	47	5	0	241
11.25-33.75	86	74	25	2	0	0	187
33.75-56.25	91	298	96	0	0	0	485
56.25-78.75	56	21	0	0	0	0	77
78.75-101.25	41	6	6	1	0	0	54
101.25-123.75	34	15	23	3	0	0	75
123.75-146.25	24	15	11	3	0	0	53
146.25-168.75	33	17	31	3	0	0	84
168.75-191.25	40	42	29	13	1	0	125
191.25-213.75	24	53	29	5	1	0	112
213.75-236.25	28	22	35	6	0	0	91
236.25-258.75	13	13	14	5	0	0	45
258.75-281.25	17	12	8	6	0	0	43
281.25-303.75	20	20	16	7	0	0	63
303.75-326.25	30	50	32	5	0	0	117
326.25-348.75	36	62	87	64	1	0	250
Total	613	781	530	170	8	0	2184

Frequency of Calm Winds: 82
 Average Wind Speed: 3.02 m/s

Station ID: 1
 Start Date: 1/1/2016 - 00:00
 End Date: 3/31/2016 - 23:00

Run ID:

Frequency Distribution
 (Normalized)

	Wind Direction (Blowing From) / Wind Speed (m/s)						
	0.5 - 2.1	2.1 - 3.6	3.6 - 5.7	5.7 - 8.8	8.8 - 11.1	>= 11.1	Total
348.75-11.25	0.018315	0.027930	0.040293	0.021520	0.002289	0.000000	0.110348
11.25-33.75	0.039377	0.033883	0.011447	0.000916	0.000000	0.000000	0.085623
33.75-56.25	0.041667	0.136447	0.043956	0.000000	0.000000	0.000000	0.222070
56.25-78.75	0.025641	0.009615	0.000000	0.000000	0.000000	0.000000	0.035256
78.75-101.25	0.018773	0.002747	0.002747	0.000458	0.000000	0.000000	0.024725
101.25-123.75	0.015568	0.006868	0.010531	0.001374	0.000000	0.000000	0.034341
123.75-146.25	0.010989	0.006868	0.005037	0.001374	0.000000	0.000000	0.024267
146.25-168.75	0.015110	0.007784	0.014194	0.001374	0.000000	0.000000	0.038462
168.75-191.25	0.018315	0.019231	0.013278	0.005952	0.000458	0.000000	0.057234
191.25-213.75	0.010989	0.024267	0.013278	0.002289	0.000458	0.000000	0.051282
213.75-236.25	0.012821	0.010073	0.016026	0.002747	0.000000	0.000000	0.041667
236.25-258.75	0.005952	0.005952	0.006410	0.002289	0.000000	0.000000	0.020604
258.75-281.25	0.007784	0.005495	0.003663	0.002747	0.000000	0.000000	0.019689
281.25-303.75	0.009158	0.009158	0.007326	0.003205	0.000000	0.000000	0.028846
303.75-326.25	0.013736	0.022894	0.014652	0.002289	0.000000	0.000000	0.053571
326.25-348.75	0.016484	0.028388	0.039835	0.029304	0.000458	0.000000	0.114469
Total	0.280678	0.357601	0.242674	0.077839	0.003663	0.000000	0.962454

Frequency of Calm Winds: 3.75%

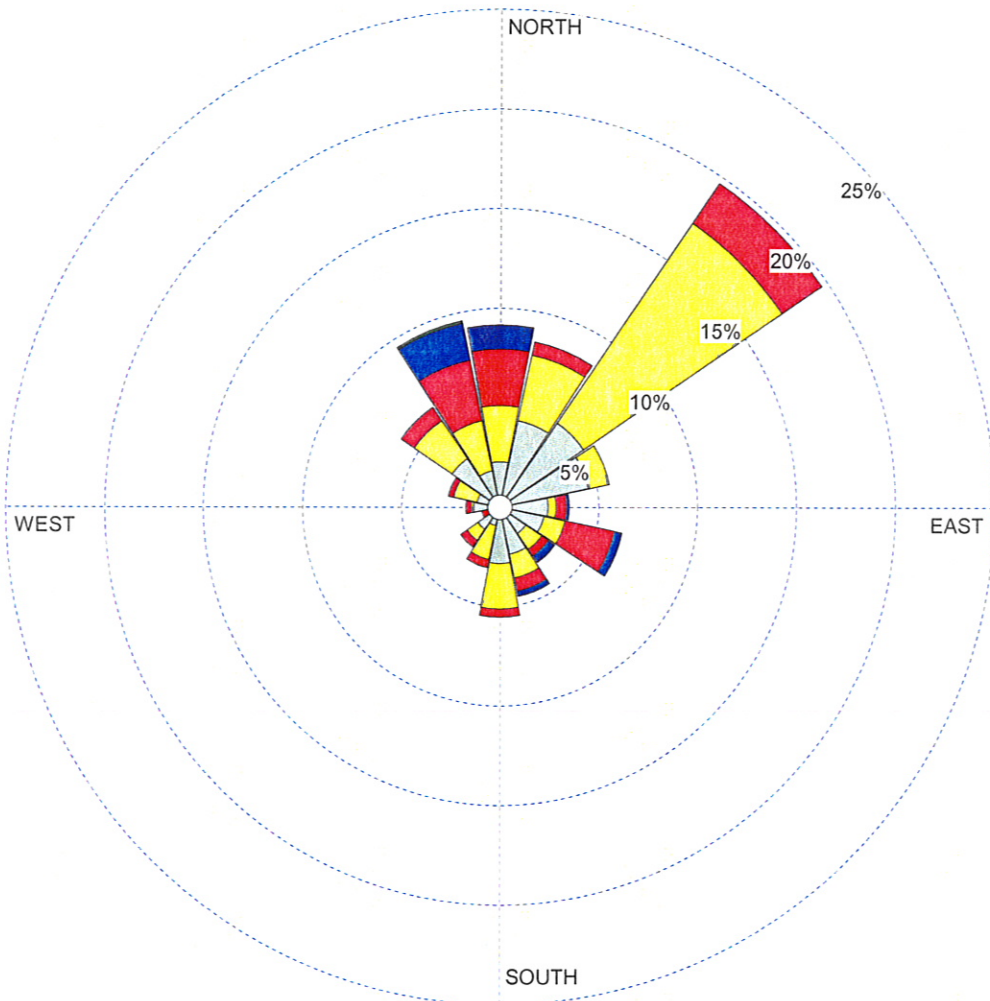
Average Wind Speed: 3.02 m/s

WIND ROSE PLOT:

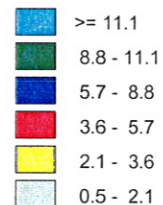
Alton Coal Development , Alton, Utah
2016 January

DISPLAY:

Wind Speed
Direction (blowing from)



WIND SPEED
(m/s)



Calms: 0.78%

COMMENTS:

DATA PERIOD:

Start Date: 1/1/2016 - 00:00
End Date: 1/31/2016 - 23:00

COMPANY NAME:

Alton Coal Development, LLC - Coal Hollow Mine

MODELER:

K. Nicholes

CALM WINDS:

0.78%

TOTAL COUNT:

744 hrs.

AVG. WIND SPEED:

2.48 m/s

DATE:

4/19/2016

PROJECT NO.:



Station ID: 1
 Start Date: 1/1/2016 - 00:00
 End Date: 1/31/2016 - 23:00

Run ID:

Frequency Distribution
 (Count)

	Wind Direction (Blowing From) / Wind Speed (m/s)						
	0.5 - 2.1	2.1 - 3.6	3.6 - 5.7	5.7 - 8.8	8.8 - 11.1	>= 11.1	Total
348.75-11.25	17	21	21	9	0	0	68
11.25-33.75	33	25	5	0	0	0	63
33.75-56.25	38	90	18	0	0	0	146
56.25-78.75	34	8	0	0	0	0	42
78.75-101.25	18	3	4	1	0	0	26
101.25-123.75	17	8	19	3	0	0	47
123.75-146.25	12	7	3	3	0	0	25
146.25-168.75	18	9	5	2	0	0	34
168.75-191.25	21	17	3	0	0	0	41
191.25-213.75	7	13	3	0	0	0	23
213.75-236.25	10	5	3	0	0	0	18
236.25-258.75	3	1	3	0	0	0	7
258.75-281.25	10	1	2	0	0	0	13
281.25-303.75	9	9	2	0	0	0	20
303.75-326.25	22	17	6	0	0	0	45
326.25-348.75	14	19	23	14	1	0	71
Total	283	253	120	32	1	0	744

Frequency of Calm Winds: 55
 Average Wind Speed: 2.48 m/s

Station ID: 1
 Start Date: 1/1/2016 - 00:00
 End Date: 1/31/2016 - 23:00

Run ID:

Frequency Distribution
 (Normalized)

	Wind Direction (Blowing From) / Wind Speed (m/s)						
	0.5 - 2.1	2.1 - 3.6	3.6 - 5.7	5.7 - 8.8	8.8 - 11.1	>= 11.1	Total
348.75-11.25	0.022849	0.028226	0.028226	0.012097	0.000000	0.000000	0.091398
11.25-33.75	0.044355	0.033602	0.006720	0.000000	0.000000	0.000000	0.084677
33.75-56.25	0.051075	0.120968	0.024194	0.000000	0.000000	0.000000	0.196237
56.25-78.75	0.045699	0.010753	0.000000	0.000000	0.000000	0.000000	0.056452
78.75-101.25	0.024194	0.004032	0.005376	0.001344	0.000000	0.000000	0.034946
101.25-123.75	0.022849	0.010753	0.025538	0.004032	0.000000	0.000000	0.063172
123.75-146.25	0.016129	0.009409	0.004032	0.004032	0.000000	0.000000	0.033602
146.25-168.75	0.024194	0.012097	0.006720	0.002688	0.000000	0.000000	0.045699
168.75-191.25	0.028226	0.022849	0.004032	0.000000	0.000000	0.000000	0.055108
191.25-213.75	0.009409	0.017473	0.004032	0.000000	0.000000	0.000000	0.030914
213.75-236.25	0.013441	0.006720	0.004032	0.000000	0.000000	0.000000	0.024194
236.25-258.75	0.004032	0.001344	0.004032	0.000000	0.000000	0.000000	0.009409
258.75-281.25	0.013441	0.001344	0.002688	0.000000	0.000000	0.000000	0.017473
281.25-303.75	0.012097	0.012097	0.002688	0.000000	0.000000	0.000000	0.026882
303.75-326.25	0.029570	0.022849	0.008065	0.000000	0.000000	0.000000	0.060484
326.25-348.75	0.018817	0.025538	0.030914	0.018817	0.001344	0.000000	0.095430
Total	0.380376	0.340054	0.161290	0.043011	0.001344	0.000000	0.926075

Frequency of Calm Winds: 7.39%

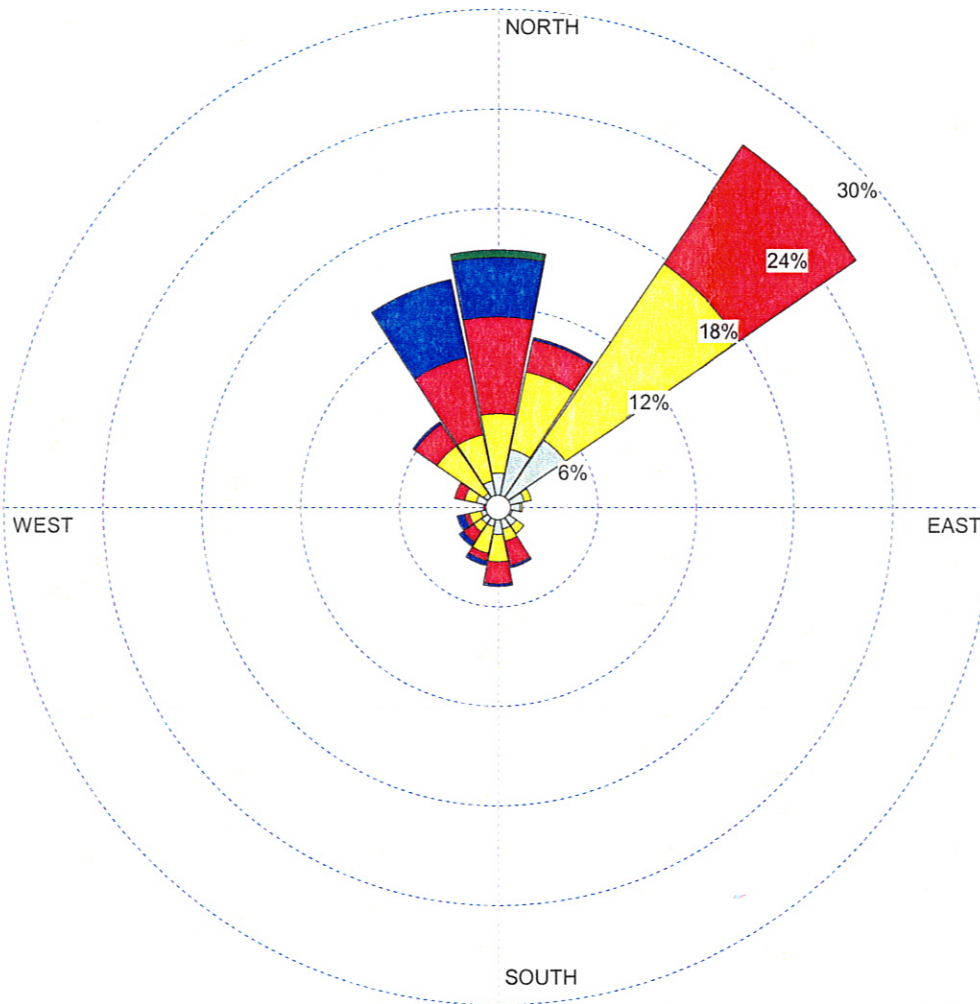
Average Wind Speed: 2.48 m/s

WIND ROSE PLOT:

Alton Coal Development , Alton, Utah
2016 February

DISPLAY:

Wind Speed
Direction (blowing from)



COMMENTS:

DATA PERIOD:

Start Date: 2/1/2016 - 00:00
End Date: 2/28/2016 - 23:00

COMPANY NAME:

Alton Coal Development, LLC - Coal Hollow Mine

MODELER:

K. Nicholes

CALM WINDS:

0.01%

TOTAL COUNT:

672 hrs.

AVG. WIND SPEED:

3.30 m/s

DATE:

4/19/2016

PROJECT NO.:



Station ID: 1
 Start Date: 2/1/2016 - 00:00
 End Date: 2/28/2016 - 23:00

Run ID:

Frequency Distribution
 (Count)

Wind Direction (Blowing From) / Wind Speed (m/s)							
	0.5 - 2.1	2.1 - 3.6	3.6 - 5.7	5.7 - 8.8	8.8 - 11.1	>= 11.1	Total
348.75-11.25	14	24	39	24	3	0	104
11.25-33.75	24	32	13	1	0	0	70
33.75-56.25	33	86	58	0	0	0	177
56.25-78.75	11	3	0	0	0	0	14
78.75-101.25	9	1	0	0	0	0	10
101.25-123.75	6	0	0	0	0	0	6
123.75-146.25	9	4	0	0	0	0	13
146.25-168.75	9	5	10	1	0	0	25
168.75-191.25	11	11	9	1	0	0	32
191.25-213.75	8	11	3	2	0	0	24
213.75-236.25	8	4	5	2	0	0	19
236.25-258.75	7	5	2	3	0	0	17
258.75-281.25	2	3	1	0	0	0	6
281.25-303.75	9	5	4	0	0	0	18
303.75-326.25	7	23	11	1	0	0	42
326.25-348.75	11	19	32	32	0	0	94
Total	178	236	187	67	3	0	672

Frequency of Calm Winds: 1
 Average Wind Speed: 3.30 m/s

Station ID: 1
 Start Date: 2/1/2016 - 00:00
 End Date: 2/28/2016 - 23:00

Run ID:

Frequency Distribution
 (Normalized)

	Wind Direction (Blowing From) / Wind Speed (m/s)						
	0.5 - 2.1	2.1 - 3.6	3.6 - 5.7	5.7 - 8.8	8.8 - 11.1	>= 11.1	Total
348.75-11.25	0.020833	0.035714	0.058036	0.035714	0.004464	0.000000	0.154762
11.25-33.75	0.035714	0.047619	0.019345	0.001488	0.000000	0.000000	0.104167
33.75-56.25	0.049107	0.127976	0.086310	0.000000	0.000000	0.000000	0.263393
56.25-78.75	0.016369	0.004464	0.000000	0.000000	0.000000	0.000000	0.020833
78.75-101.25	0.013393	0.001488	0.000000	0.000000	0.000000	0.000000	0.014881
101.25-123.75	0.008929	0.000000	0.000000	0.000000	0.000000	0.000000	0.008929
123.75-146.25	0.013393	0.005952	0.000000	0.000000	0.000000	0.000000	0.019345
146.25-168.75	0.013393	0.007440	0.014881	0.001488	0.000000	0.000000	0.037202
168.75-191.25	0.016369	0.016369	0.013393	0.001488	0.000000	0.000000	0.047619
191.25-213.75	0.011905	0.016369	0.004464	0.002976	0.000000	0.000000	0.035714
213.75-236.25	0.011905	0.005952	0.007440	0.002976	0.000000	0.000000	0.028274
236.25-258.75	0.010417	0.007440	0.002976	0.004464	0.000000	0.000000	0.025298
258.75-281.25	0.002976	0.004464	0.001488	0.000000	0.000000	0.000000	0.008929
281.25-303.75	0.013393	0.007440	0.005952	0.000000	0.000000	0.000000	0.026786
303.75-326.25	0.010417	0.034226	0.016369	0.001488	0.000000	0.000000	0.062500
326.25-348.75	0.016369	0.028274	0.047619	0.047619	0.000000	0.000000	0.139881
Total	0.264881	0.351190	0.278274	0.099702	0.004464	0.000000	0.998512

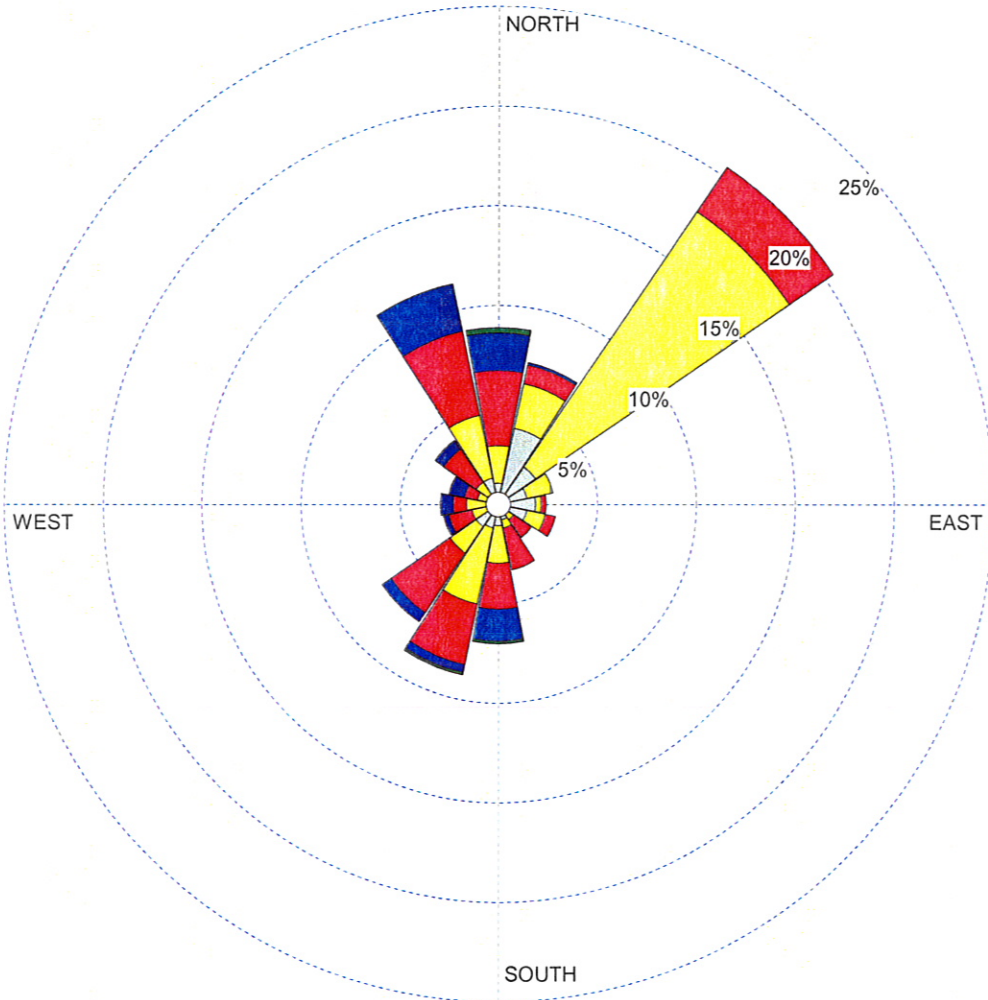
Frequency of Calm Winds: 0.15%
 Average Wind Speed: 3.30 m/s

WIND ROSE PLOT:

**Alton Coal Development , Alton, Utah
2016 March**

DISPLAY:

**Wind Speed
Direction (blowing from)**



COMMENTS:

DATA PERIOD:

**Start Date: 3/1/2016 - 00:00
End Date: 3/31/2016 - 23:00**

COMPANY NAME:

Alton Coal Development, LLC - Coal Hollow Mine

MODELER:

K. Nicholes

CALM WINDS:

0.37%

TOTAL COUNT:

744 hrs.

AVG. WIND SPEED:

3.29 m/s

DATE:

4/19/2016

PROJECT NO.:



Station ID: 1
 Start Date: 3/1/2016 - 00:00
 End Date: 3/31/2016 - 23:00

Run ID:

Frequency Distribution
 (Count)

	Wind Direction (Blowing From) / Wind Speed (m/s)						
	0.5 - 2.1	2.1 - 3.6	3.6 - 5.7	5.7 - 8.8	8.8 - 11.1	>= 11.1	Total
348.75-11.25	8	14	28	14	2	0	66
11.25-33.75	29	17	7	1	0	0	54
33.75-56.25	17	115	20	0	0	0	152
56.25-78.75	11	10	0	0	0	0	21
78.75-101.25	14	2	2	0	0	0	18
101.25-123.75	11	7	4	0	0	0	22
123.75-146.25	3	4	8	0	0	0	15
146.25-168.75	6	3	16	0	0	0	25
168.75-191.25	8	14	17	12	1	0	52
191.25-213.75	9	29	23	3	1	0	65
213.75-236.25	10	12	27	4	0	0	53
236.25-258.75	3	7	9	2	0	0	21
258.75-281.25	4	8	5	5	0	0	22
281.25-303.75	2	6	5	6	0	0	19
303.75-326.25	1	9	15	4	0	0	29
326.25-348.75	10	24	32	18	0	0	84
Total	146	281	218	69	4	0	744

Frequency of Calm Winds: 26
 Average Wind Speed: 3.29 m/s

Station ID: 1
 Start Date: 3/1/2016 - 00:00
 End Date: 3/31/2016 - 23:00

Run ID:

Frequency Distribution
 (Normalized)

	Wind Direction (Blowing From) / Wind Speed (m/s)						
	0.5 - 2.1	2.1 - 3.6	3.6 - 5.7	5.7 - 8.8	8.8 - 11.1	>= 11.1	Total
348.75-11.25	0.010753	0.018817	0.037634	0.018817	0.002688	0.000000	0.088710
11.25-33.75	0.038978	0.022849	0.009409	0.001344	0.000000	0.000000	0.072581
33.75-56.25	0.022849	0.154570	0.026882	0.000000	0.000000	0.000000	0.204301
56.25-78.75	0.014785	0.013441	0.000000	0.000000	0.000000	0.000000	0.028226
78.75-101.25	0.018817	0.002688	0.002688	0.000000	0.000000	0.000000	0.024194
101.25-123.75	0.014785	0.009409	0.005376	0.000000	0.000000	0.000000	0.029570
123.75-146.25	0.004032	0.005376	0.010753	0.000000	0.000000	0.000000	0.020161
146.25-168.75	0.008065	0.004032	0.021505	0.000000	0.000000	0.000000	0.033602
168.75-191.25	0.010753	0.018817	0.022849	0.016129	0.001344	0.000000	0.069892
191.25-213.75	0.012097	0.038978	0.030914	0.004032	0.001344	0.000000	0.087366
213.75-236.25	0.013441	0.016129	0.036290	0.005376	0.000000	0.000000	0.071237
236.25-258.75	0.004032	0.009409	0.012097	0.002688	0.000000	0.000000	0.028226
258.75-281.25	0.005376	0.010753	0.006720	0.006720	0.000000	0.000000	0.029570
281.25-303.75	0.002688	0.008065	0.006720	0.008065	0.000000	0.000000	0.025538
303.75-326.25	0.001344	0.012097	0.020161	0.005376	0.000000	0.000000	0.038978
326.25-348.75	0.013441	0.032258	0.043011	0.024194	0.000000	0.000000	0.112903
Total	0.196237	0.377688	0.293011	0.092742	0.005376	0.000000	0.965054

Frequency of Calm Winds: 3.49%

Average Wind Speed: 3.29 m/s

APPENDIX B

Listing of PM₁₀ Concentrations

Background Monitor 962A

PM₁₀ Sampler Summary

January 1, 2016 - March 31, 2016

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)		Sample Period (hr:min)	Sample Volume (m ³)	Std Volume (m ³)	Mass (mg)		Flag	Comments
		LTP	STP				Tare	Gross		
01/01/16	P2926661	2.3	2.7	23:59	24.0	20.7	381.888	381.944	0.056	
01/07/16	P2927855	0.7	0.8	23:59	24.0	20.2	380.073	380.090	0.017	
01/13/16	P2927858	0.6	0.7	23:59	24.0	20.4	375.202	375.218	0.016	
01/19/16	P2928049	0.6	0.7	23:59	24.0	20.3	394.529	394.544	0.015	
01/25/16	P2928052	0.8	0.9	23:59	24.0	20.6	367.494	367.514	0.020	TD
01/31/16	P2928155	0.6	0.8	23:59	24.0	19.9	391.311	391.327	0.016	
02/06/16	P2928158	1.4	1.7	23:59	24.0	20.6	392.333	392.368	0.035	
02/12/16	P2928161	1.3	1.6	23:59	24.0	20.0	390.325	390.357	0.032	
02/18/16	P2928304	6.0	7.3	23:59	24.0	19.8	371.169	371.314	0.145	
02/24/16	P2928406	3.1	3.7	24:00	24.0	20.2	375.584	375.659	0.075	
03/01/16	P2928416	2.5	3.1	23:59	24.0	19.8	377.214	377.276	0.062	TD
03/07/16	P2928413	2.5	3.0	23:59	24.0	20.0	351.941	352.003	0.062	
03/13/16	P2928781	5.7	6.9	23:59	24.0	19.9	384.546	384.684	0.138	
03/19/16	P2928786	2.2	2.6	23:59	24.0	19.7	398.302	398.355	0.053	
03/25/16	P2928791	3.9	4.7	23:59	24.0	19.7	389.832	389.926	0.094	
03/31/16	P2928997	2.1	2.5	23:59	24.0	19.9	385.746	385.797	0.051	
02/15/16	P2928303	Field Blank					387.440	387.446	0.006	

# Valid	Recovery	Average	St. Dev.	Max	Min
16	100%	2.7	2.1	7.3	0.7

BGI PQ200 Air Sampling System Downloaded 2016 04 jan 13:09:42

Job Details:

Job Name: 16Jan04A.JOB
Version: 5.62
Serial No: 962
Pump Time: 7228:04
Flags:

Job Code:

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

	Max	Min	Avg	Units
BP	586	584	585	mmHg
TA	0.1	-16.4	-6.9	°C
Q	---	---	16.71	Lpm

Timer Information:

Date Time
dd-mm hh:mm:ss
Start: 15-01-jan 0:00:08
Stop: 16-02-jan 0:00:04
ET: 23:59

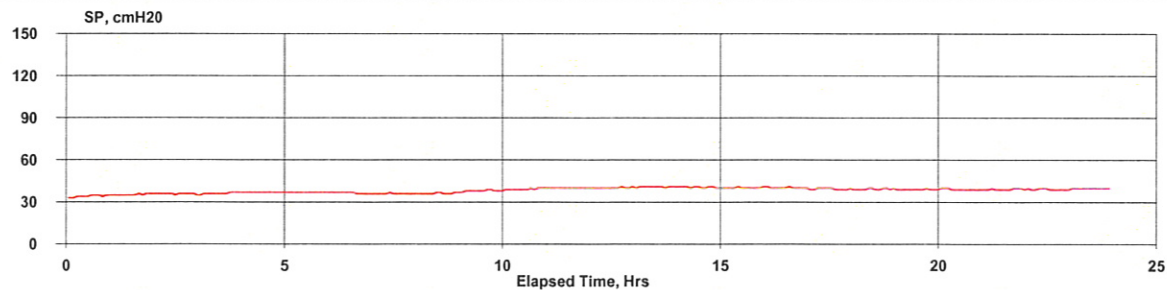
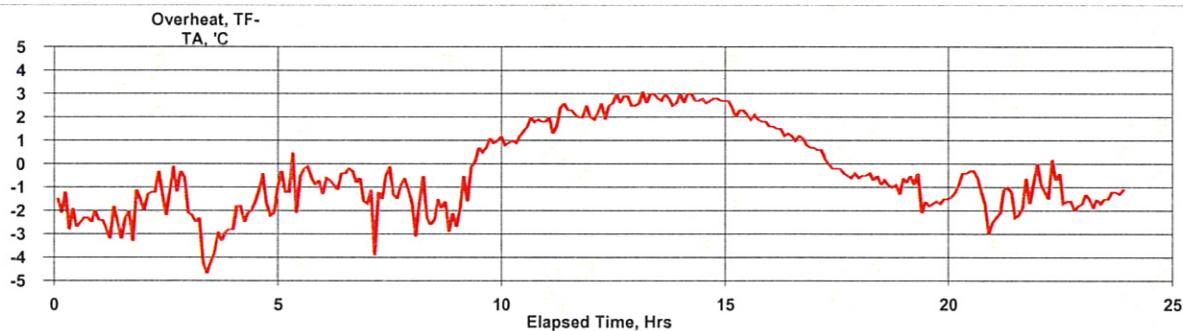
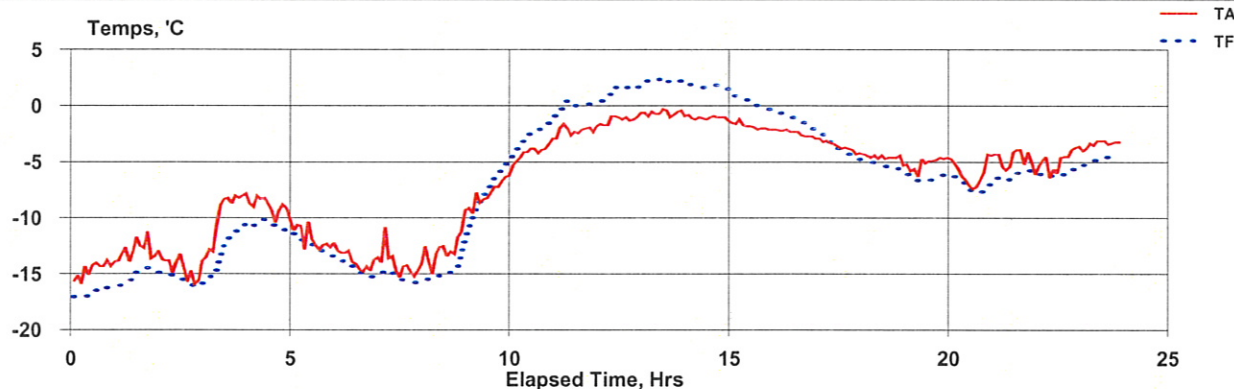
Mass Concentration Data:

Filter ID: 18
Final Wt: mg
Initial Wt: mg
Delta Wt: 0.000 mg
Total Vol: 24.036 m³
Mass Conc: 0 µg/m³

QCV 0.45 %
Max overheat 3.5 °C
occured 01-jan 13:21:29

Notes 1:

Notes 2:



Hourly

16-01-jan	0:05:08	585	-14.6	-16.8	-2.2	34	16.72
16-01-jan	1:05:08	585	-12.9	-15.2	-2.3	35	16.72
16-01-jan	2:05:08	585	-14.5	-15.5	-1.1	36	16.72
16-01-jan	3:05:08	585	-9.7	-12.9	-3.2	36	16.71
16-01-jan	4:05:08	585	-9.0	-10.7	-1.7	37	16.71
16-01-jan	5:05:08	585	-11.8	-12.6	-0.7	37	16.72
16-01-jan	6:05:08	585	-13.8	-14.6	-0.8	37	16.72
16-01-jan	7:05:08	585	-14.1	-15.4	-1.3	36	16.72
16-01-jan	8:05:08	585	-12.6	-14.7	-2.1	36	16.71
16-01-jan	9:05:08	586	-7.7	-7.6	0.2	38	16.71
16-01-jan	10:05:08	586	-4.1	-2.6	1.4	39	16.72
16-01-jan	11:05:08	586	-2.2	-0.1	2.1	40	16.69
16-01-jan	12:05:08	585	-1.2	1.3	2.5	40	16.71
16-01-jan	13:05:08	585	-0.6	2.2	2.8	41	16.71
16-01-jan	14:05:08	585	-1.1	1.7	2.8	41	16.71
16-01-jan	15:05:08	585	-1.8	0.3	2.1	40	16.70
16-01-jan	16:05:08	585	-2.4	-1.3	1.2	40	16.71
16-01-jan	17:05:08	585	-3.6	-3.7	-0.1	40	16.70
16-01-jan	18:05:08	585	-4.6	-5.3	-0.7	39	16.70
16-01-jan	19:05:08	586	-5.1	-6.4	-1.3	39	16.72
16-01-jan	20:05:08	586	-5.9	-7.1	-1.2	39	16.72
16-01-jan	21:05:08	586	-4.8	-6.2	-1.4	39	16.71
16-01-jan	22:05:08	586	-4.8	-6.0	-1.2	39	16.72
16-01-jan	23:05:08	586	-3.4	-4.8	-1.4	40	16.71

BGI PQ200 Air Sampling System Downloaded 2016 08 jan 11:41:55

Job Details:

Job Name: 16Jan08A.JOB
Version: 5.62
Serial No: 962
Pump Time: 7252:03
Flags:

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

	Max	Min	Avg	Units
BP	577	574	574	mmHg
TA	-1.3	-12.2	-4.9	°C
Q	---	---	16.71	Lpm

Timer Information:

Date Time
dd-mmm hh:mm:ss
Start: 16-07-jan 0:00:08
Stop: 16-08-jan 0:00:05
ET: 23:59

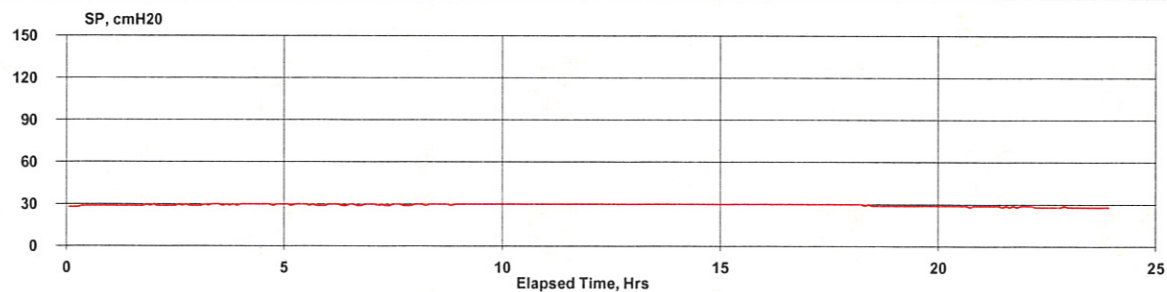
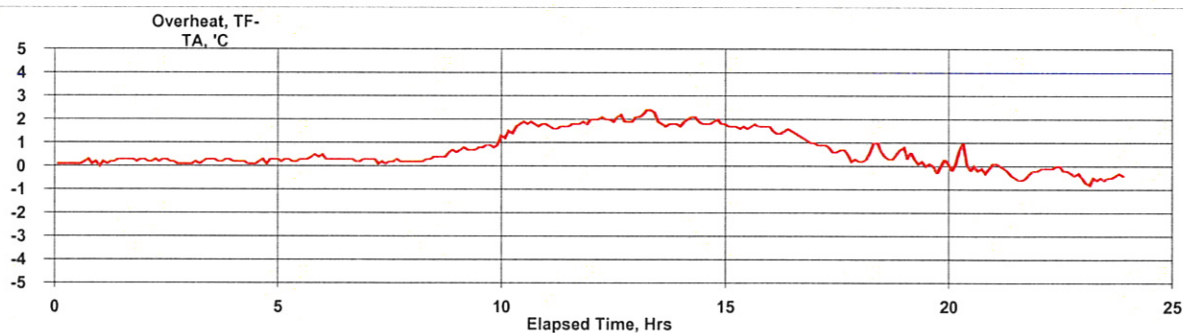
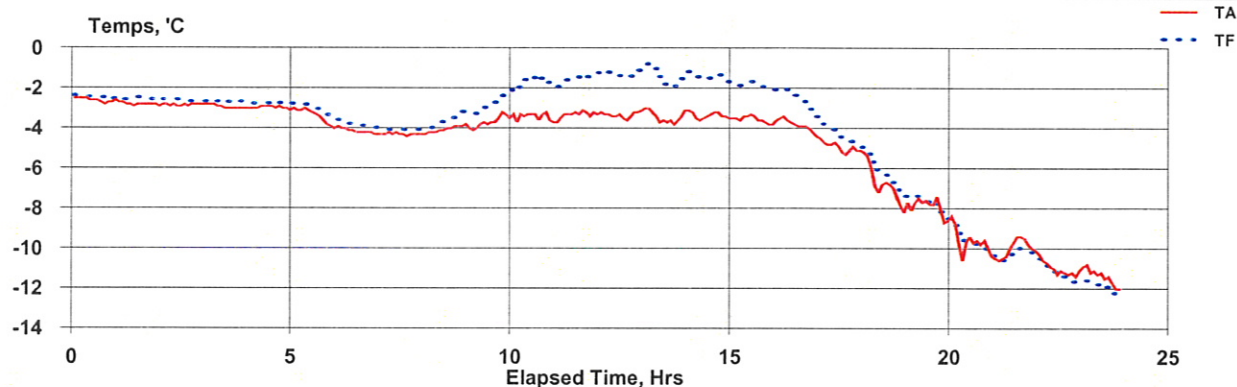
Mass Concentration Data:

Filter ID: 5
Final Wt: mg
Initial Wt: mg
Delta Wt: 0.000 mg
Total Vol: 24.042 m³
Mass Conc: 0 µg/m³

QCV 0.56 %
Max overheat 2.5 °C
occured 07-jan 13:13:13

Notes 1:

Notes 2:



Hourly

16-07-jan	0:05:08	576	-2.6	-2.5	0.1	29	16.71
16-07-jan	1:05:08	576	-2.8	-2.6	0.3	29	16.71
16-07-jan	2:05:08	575	-2.8	-2.6	0.2	29	16.71
16-07-jan	3:05:08	575	-2.9	-2.7	0.2	30	16.71
16-07-jan	4:05:08	575	-3.0	-2.8	0.2	30	16.71
16-07-jan	5:05:08	575	-3.4	-3.1	0.3	30	16.71
16-07-jan	6:05:08	575	-4.1	-3.9	0.3	30	16.72
16-07-jan	7:05:08	575	-4.3	-4.1	0.2	30	16.71
16-07-jan	8:05:08	575	-4.1	-3.7	0.4	30	16.72
16-07-jan	9:05:08	576	-3.7	-2.9	0.8	30	16.71
16-07-jan	10:05:08	576	-3.4	-1.7	1.7	30	16.71
16-07-jan	11:05:08	575	-3.3	-1.6	1.8	30	16.71
16-07-jan	12:05:08	575	-3.3	-1.3	2.0	30	16.71
16-07-jan	13:05:08	574	-3.4	-1.4	2.0	30	16.71
16-07-jan	14:05:08	574	-3.4	-1.5	1.9	30	16.71
16-07-jan	15:05:08	574	-3.6	-1.9	1.7	30	16.71
16-07-jan	16:05:08	574	-3.8	-2.5	1.3	30	16.71
16-07-jan	17:05:08	574	-4.9	-4.3	0.6	30	16.72
16-07-jan	18:05:08	574	-6.8	-6.2	0.6	29	16.72
16-07-jan	19:05:08	574	-7.9	-7.8	0.1	29	16.71
16-07-jan	20:05:08	575	-9.7	-9.6	0.1	29	16.71
16-07-jan	21:05:08	575	-10.0	-10.3	-0.3	29	16.72
16-07-jan	22:05:08	575	-11.0	-11.2	-0.2	28	16.72
16-07-jan	23:05:08	574	-11.4	-11.9	-0.5	28	16.71

BGI PQ200 Air Sampling System Downloaded 2016 14 jan 12:46:41

Job Details:

Job Name: 16Jan14A.JOB
Version: 5.62
Serial No: 962
Pump Time: 7276:02
Flags:

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

	Max	Min	Avg	Units
BP	586	581	583	mmHg
TA	7.8	-12.4	-3.4	°C
Q	---	---	16.71	Lpm

Timer Information:

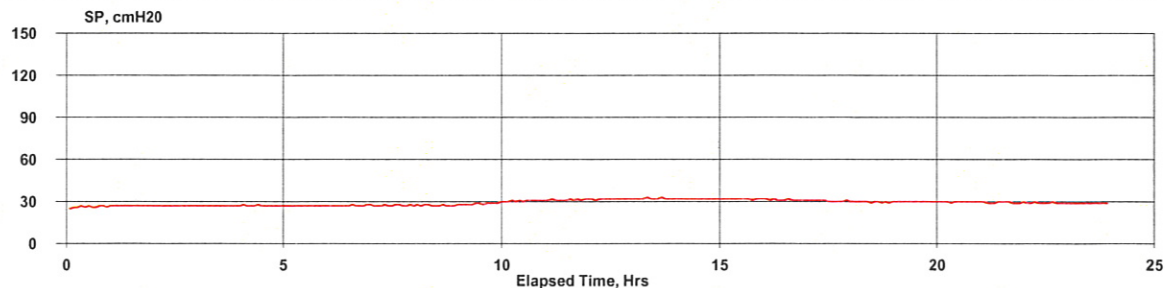
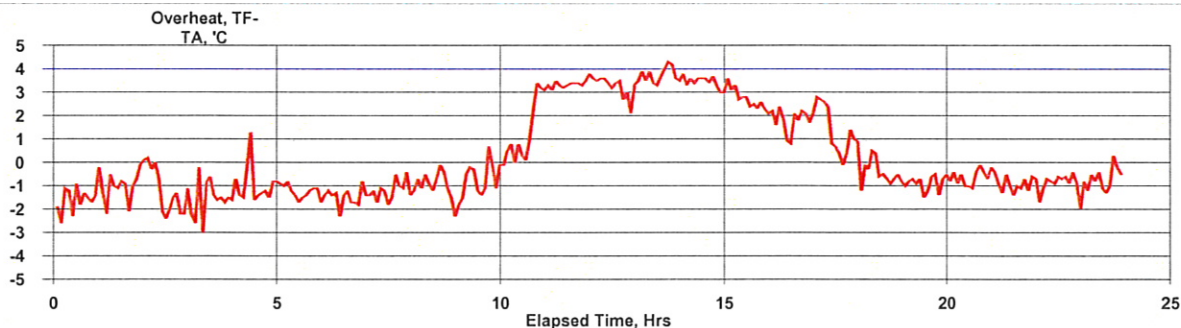
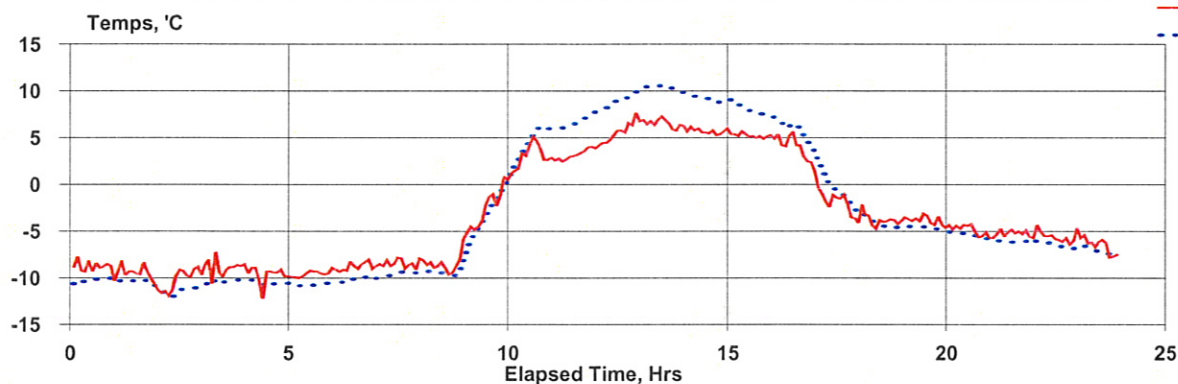
Date Time
dd-mmm hh:mm:ss
Start: 16-13-jan 0:00:08
Stop: 16-14-jan 0:00:04
ET: 23:59

Mass Concentration Data:

Filter ID: 8
Final Wt: mg
Initial Wt: mg
Delta Wt: 0.000 mg
Total Vol: 24.042 m³
Mass Conc: 0 µg/m³

QCV 0.54 %
Max overheat 4.6 °C
occured 13-jan 13:42:43

Notes 1:
Notes 2:



Hourly

16-13-jan	0:05:08	586	-8.8	-10.3	-1.5	26	16.72
16-13-jan	1:05:08	586	-9.5	-10.5	-1.0	27	16.71
16-13-jan	2:05:08	585	-10.1	-11.4	-1.3	27	16.72
16-13-jan	3:05:08	585	-8.9	-10.4	-1.6	27	16.72
16-13-jan	4:05:08	585	-9.6	-10.6	-0.9	27	16.72
16-13-jan	5:05:08	585	-9.5	-10.8	-1.3	27	16.72
16-13-jan	6:05:08	585	-8.8	-10.2	-1.5	27	16.72
16-13-jan	7:05:08	585	-8.4	-9.6	-1.2	27	16.70
16-13-jan	8:05:08	585	-8.4	-9.4	-1.0	27	16.71
16-13-jan	9:05:08	585	-2.4	-3.2	-0.7	29	16.72
16-13-jan	10:05:08	585	3.1	4.4	1.3	31	16.72
16-13-jan	11:05:08	585	3.2	6.6	3.4	31	16.71
16-13-jan	12:05:08	584	5.7	8.9	3.2	32	16.71
16-13-jan	13:05:08	584	6.6	10.3	3.7	32	16.72
16-13-jan	14:05:08	583	5.7	9.2	3.4	32	16.72
16-13-jan	15:05:08	583	5.3	8.0	2.7	32	16.71
16-13-jan	16:05:08	583	3.9	5.8	1.8	31	16.71
16-13-jan	17:05:08	583	-2.0	-0.7	1.3	31	16.71
16-13-jan	18:05:08	583	-3.8	-4.2	-0.5	30	16.72
16-13-jan	19:05:08	582	-3.8	-4.7	-0.9	30	16.72
16-13-jan	20:05:08	582	-4.8	-5.5	-0.6	30	16.71
16-13-jan	21:05:08	582	-5.2	-6.1	-0.9	30	16.71
16-13-jan	22:05:08	582	-5.5	-6.5	-0.9	29	16.74
16-13-jan	23:05:08	582	-6.5	-7.2	-0.7	29	16.70

BGI PQ200 Air Sampling System

Downloaded 2016 20 jan 11:45:34

Job Details:

Job Name: 16Jan20A.JOB
Version: 5.62
Serial No: 962
Pump Time: 7300:01
Flags:

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

	Max	Min	Avg	Units
BP	587	583	584	mmHg
TA	5.1	-10.9	-1.3	°C
Q	---	---	16.71	Lpm

QCV 0.54 %
Max overheat 3.5 °C
occured 20-jan 07:57:00

Timer Information:

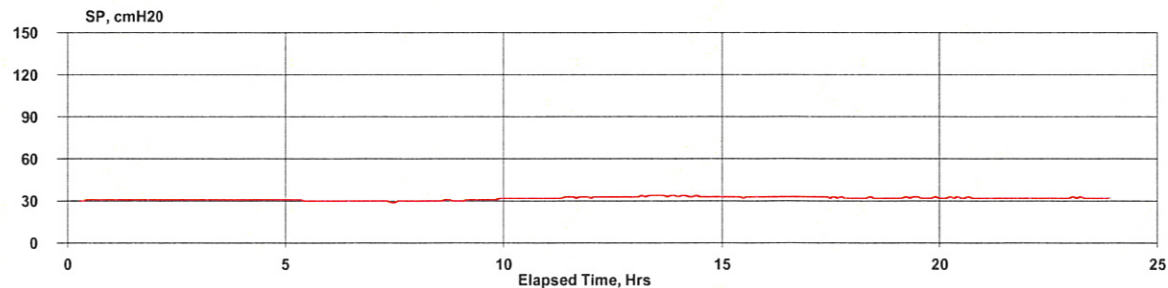
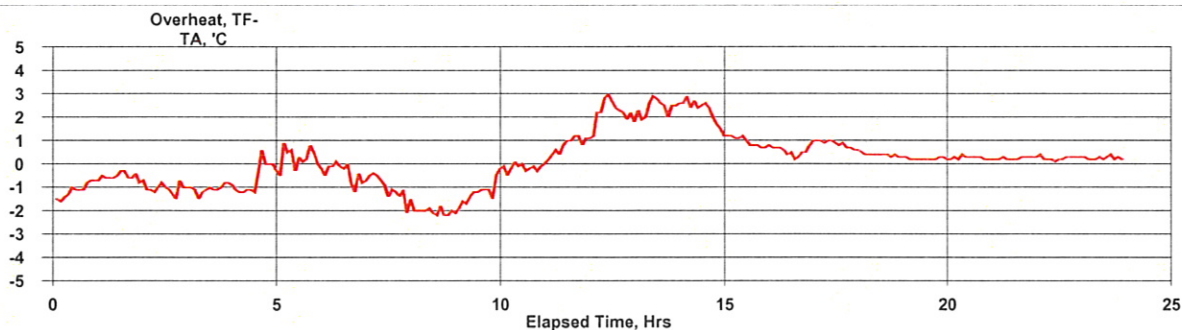
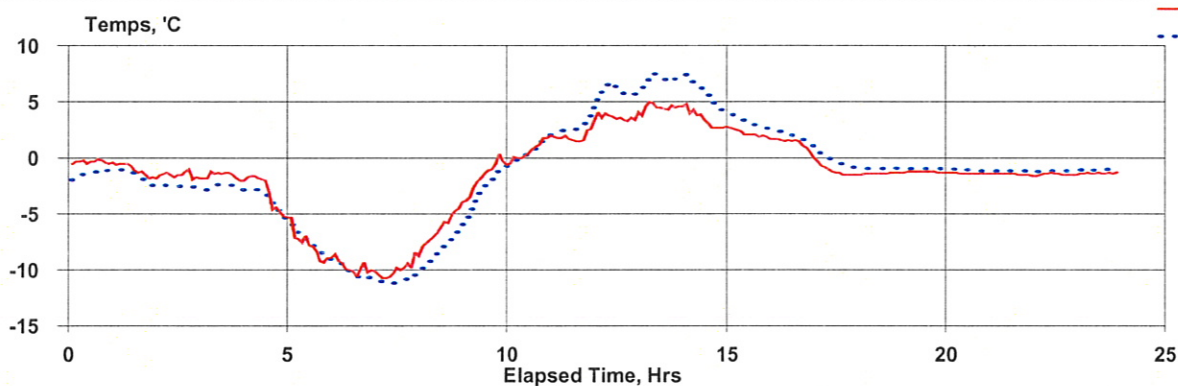
	Date	Time
	dd-mmm	hh:mm:ss
Start:	16-19-jan	0:00:08
Stop:	16-20-jan	0:00:04
ET:	23:59	

Mass Concentration Data:

Filter ID:	11	
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

16-19-jan	0:05:08	585	-0.3	-1.4	-1.1	31	16.71
16-19-jan	1:05:08	585	-1.1	-1.6	-0.5	31	16.71
16-19-jan	2:05:08	585	-1.5	-2.6	-1.1	31	16.71
16-19-jan	3:05:08	585	-1.6	-2.6	-1.1	31	16.71
16-19-jan	4:05:08	584	-3.2	-3.8	-0.6	31	16.71
16-19-jan	5:05:08	585	-7.9	-7.6	0.2	30	16.72
16-19-jan	6:05:08	585	-9.8	-10.2	-0.4	30	16.71
16-19-jan	7:05:08	585	-9.9	-11.0	-1.1	30	16.72
16-19-jan	8:05:08	586	-6.0	-8.1	-2.0	30	16.71
16-19-jan	9:05:08	586	-1.5	-2.7	-1.2	31	16.71
16-19-jan	10:05:08	586	0.7	0.6	-0.2	32	16.72
16-19-jan	11:05:08	586	2.0	2.8	0.8	33	16.72
16-19-jan	12:05:08	585	3.7	5.9	2.2	33	16.71
16-19-jan	13:05:08	585	4.5	7.0	2.4	34	16.71
16-19-jan	14:05:08	584	3.4	5.7	2.2	33	16.71
16-19-jan	15:05:08	584	2.2	3.1	1.0	33	16.72
16-19-jan	16:05:08	585	1.3	1.8	0.6	33	16.71
16-19-jan	17:05:08	585	-1.2	-0.3	0.8	33	16.72
16-19-jan	18:05:08	585	-1.4	-1.0	0.4	32	16.71
16-19-jan	19:05:08	584	-1.2	-1.0	0.2	32	16.72
16-19-jan	20:05:08	584	-1.4	-1.1	0.3	32	16.71
16-19-jan	21:05:08	585	-1.5	-1.2	0.3	32	16.71
16-19-jan	22:05:08	585	-1.5	-1.2	0.2	32	16.71
16-19-jan	23:05:08	585	-1.4	-1.1	0.3	32	16.71

BGI PQ200 Air Sampling System

Downloaded 2016 28 jan 12:34:49

Job Details:

Job Name: 16Jan28A.JOB
Version: 5.62
Serial No: 962
Pump Time: 7324:00
Flags: F

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

	Max	Min	Avg	Units
BP	586	581	583	mmHg
TA	0	-13.9	-6.4	°C
Q	---	---	16.71	Lpm

QCV 0.57 %

Max overheat 7.5 °C
occured 27-jan 17:45:34

Timer Information:

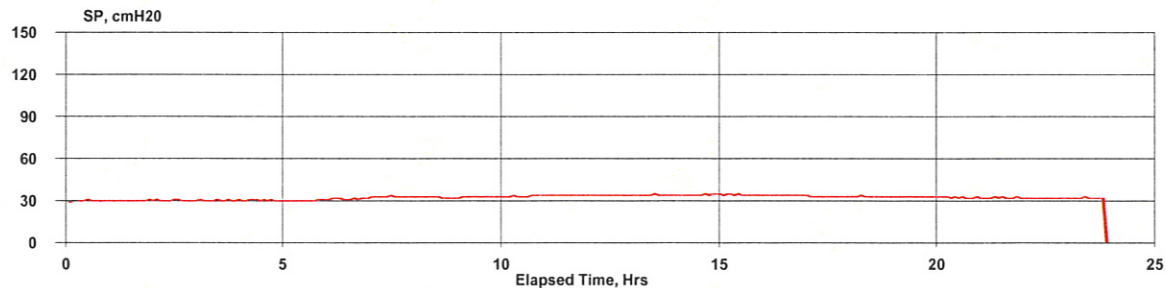
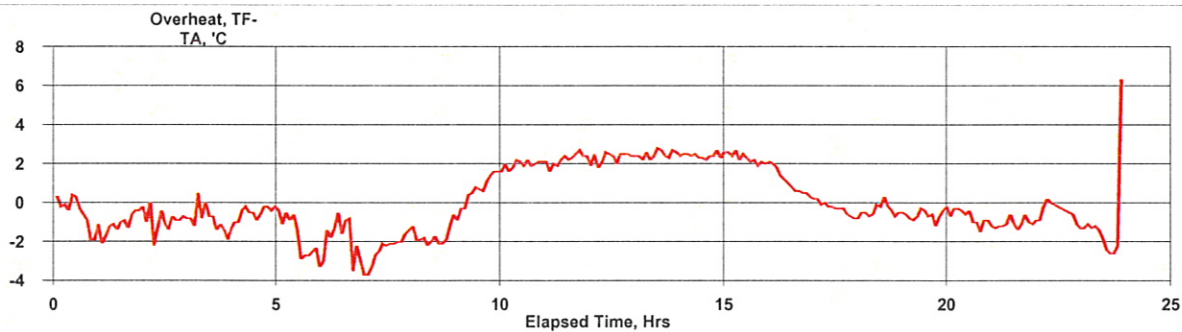
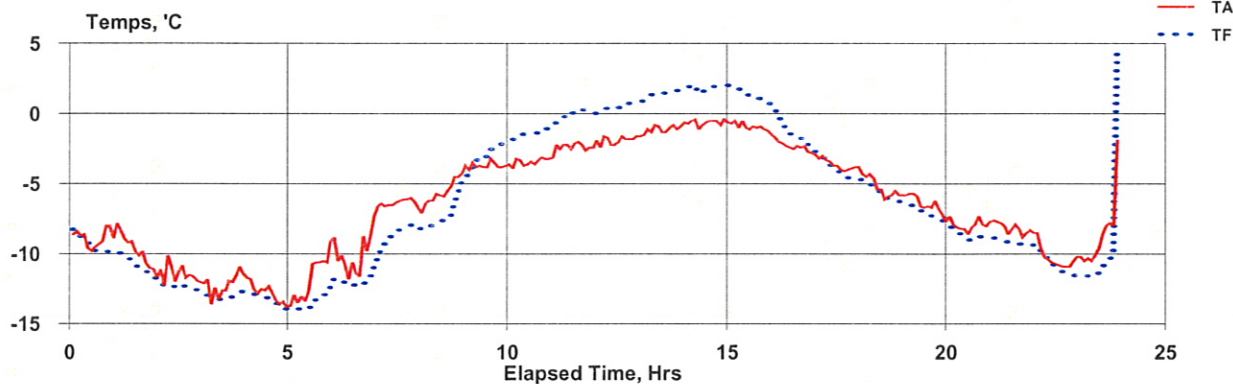
Date	Time
dd-mmm	hh:mm:ss
Start: 16-25-jan	0:00:08
Stop: 16-26-jan	0:00:05
ET: 23:59	

Mass Concentration Data:

Filter ID:	12
Final Wt:	mg
Initial Wt:	mg
Delta Wt:	0.000 mg
Total Vol:	24.039 m ³
Mass Conc:	0 µg/m ³

Notes 1:

Notes 2:



Hourly

16-25-jan	0:05:08	582	-8.9	-9.4	-0.5	30	16.71
16-25-jan	1:05:08	582	-9.8	-10.8	-1.0	30	16.72
16-25-jan	2:05:08	582	-11.4	-12.4	-0.9	30	16.73
16-25-jan	3:05:08	582	-12.2	-13.1	-0.9	30	16.72
16-25-jan	4:05:08	582	-12.8	-13.3	-0.5	30	16.71
16-25-jan	5:05:08	582	-11.8	-13.5	-1.8	30	16.71
16-25-jan	6:05:08	582	-10.0	-12.0	-2.0	32	16.71
16-25-jan	7:05:08	582	-6.4	-8.7	-2.3	33	16.71
16-25-jan	8:05:08	583	-5.6	-7.3	-1.7	33	16.71
16-25-jan	9:05:08	583	-3.7	-3.1	0.6	33	16.71
16-25-jan	10:05:08	584	-3.4	-1.5	2.0	33	16.71
16-25-jan	11:05:08	584	-2.4	-0.1	2.2	34	16.71
16-25-jan	12:05:08	584	-1.9	0.4	2.3	34	16.70
16-25-jan	13:05:08	583	-1.1	1.3	2.5	34	16.71
16-25-jan	14:05:08	583	-0.6	1.8	2.4	34	16.69
16-25-jan	15:05:08	583	-0.9	1.4	2.3	34	16.70
16-25-jan	16:05:08	584	-2.3	-1.2	1.1	34	16.71
16-25-jan	17:05:08	584	-3.6	-3.8	-0.3	33	16.71
16-25-jan	18:05:08	584	-5.1	-5.5	-0.4	33	16.72
16-25-jan	19:05:08	585	-6.3	-7.0	-0.7	33	16.71
16-25-jan	20:05:08	585	-7.9	-8.6	-0.7	33	16.71
16-25-jan	21:05:08	585	-8.1	-9.2	-1.1	32	16.71
16-25-jan	22:05:08	586	-10.2	-10.6	-0.4	32	16.71
16-25-jan	23:05:08	586	-9.4	-11.2	-1.7	32	16.71
16-27-jan	18:02:09	588	-1.9	4.4	6.3		0.00

BGI PQ200 Air Sampling System Downloaded 2016 03 feb 09:25:39

Job Details:

Job Name: 16Feb03A.JOB
Version: 5.62
Serial No: 962
Pump Time: 7347:59
Flags:

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

	Max	Min	Avg	Units
BP	578	568	574	mmHg
TA	2.4	-3.4	-0.7	°C
Q	---	---	16.7	Lpm

QCV 0.54 %
Max overheat 4.1 °C
occured 02-feb 16:17:24

Timer Information:

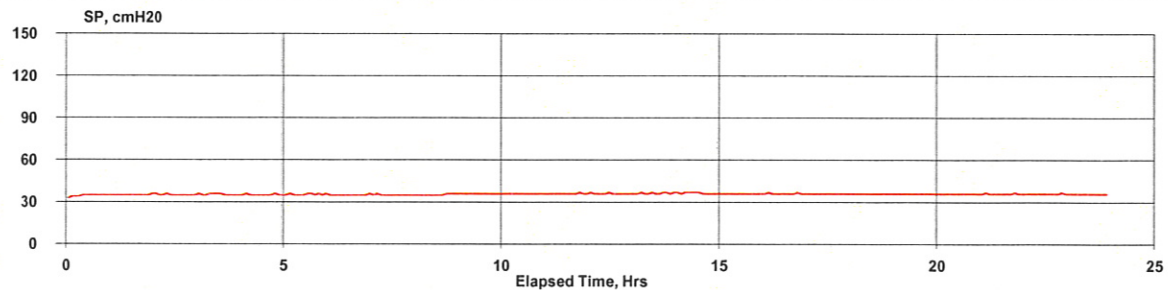
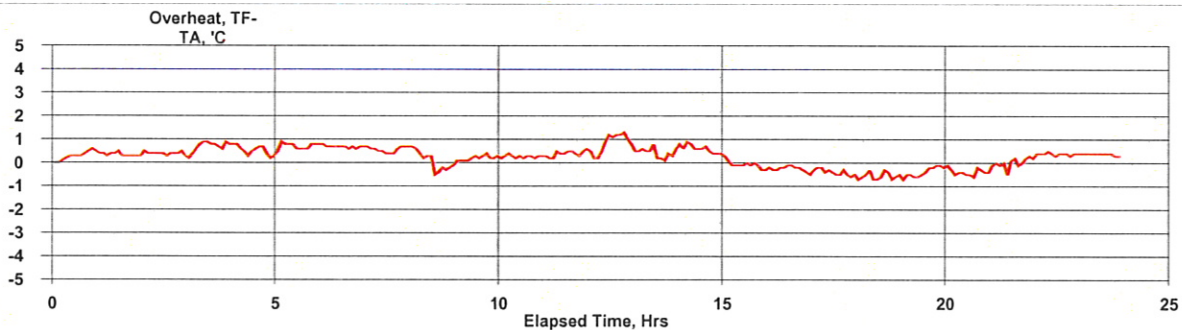
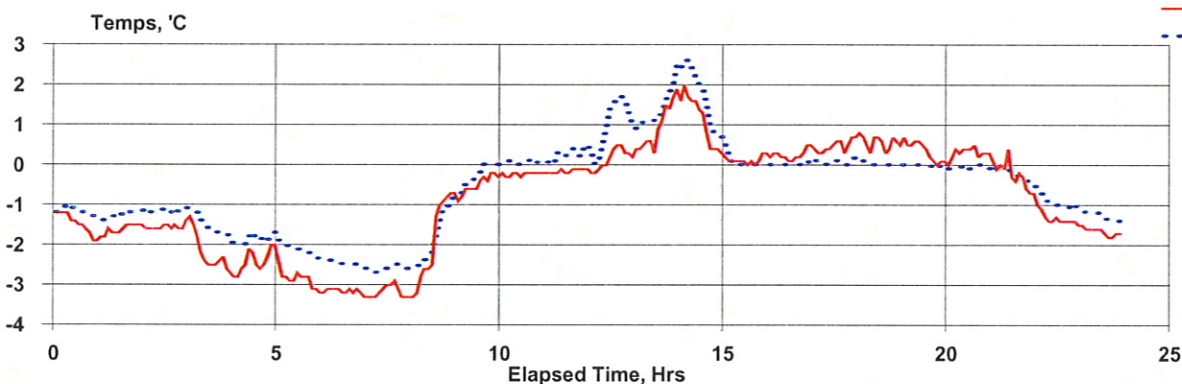
Date Time
dd-mmm hh:mm:ss
Start: 16-31-jan 0:00:08
Stop: 16-01-feb 0:00:05
ET: 23:59

Mass Concentration Data:

Filter ID: 4
Final Wt: mg
Initial Wt: mg
Delta Wt: 0.000 mg
Total Vol: 24.039 m³
Mass Conc: 0 µg/m³

Notes 1:

Notes 2:



Hourly

16-31-jan	0:05:08	578	-1.5	-1.2	0.3	35	16.71
16-31-jan	1:05:08	578	-1.6	-1.3	0.4	35	16.69
16-31-jan	2:05:08	578	-1.6	-1.2	0.4	35	16.72
16-31-jan	3:05:08	577	-2.2	-1.5	0.7	35	16.73
16-31-jan	4:05:08	577	-2.4	-1.9	0.5	35	16.71
16-31-jan	5:05:08	577	-2.9	-2.1	0.7	35	16.70
16-31-jan	6:05:08	577	-3.2	-2.5	0.7	35	16.71
16-31-jan	7:05:08	577	-3.2	-2.6	0.6	35	16.71
16-31-jan	8:05:08	577	-1.9	-1.8	0.1	35	16.71
16-31-jan	9:05:08	576	-0.5	-0.3	0.2	36	16.71
16-31-jan	10:05:08	577	-0.2	0.1	0.3	36	16.71
16-31-jan	11:05:08	576	-0.2	0.3	0.4	36	16.71
16-31-jan	12:05:08	576	0.2	1.0	0.8	36	16.71
16-31-jan	13:05:08	575	0.9	1.4	0.4	36	16.71
16-31-jan	14:05:08	574	1.1	1.7	0.6	37	16.71
16-31-jan	15:05:08	573	0.1	0.1	-0.1	36	16.72
16-31-jan	16:05:08	573	0.3	0.0	-0.3	36	16.72
16-31-jan	17:05:08	572	0.5	0.1	-0.4	36	16.71
16-31-jan	18:05:08	572	0.6	0.0	-0.6	36	16.72
16-31-jan	19:05:08	571	0.4	0.0	-0.4	36	16.71
16-31-jan	20:05:08	570	0.3	-0.1	-0.4	36	16.71
16-31-jan	21:05:08	569	-0.2	-0.2	0.0	36	16.71
16-31-jan	22:05:08	570	-1.3	-0.9	0.4	36	16.71
16-31-jan	23:05:08	569	-1.7	-1.3	0.4	36	16.70

BGI PQ200 Air Sampling System

Downloaded 2016 08 feb 10:28:14

Job Details:

Job Name: 16Feb08A.JOB
Version: 5.62
Serial No: 962
Pump Time: 7371:58
Flags:

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

	Max	Min	Avg	Units
BP	591	589	589	mmHg
TA	7.8	-13.8	-3.2	°C
Q	---	---	16.71	Lpm

QCV 0.56 %

Max overheat 5.5 °C
occured 06-feb 13:02:43

Timer Information:

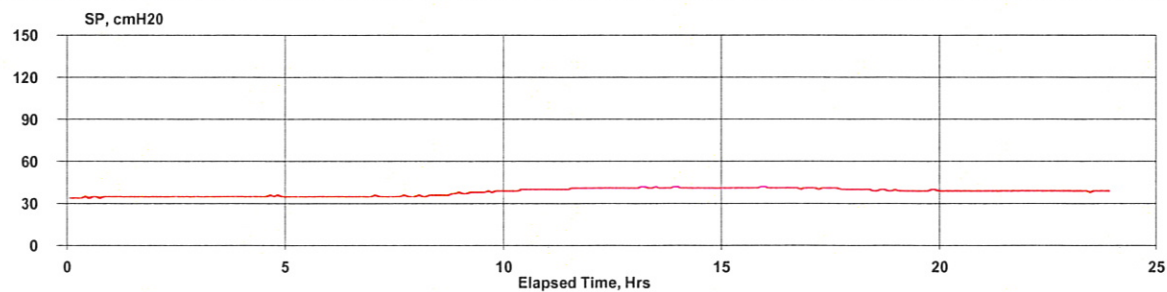
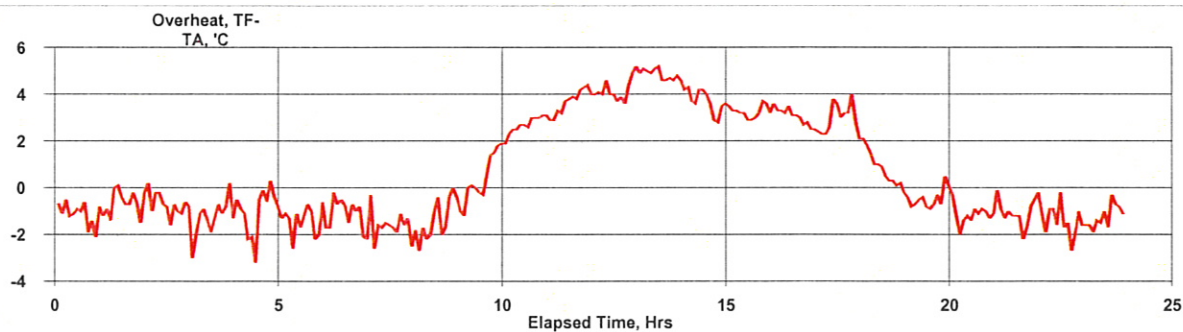
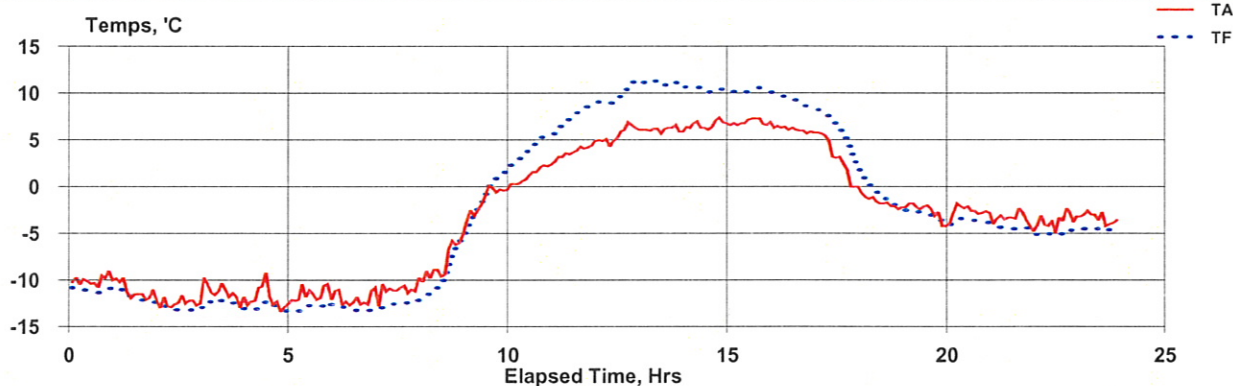
Date	Time
dd-mmm	hh:mm:ss
Start: 16-06-feb	0:00:08
Stop: 16-07-feb	0:00:04
ET: 23:59	

Mass Concentration Data:

Filter ID:	7
Final Wt:	mg
Initial Wt:	mg
Delta Wt:	0.000 mg
Total Vol:	24.033 m ³
Mass Conc:	0 µg/m ³

Notes 1:

Notes 2:



Hourly

16-06-feb	0:05:08	590	-10.0	-11.1	-1.1	35	16.72
16-06-feb	1:05:08	590	-11.2	-11.9	-0.6	35	16.73
16-06-feb	2:05:08	591	-12.4	-13.1	-0.7	35	16.69
16-06-feb	3:05:08	590	-11.3	-12.6	-1.3	35	16.72
16-06-feb	4:05:08	590	-12.0	-13.0	-1.0	35	16.71
16-06-feb	5:05:08	590	-11.5	-12.9	-1.4	35	16.71
16-06-feb	6:05:08	590	-12.0	-13.1	-1.2	35	16.69
16-06-feb	7:05:08	590	-11.0	-12.6	-1.6	35	16.72
16-06-feb	8:05:08	591	-8.0	-9.3	-1.4	36	16.73
16-06-feb	9:05:08	591	-1.4	-1.0	0.4	38	16.72
16-06-feb	10:05:08	591	1.3	4.0	2.7	40	16.71
16-06-feb	11:05:08	591	3.8	7.5	3.7	41	16.70
16-06-feb	12:05:08	590	5.6	9.8	4.2	41	16.71
16-06-feb	13:05:08	590	6.1	11.0	4.8	41	16.71
16-06-feb	14:05:08	590	6.7	10.4	3.7	41	16.72
16-06-feb	15:05:08	589	6.9	10.2	3.3	41	16.71
16-06-feb	16:05:08	589	6.1	9.2	3.1	41	16.71
16-06-feb	17:05:08	589	3.0	5.9	2.9	41	16.71
16-06-feb	18:05:08	589	-1.7	-0.9	0.8	40	16.71
16-06-feb	19:05:08	589	-2.6	-3.1	-0.5	39	16.71
16-06-feb	20:05:08	590	-2.6	-3.8	-1.2	39	16.71
16-06-feb	21:05:08	590	-3.5	-4.5	-1.0	39	16.71
16-06-feb	22:05:08	590	-3.6	-5.0	-1.4	39	16.71
16-06-feb	23:05:08	590	-3.3	-4.6	-1.2	39	16.71

BGI PQ200 Air Sampling System Downloaded 2016 15 feb 09:54:13

Job Details:

Job Name: 16Feb15A.JOB
Version: 5.62
Serial No: 962
Pump Time: 7395:57
Flags:

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

	Max	Min	Avg	Units
BP	590	588	589	mmHg
TA	15.4	-2.3	5	°C
Q	---	---	16.7	Lpm

QCV 0.58 %
Max overheat 4 °C
occured 12-feb 17:40:50

Timer Information:

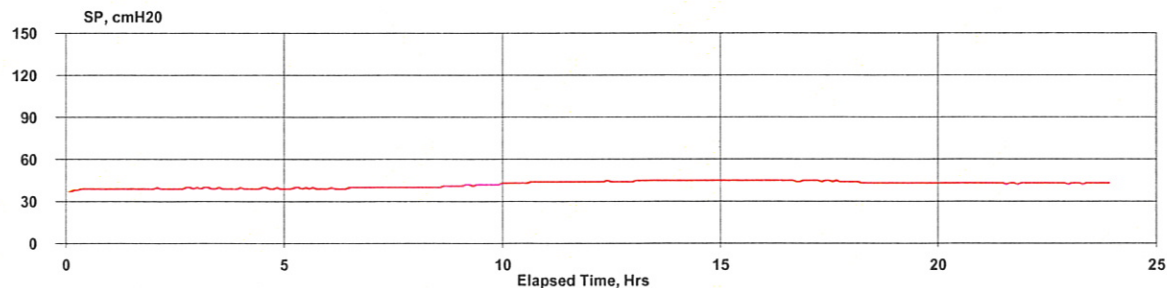
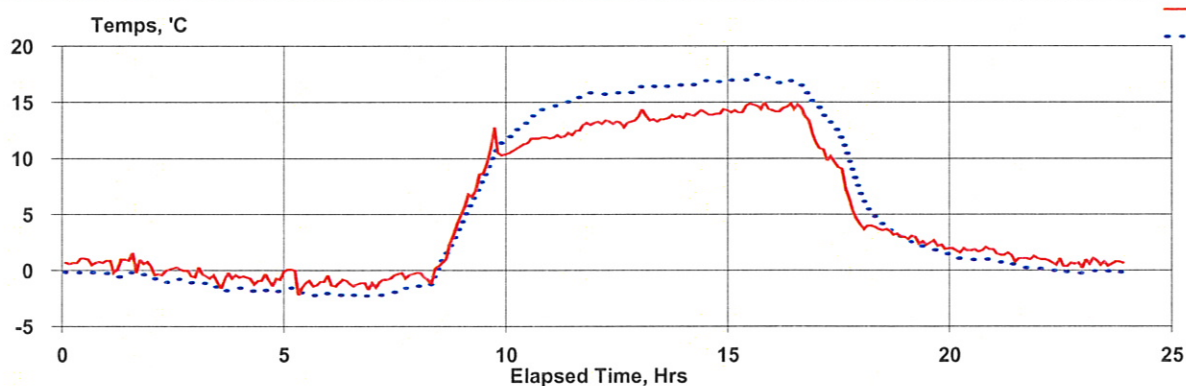
Date Time
dd-mmm hh:mm:ss
Start: 16-12-feb 0:00:08
Stop: 16-13-feb 0:00:05
ET: 23:59

Mass Concentration Data:

Filter ID: 16
Final Wt: mg
Initial Wt: mg
Delta Wt: 0.000 mg
Total Vol: 24.04 m³
Mass Conc: 0 µg/m³

Notes 1:

Notes 2:



Hourly

16-12-feb	0:05:08	590	0.8	-0.2	-1.0	39	16.70
16-12-feb	1:05:08	589	0.7	-0.4	-1.1	39	16.71
16-12-feb	2:05:08	590	-0.1	-1.0	-0.9	39	16.70
16-12-feb	3:05:08	589	-0.6	-1.5	-1.0	39	16.71
16-12-feb	4:05:08	589	-0.8	-1.8	-1.1	39	16.70
16-12-feb	5:05:08	589	-0.9	-2.0	-1.1	39	16.71
16-12-feb	6:05:08	589	-1.2	-2.2	-1.0	40	16.71
16-12-feb	7:05:08	590	-0.6	-1.9	-1.3	40	16.72
16-12-feb	8:05:08	590	1.2	0.7	-0.5	40	16.70
16-12-feb	9:05:08	590	9.0	8.4	-0.6	42	16.70
16-12-feb	10:05:08	590	11.4	13.4	1.9	43	16.70
16-12-feb	11:05:08	590	12.5	15.2	2.7	44	16.71
16-12-feb	12:05:08	590	13.3	15.8	2.5	44	16.71
16-12-feb	13:05:08	589	13.7	16.4	2.7	45	16.72
16-12-feb	14:05:08	589	14.1	16.7	2.7	45	16.70
16-12-feb	15:05:08	589	14.5	17.1	2.6	45	16.71
16-12-feb	16:05:08	589	13.9	16.3	2.4	45	16.71
16-12-feb	17:05:08	588	8.1	11.4	3.3	45	16.71
16-12-feb	18:05:08	588	3.6	4.2	0.6	43	16.72
16-12-feb	19:05:08	589	2.5	2.0	-0.5	43	16.72
16-12-feb	20:05:08	588	1.9	1.0	-0.9	43	16.71
16-12-feb	21:05:08	589	1.2	0.4	-0.8	43	16.71
16-12-feb	22:05:08	589	0.7	-0.1	-0.8	43	16.71
16-12-feb	23:05:08	588	0.7	-0.2	-0.9	43	16.71

BGI PQ200 Air Sampling System Downloaded 2016 19 feb 10:19:40

Job Details:

Job Name: 16Feb19A.JOB
Version: 5.62
Serial No: 962
Pump Time: 7419:56
Flags:

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

	Max	Min	Avg	Units
BP	584	577	580	mmHg
TA	9.1	-4	2.8	°C
Q	---	---	16.7	Lpm

QCV 0.55 %

Max overheat 2 °C
occured 18-feb 17:27:39

Timer Information:

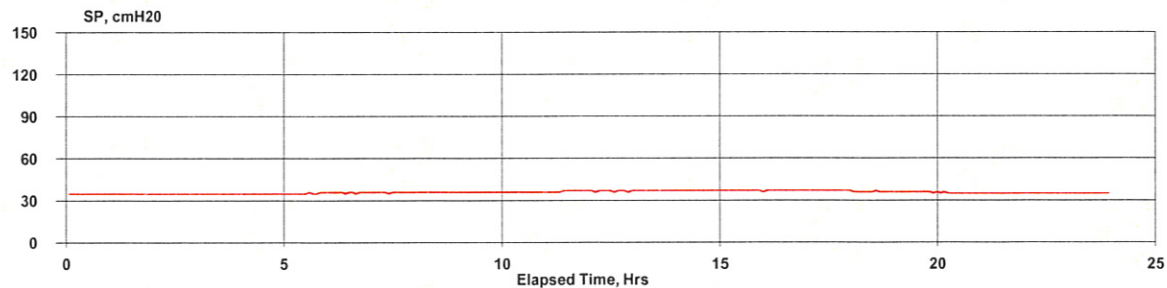
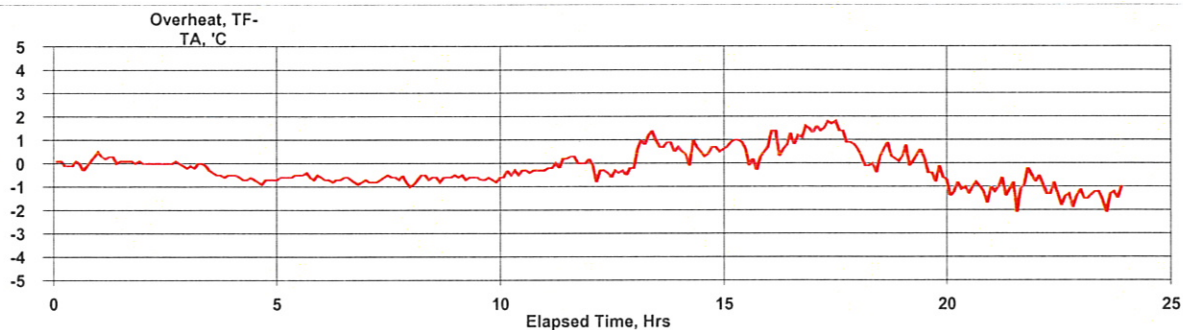
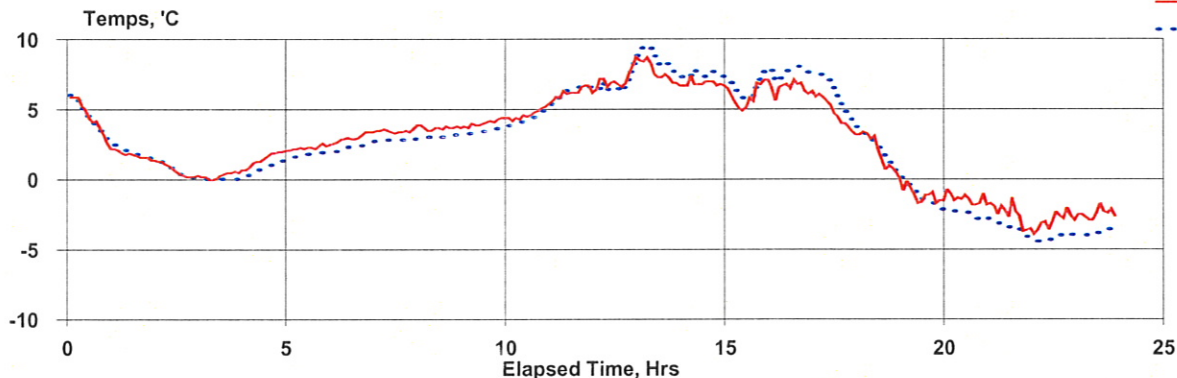
Date Time
dd-mmm hh:mm:ss
Start: 16-18-feb 0:00:08
Stop: 16-19-feb 0:00:05
ET: 23:59

Mass Concentration Data:

Filter ID: 10
Final Wt: mg
Initial Wt: mg
Delta Wt: 0.000 mg
Total Vol: 24.037 m³
Mass Conc: 0 µg/m³

Notes 1:

Notes 2:



Hourly

16-18-feb	0:05:08	581	4.4	4.4	0.0	35	16.71
16-18-feb	1:05:08	581	1.8	1.9	0.1	35	16.70
16-18-feb	2:05:08	581	0.6	0.6	0.0	35	16.71
16-18-feb	3:05:08	581	0.3	0.0	-0.3	35	16.70
16-18-feb	4:05:08	580	1.5	0.9	-0.7	35	16.71
16-18-feb	5:05:08	580	2.3	1.8	-0.6	35	16.70
16-18-feb	6:05:08	579	3.0	2.3	-0.7	36	16.70
16-18-feb	7:05:08	580	3.5	2.8	-0.7	36	16.70
16-18-feb	8:05:08	579	3.7	3.1	-0.6	36	16.71
16-18-feb	9:05:08	579	4.1	3.4	-0.6	36	16.71
16-18-feb	10:05:08	579	4.7	4.3	-0.4	36	16.71
16-18-feb	11:05:08	579	6.2	6.3	0.1	37	16.70
16-18-feb	12:05:08	578	7.2	6.8	-0.4	37	16.71
16-18-feb	13:05:08	579	7.6	8.5	0.9	37	16.71
16-18-feb	14:05:08	580	6.9	7.4	0.5	37	16.71
16-18-feb	15:05:08	580	6.0	6.6	0.5	37	16.71
16-18-feb	16:05:08	581	6.5	7.6	1.1	37	16.71
16-18-feb	17:05:08	582	4.7	6.0	1.3	37	16.71
16-18-feb	18:05:08	583	1.9	2.1	0.2	36	16.71
16-18-feb	19:05:08	583	-1.1	-1.2	-0.1	36	16.71
16-18-feb	20:05:08	583	-1.4	-2.5	-1.1	35	16.71
16-18-feb	21:05:08	584	-2.5	-3.5	-1.0	35	16.71
16-18-feb	22:05:08	584	-3.0	-4.2	-1.3	35	16.71
16-18-feb	23:05:08	584	-2.5	-3.9	-1.4	35	16.72

BGI PQ200 Air Sampling System Downloaded 2016 25 feb 13:56:08

Job Details:

Job Name: 16Feb25A.JOB
Version: 5.62
Serial No: 962
Pump Time: 7443:56
Flags:

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

	Max	Min	Avg	Units
BP	588	586	586	mmHg
TA	11.3	-9.2	-0.1	°C
Q	---	---	16.71	Lpm

QCV 0.51 %
Max overheat 4.3 °C
occured 24-feb 18:16:00

Timer Information:

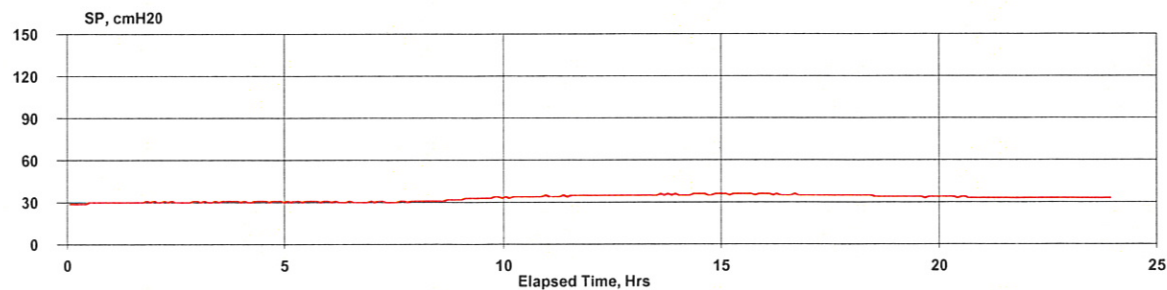
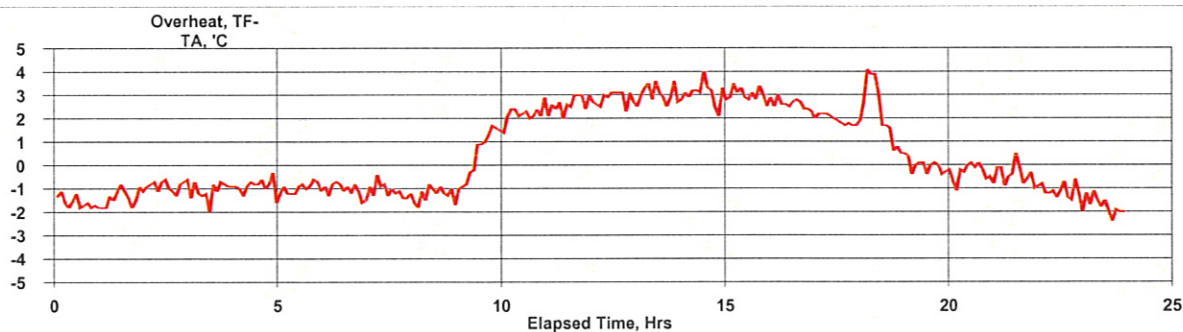
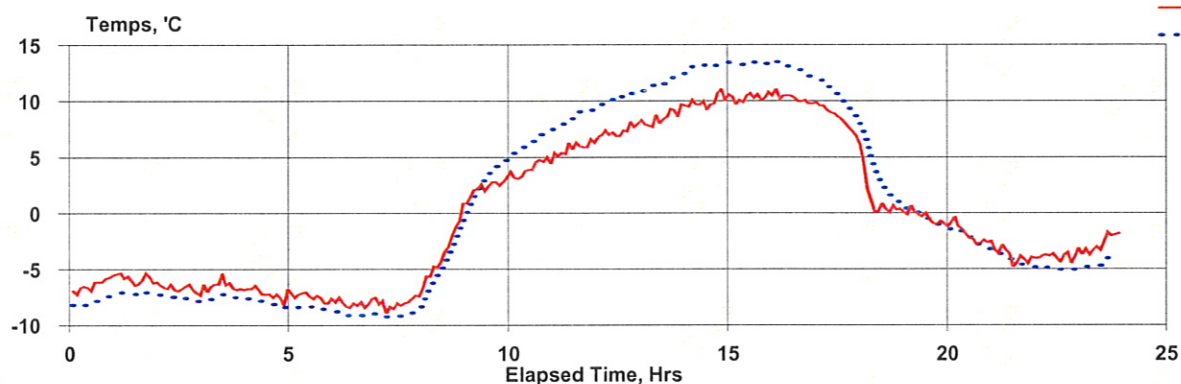
Date Time
dd-mmm hh:mm:ss
Start: 16-24-feb 0:00:08
Stop: 16-25-feb 0:00:04
ET: 24:00:00

Mass Concentration Data:

Filter ID: 4
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

16-24-feb	0:04:43	587	-6.3	-7.9	-1.6	30	16.71
16-24-feb	1:04:43	587	-5.8	-7.2	-1.3	30	16.71
16-24-feb	2:04:43	587	-6.7	-7.6	-0.9	30	16.72
16-24-feb	3:04:43	587	-6.4	-7.5	-1.1	31	16.71
16-24-feb	4:04:43	587	-7.1	-8.0	-0.9	31	16.71
16-24-feb	5:04:43	587	-7.4	-8.4	-1.0	31	16.71
16-24-feb	6:04:43	587	-8.0	-9.0	-1.1	30	16.71
16-24-feb	7:04:43	587	-8.0	-9.1	-1.1	31	16.72
16-24-feb	8:04:43	588	-3.4	-4.7	-1.3	31	16.71
16-24-feb	9:04:43	588	2.3	2.8	0.5	33	16.72
16-24-feb	10:04:43	588	4.0	6.2	2.2	34	16.71
16-24-feb	11:04:43	588	5.9	8.5	2.6	35	16.71
16-24-feb	12:04:43	587	7.3	10.2	2.9	35	16.72
16-24-feb	13:04:43	587	8.5	11.6	3.0	35	16.70
16-24-feb	14:04:43	586	9.9	13.0	3.1	36	16.70
16-24-feb	15:04:43	586	10.3	13.3	3.0	36	16.71
16-24-feb	16:04:43	586	10.3	12.9	2.6	35	16.72
16-24-feb	17:04:43	586	8.6	10.5	1.9	35	16.72
16-24-feb	18:04:43	586	1.4	3.6	2.2	35	16.71
16-24-feb	19:04:43	587	-0.3	-0.3	0.0	34	16.73
16-24-feb	20:04:43	587	-1.8	-2.1	-0.3	34	16.72
16-24-feb	21:04:43	587	-3.7	-4.1	-0.4	33	16.72
16-24-feb	22:04:43	587	-3.9	-5.0	-1.1	33	16.71
16-24-feb	23:04:43	587	-2.8	-4.5	-1.8	33	16.71

BGI PQ200 Air Sampling System Downloaded 2016 03 mar 09:07:51

Job Details:

Job Name: 16Mar03A.JOB
Version: 5.62
Serial No: 962
Pump Time: 7467:55
Flags: F

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

	Max	Min	Avg	Units
BP	588	585	586	mmHg
TA	16.9	-0.7	6.3	°C
Q	---	---	16.71	Lpm

QCV 0.5 %

Max overheat 5.7 °C
occured 02-mar 18:31:58

Timer Information:

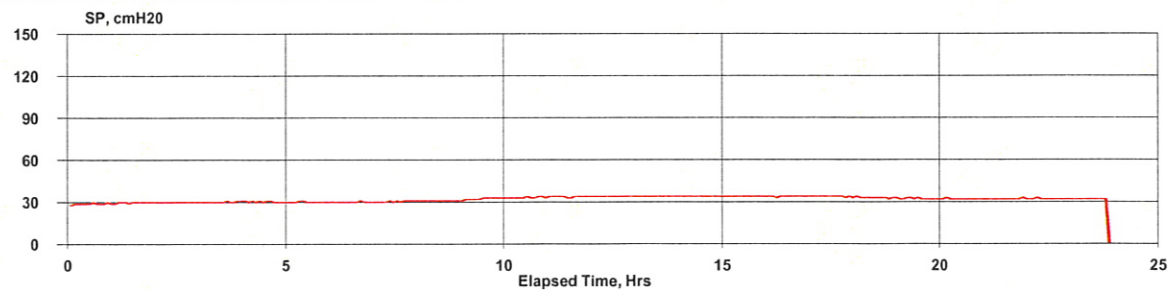
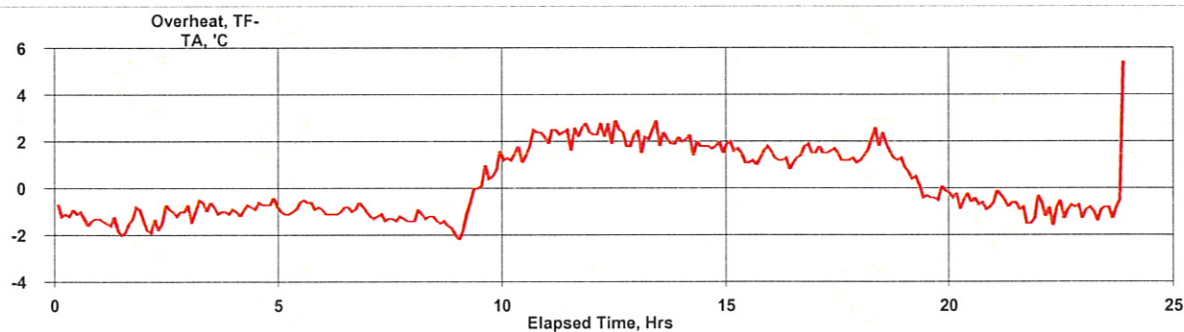
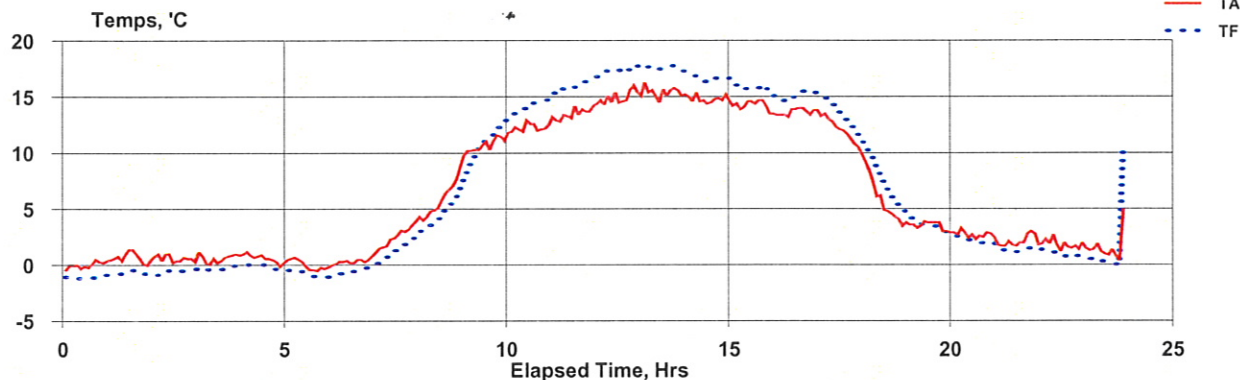
Date	Time
dd-mmm	hh:mm:ss
Start: 16-01-mar	0:00:08
Stop: 16-02-mar	0:00:05
ET: 23:59	

Mass Concentration Data:

Filter ID:	JBR11	
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

16-01-mar	0:05:08	586	0.0	-1.1	-1.2	29	16.71
16-01-mar	1:05:08	586	0.7	-0.7	-1.4	30	16.71
16-01-mar	2:05:08	586	0.6	-0.6	-1.2	30	16.70
16-01-mar	3:05:08	586	0.7	-0.3	-0.9	30	16.72
16-01-mar	4:05:08	586	0.6	-0.2	-0.8	30	16.71
16-01-mar	5:05:08	587	0.0	-0.8	-0.8	30	16.72
16-01-mar	6:05:08	587	0.3	-0.6	-0.9	30	16.71
16-01-mar	7:05:08	587	2.5	1.2	-1.3	31	16.71
16-01-mar	8:05:08	587	5.8	4.4	-1.4	31	16.71
16-01-mar	9:05:08	588	10.7	10.6	-0.1	32	16.70
16-01-mar	10:05:08	588	12.2	14.0	1.7	33	16.71
16-01-mar	11:05:08	587	13.5	15.8	2.4	34	16.73
16-01-mar	12:05:08	587	14.9	17.3	2.3	34	16.71
16-01-mar	13:05:08	587	15.4	17.6	2.2	34	16.71
16-01-mar	14:05:08	586	14.8	16.7	1.9	34	16.70
16-01-mar	15:05:08	586	14.3	15.8	1.5	34	16.71
16-01-mar	16:05:08	586	13.6	15.0	1.4	34	16.72
16-01-mar	17:05:08	586	12.3	13.7	1.4	34	16.72
16-01-mar	18:05:08	586	6.1	7.8	1.7	33	16.70
16-01-mar	19:05:08	586	3.6	3.6	0.1	32	16.71
16-01-mar	20:05:08	586	2.7	2.2	-0.5	32	16.72
16-01-mar	21:05:08	586	2.2	1.4	-0.8	32	16.72
16-01-mar	22:05:08	586	1.8	1.0	-0.9	32	16.71
16-01-mar	23:05:08	586	1.3	0.3	-1.0	32	16.72
16-02-mar	18:42:09	585	4.9	10.3	5.4		0.00

BGI PQ200 Air Sampling System Downloaded 2016 10 mar 11:37:04

Job Details:

Job Name: 16Mar10A.JOB
Version: 5.62
Serial No: 962
Pump Time: 7491:54
Flags:

Job Code:

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

	Max	Min	Avg	Units
BP	578	575	576	mmHg
TA	6	-11.4	-2.2	°C
Q	---	---	16.71	Lpm

QCV 0.43 %

Max overheat 5.2 °C
occured 08-mar 15:36:38

Timer Information:

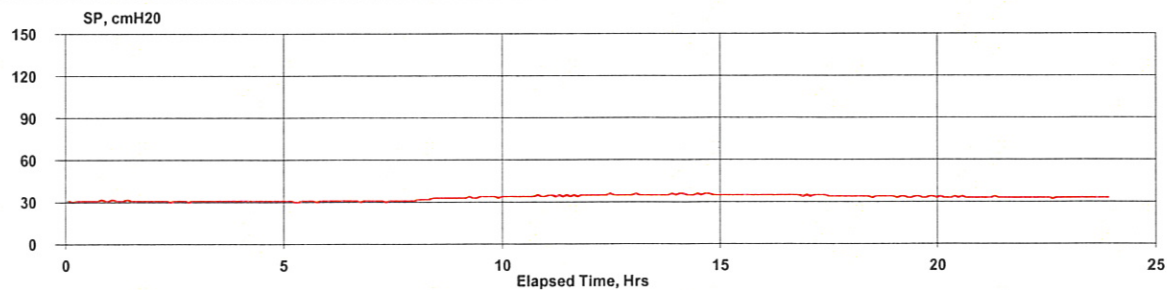
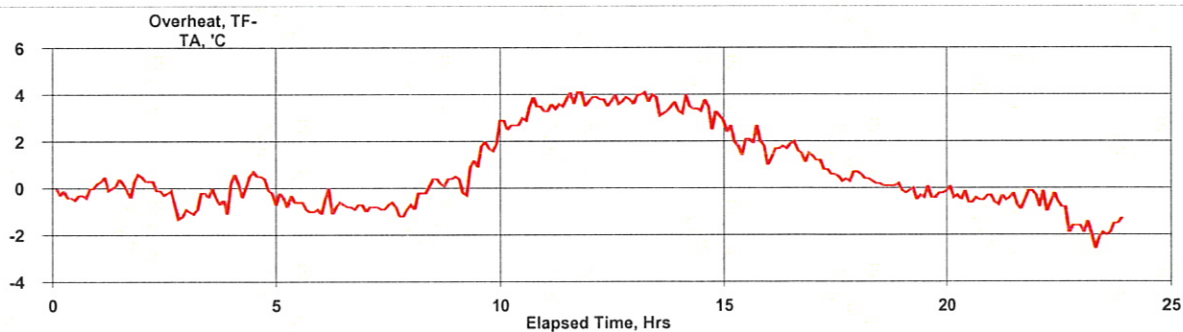
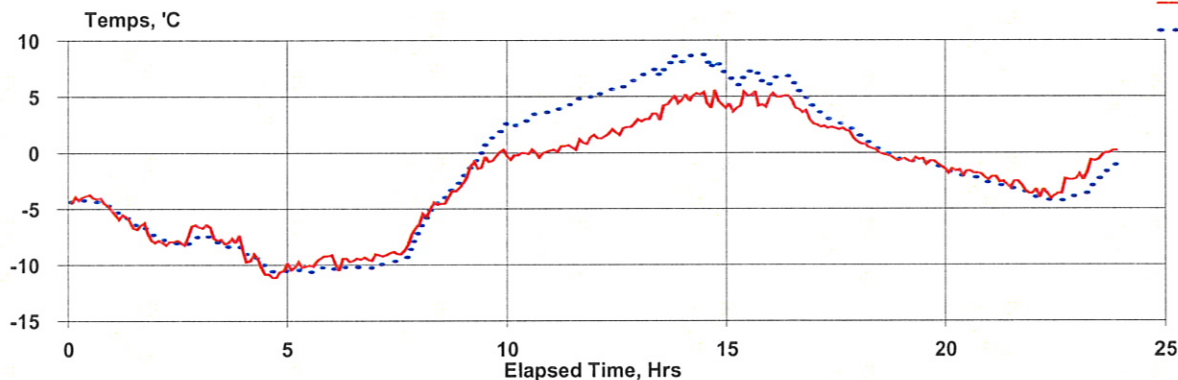
Date Time
dd-mmm hh:mm:ss
Start: 16-07-mar 0:00:08
Stop: 16-08-mar 0:00:05
ET: 23:59

Mass Concentration Data:

Filter ID: JBR-1
Final Wt: mg
Initial Wt: mg
Delta Wt: 0.000 mg
Total Vol: 24.035 m³
Mass Conc: 0 µg/m³

Notes 1:

Notes 2:



Hourly

16-07-mar	0:05:08	576	-4.2	-4.4	-0.2	31	16.71
16-07-mar	1:05:08	576	-6.5	-6.3	0.2	31	16.72
16-07-mar	2:05:08	576	-7.6	-7.9	-0.3	31	16.72
16-07-mar	3:05:08	576	-7.5	-8.1	-0.5	31	16.71
16-07-mar	4:05:08	576	-10.2	-10.1	0.2	31	16.72
16-07-mar	5:05:08	577	-9.8	-10.5	-0.7	31	16.71
16-07-mar	6:05:08	576	-9.6	-10.3	-0.7	31	16.71
16-07-mar	7:05:08	576	-8.3	-9.2	-0.9	31	16.70
16-07-mar	8:05:08	577	-4.2	-4.1	0.1	33	16.71
16-07-mar	9:05:08	577	-0.7	0.5	1.2	34	16.71
16-07-mar	10:05:08	577	-0.1	3.0	3.1	34	16.71
16-07-mar	11:05:08	577	0.8	4.4	3.7	35	16.69
16-07-mar	12:05:08	577	2.0	5.7	3.8	35	16.70
16-07-mar	13:05:08	576	3.8	7.5	3.7	35	16.71
16-07-mar	14:05:08	576	4.8	8.1	3.3	35	16.71
16-07-mar	15:05:08	575	4.6	6.6	2.0	35	16.71
16-07-mar	16:05:08	575	4.3	5.9	1.6	35	16.70
16-07-mar	17:05:08	575	2.0	2.7	0.7	34	16.70
16-07-mar	18:05:08	575	0.0	0.3	0.2	34	16.70
16-07-mar	19:05:08	576	-0.8	-1.0	-0.2	34	16.70
16-07-mar	20:05:08	576	-1.8	-2.2	-0.4	33	16.71
16-07-mar	21:05:08	576	-2.8	-3.3	-0.4	33	16.71
16-07-mar	22:05:08	576	-3.2	-4.2	-1.0	33	16.71
16-07-mar	23:05:08	576	-0.7	-2.5	-1.8	33	16.72

BGI PQ200 Air Sampling System Downloaded 2016 14 mar 14:58:24

Job Details:

Job Name:
Version: 5.62
Serial No: 962
Pump Time: 7515:53
Flags:

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

	Max	Min	Avg	Units
BP	583	580	581	mmHg
TA	10.1	-4.4	2	°C
Q	---	---	16.7	Lpm

QCV 0.49 %
Max overheat 3.8 °C
occured 13-mar 14:03:54

Timer Information:

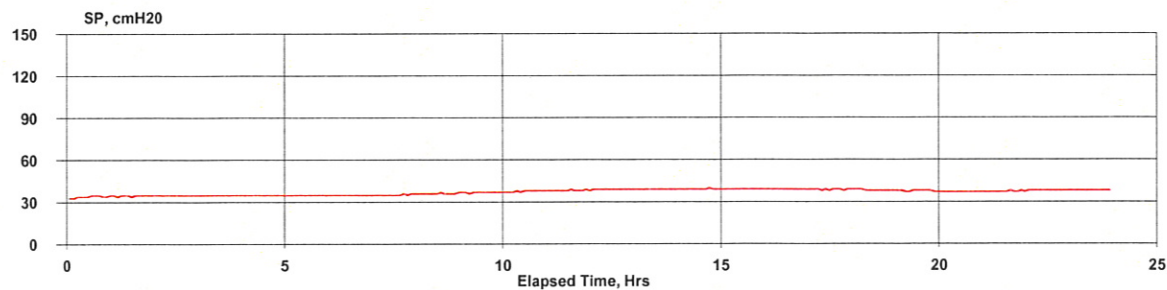
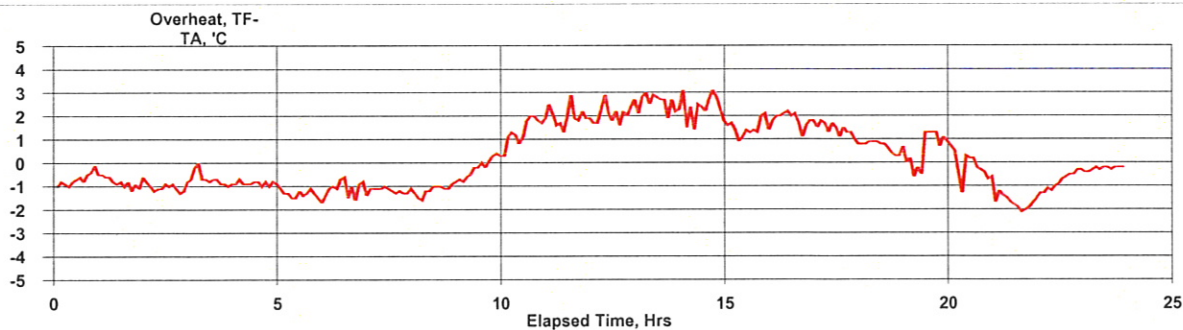
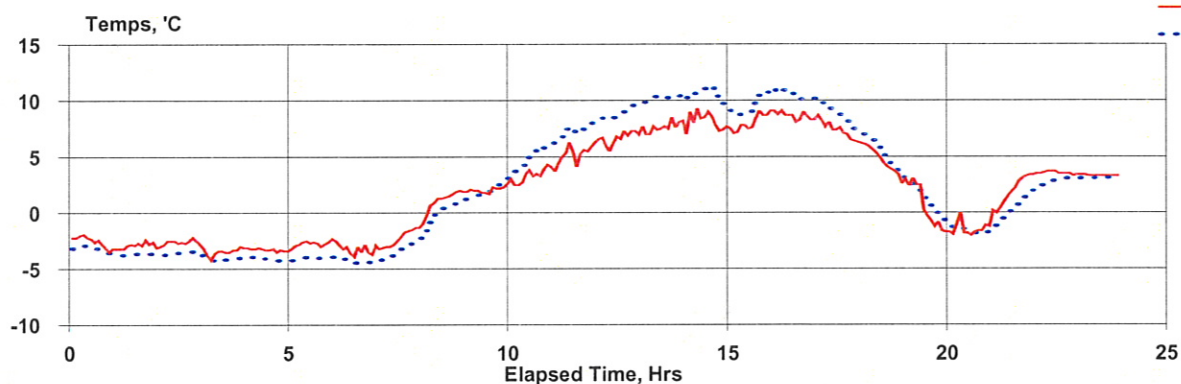
Date Time
dd-mmm hh:mm:ss
Start: 16-13-mar 0:00:08
Stop: 16-14-mar 0:00:05
ET: 23:59

Mass Concentration Data:

Filter ID: 11
Final Wt: mg
Initial Wt: mg
Delta Wt: 0.000 mg
Total Vol: 24.031 m³
Mass Conc: 0 µg/m³

Notes 1:

Notes 2:



Hourly

16-13-mar	0:05:08	583	-2.5	-3.2	-0.7	34	16.72
16-13-mar	1:05:08	583	-2.9	-3.7	-0.8	35	16.70
16-13-mar	2:05:08	582	-2.6	-3.6	-1.0	35	16.70
16-13-mar	3:05:08	582	-3.4	-4.1	-0.7	35	16.71
16-13-mar	4:05:08	582	-3.3	-4.1	-0.9	35	16.71
16-13-mar	5:05:08	582	-2.7	-4.1	-1.4	35	16.69
16-13-mar	6:05:08	582	-3.2	-4.3	-1.1	35	16.69
16-13-mar	7:05:08	583	-2.3	-3.4	-1.2	35	16.70
16-13-mar	8:05:08	583	1.1	0.0	-1.1	36	16.72
16-13-mar	9:05:08	583	2.1	1.9	-0.2	37	16.71
16-13-mar	10:05:08	583	3.4	4.8	1.4	38	16.71
16-13-mar	11:05:08	583	5.2	7.2	2.0	38	16.71
16-13-mar	12:05:08	583	6.7	8.8	2.1	39	16.71
16-13-mar	13:05:08	582	7.7	10.2	2.6	39	16.71
16-13-mar	14:05:08	582	8.2	10.5	2.4	39	16.73
16-13-mar	15:05:08	581	8.0	9.5	1.5	39	16.71
16-13-mar	16:05:08	581	8.6	10.5	1.9	39	16.71
16-13-mar	17:05:08	581	7.4	8.7	1.4	39	16.71
16-13-mar	18:05:08	581	4.7	5.4	0.7	38	16.70
16-13-mar	19:05:08	581	0.6	1.2	0.6	38	16.71
16-13-mar	20:05:08	581	-1.5	-1.6	-0.2	37	16.71
16-13-mar	21:05:08	581	1.9	0.2	-1.7	37	16.70
16-13-mar	22:05:08	581	3.5	2.7	-0.8	38	16.70
16-13-mar	23:05:08	581	3.3	3.1	-0.3	38	16.70

BGI PQ200 Air Sampling System

Downloaded 2016 22 mar 14:21:04

Job Details:

Job Name: 16Mar22A.JOB
Version: 5.62
Serial No: 962
Pump Time: 7539:52
Flags:

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

	Max	Min	Avg	Units
BP	586	583	585	mmHg
TA	17.3	-6.4	6.2	°C
Q	---	---	16.7	Lpm

QCV 0.35 %
Max overheat 2.6 °C
occured 22-mar 14:20:45

Timer Information:

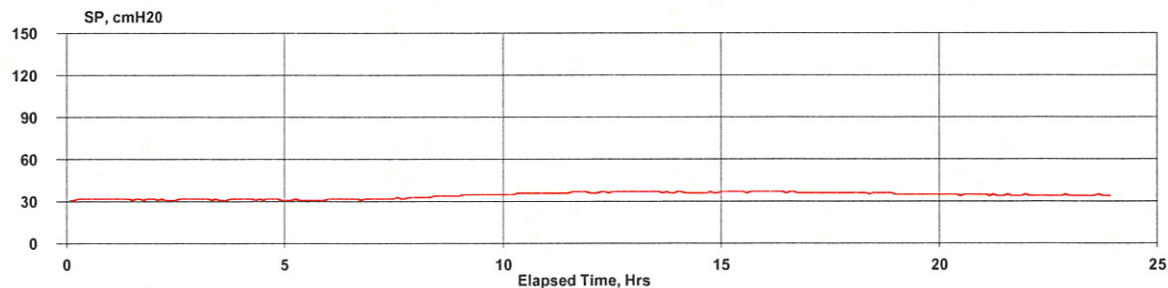
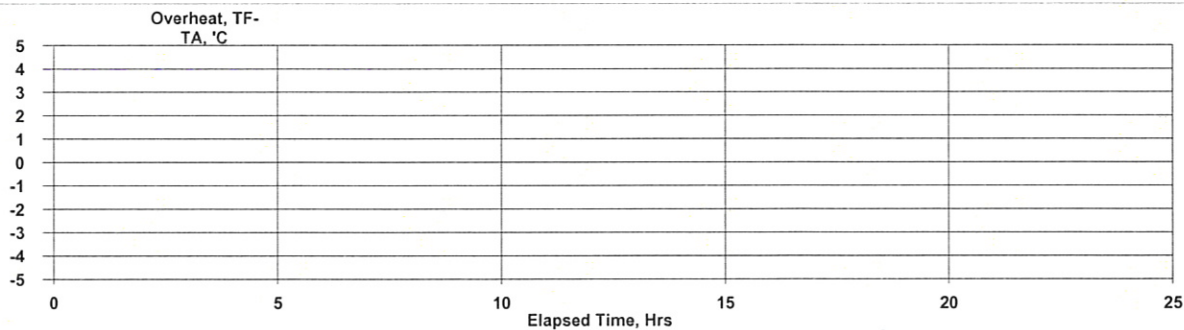
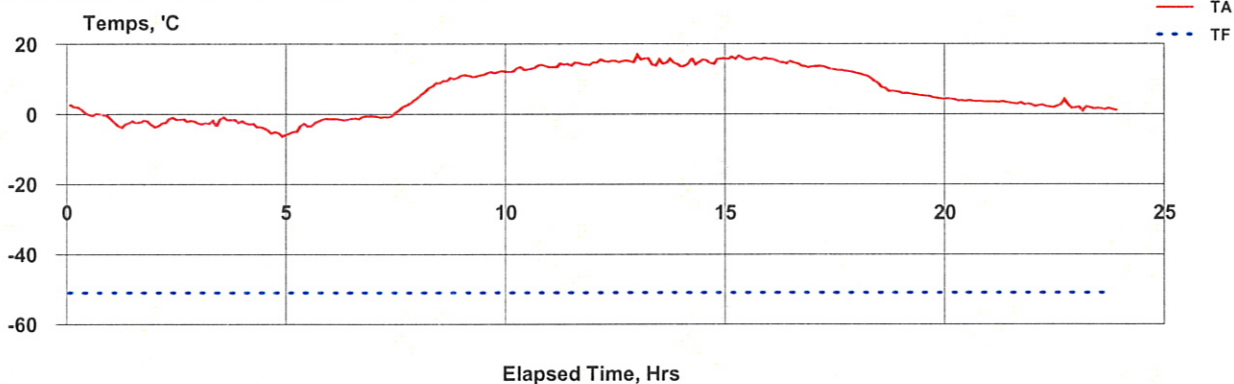
Date	Time
dd-mmm	hh:mm:ss
Start: 16-19-mar	0:00:08
Stop: 16-20-mar	0:00:05
ET: 23:59	

Mass Concentration Data:

Filter ID:	19
Final Wt:	mg
Initial Wt:	mg
Delta Wt:	0.000 mg
Total Vol:	24.03 m ³
Mass Conc:	0 µg/m ³

Notes 1:

Notes 2:



Hourly

16-19-mar	0:05:08	584	0.5	-51.1	-51.6	32	16.72
16-19-mar	1:05:08	584	-2.6	-51.1	-48.5	32	16.72
16-19-mar	2:05:08	584	-1.9	-51.1	-49.2	32	16.71
16-19-mar	3:05:08	584	-2.0	-51.1	-49.1	32	16.73
16-19-mar	4:05:08	584	-4.3	-51.1	-46.8	32	16.71
16-19-mar	5:05:08	585	-3.0	-51.1	-48.1	31	16.72
16-19-mar	6:05:08	585	-1.1	-51.1	-50.0	32	16.72
16-19-mar	7:05:08	585	1.3	-51.1	-52.4	32	16.72
16-19-mar	8:05:08	586	8.9	-51.1	-60.0	34	16.71
16-19-mar	9:05:08	586	11.6	-51.1	-62.7	35	16.70
16-19-mar	10:05:08	586	13.2	-51.1	-64.3	36	16.70
16-19-mar	11:05:08	586	14.2	-51.1	-65.3	36	16.71
16-19-mar	12:05:08	586	15.3	-51.1	-66.4	37	16.70
16-19-mar	13:05:08	585	14.9	-51.1	-66.0	37	16.71
16-19-mar	14:05:08	585	15.1	-51.1	-66.2	36	16.70
16-19-mar	15:05:08	585	16.0	-51.1	-67.1	37	16.69
16-19-mar	16:05:08	585	14.5	-51.1	-65.6	37	16.71
16-19-mar	17:05:08	585	12.8	-51.1	-63.9	36	16.71
16-19-mar	18:05:08	585	8.7	-51.1	-59.8	36	16.71
16-19-mar	19:05:08	585	5.3	-51.1	-56.4	35	16.71
16-19-mar	20:05:08	585	3.9	-51.1	-55.0	35	16.70
16-19-mar	21:05:08	586	3.3	-51.1	-54.4	34	16.70
16-19-mar	22:05:08	586	2.5	-51.1	-53.6	34	16.71
16-19-mar	23:05:08	586	1.7	-51.1	-52.8	34	16.70

BGI PQ200 Air Sampling System Downloaded 2016 28 mar 15:26:20

Job Details:

Job Name: 16Mar28A.JOB
Version: 5.62
Serial No: 962
Pump Time: 7563:51
Flags:

Job Code:

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

	Max	Min	Avg	Units
BP	581	577	579	mmHg
TA	12.8	-6.5	3.5	°C
Q	---	---	16.7	Lpm

QCV 0.53 %
Max overheat 4.1 °C
occured 27-mar 19:16:41

Timer Information:

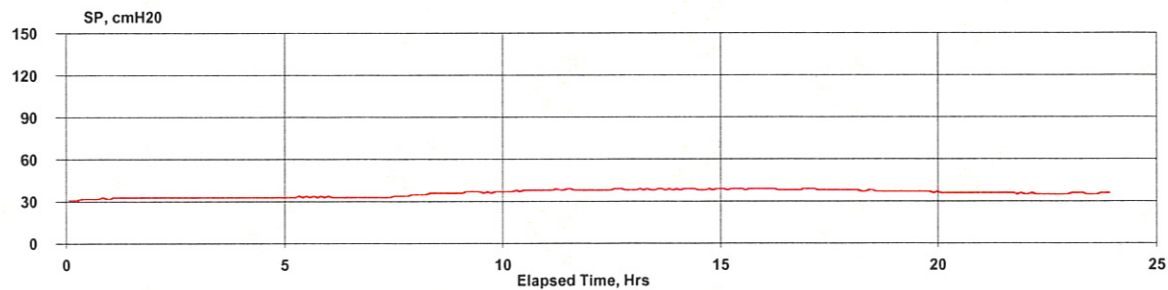
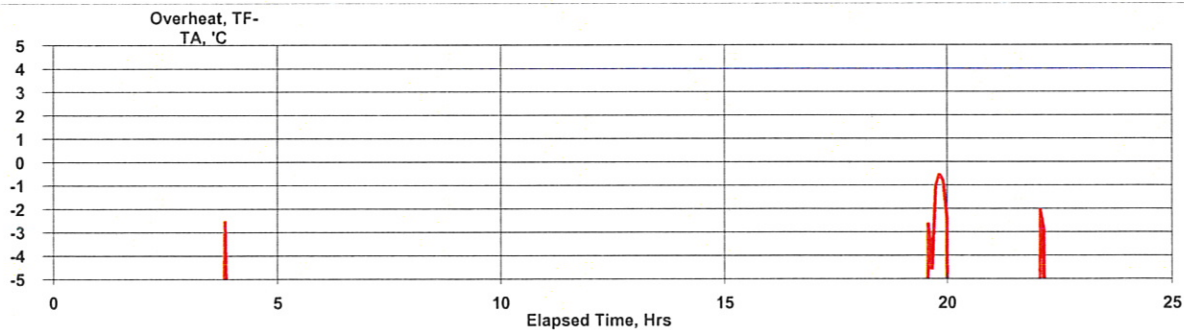
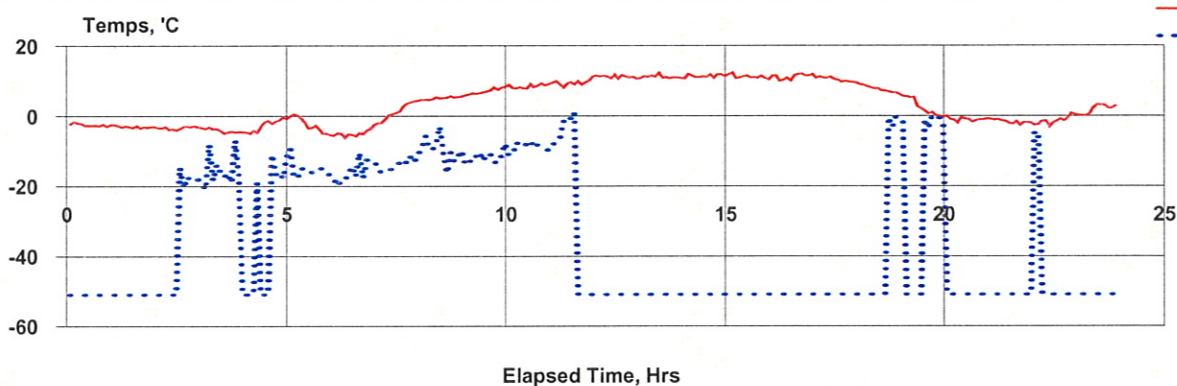
Date Time
dd-mmm hh:mm:ss
Start: 16-25-mar 0:00:08
Stop: 16-26-mar 0:00:05
ET: 23:59

Mass Concentration Data:

Filter ID: 24
Final Wt: mg
Initial Wt: mg
Delta Wt: 0.000 mg
Total Vol: 24.037 m³
Mass Conc: 0 µg/m³

Notes 1:

Notes 2:



Hourly

16-25-mar	0:05:08	581	-2.4	-51.1	-48.7	32	16.72
16-25-mar	1:05:08	581	-3.0	-51.1	-48.1	33	16.72
16-25-mar	2:05:08	581	-3.3	-34.6	-31.3	33	16.72
16-25-mar	3:05:08	580	-4.0	-18.8	-14.8	33	16.72
16-25-mar	4:05:08	580	-2.5	-33.3	-30.8	33	16.71
16-25-mar	5:05:08	580	-2.5	-15.4	-12.9	33	16.73
16-25-mar	6:05:08	580	-4.8	-15.8	-11.0	33	16.71
16-25-mar	7:05:08	580	1.5	-14.0	-15.5	34	16.72
16-25-mar	8:05:08	581	5.2	-9.8	-15.0	36	16.71
16-25-mar	9:05:08	581	7.1	-11.8	-18.9	37	16.70
16-25-mar	10:05:08	581	8.6	-8.9	-17.5	38	16.71
16-25-mar	11:05:08	580	9.6	-23.5	-33.1	38	16.72
16-25-mar	12:05:08	580	11.3	-51.1	-62.3	38	16.71
16-25-mar	13:05:08	579	11.2	-51.1	-62.3	39	16.71
16-25-mar	14:05:08	579	11.4	-51.1	-62.5	39	16.71
16-25-mar	15:05:08	579	11.2	-51.1	-62.3	39	16.71
16-25-mar	16:05:08	578	11.2	-51.1	-62.3	38	16.71
16-25-mar	17:05:08	578	10.4	-51.1	-61.5	38	16.72
16-25-mar	18:05:08	578	7.6	-34.5	-42.2	37	16.71
16-25-mar	19:05:08	578	2.5	-22.1	-24.7	37	16.71
16-25-mar	20:05:08	578	-1.0	-51.1	-50.1	36	16.71
16-25-mar	21:05:08	578	-1.6	-51.1	-49.5	36	16.71
16-25-mar	22:05:08	577	-1.3	-43.4	-42.1	35	16.73
16-25-mar	23:05:08	577	1.8	-51.1	-52.9	36	16.72

Compliance Monitor 963B

PM₁₀ Sampler Summary

January 1, 2016 - March 31, 2016

Network: Alton Coal Development

Site: Coal Hollow

Sampler ID: Coal Hollow-B

AQS ID:

Sampler Type: BGI FRM Single

Date	Filter ID	Concentration (µg/m3)	Concentration (µg/m3)	Sample Period (hr:min)	Sample Volume (m3)	Std Volume (m3)	Mass (mg)			Flag	Comments
		LTP	STP				Tare	Gross	Net		
01/01/16	P2926662	3.3	3.8	23:59	24.0	21.0	385.897	385.978	0.081		
01/07/16	P2927856	0.8	1.0	23:59	24.0	20.4	372.865	372.886	0.021		
01/13/16	P2927859	9.1	10.6	23:59	24.0	20.6	377.015	377.234	0.219		
01/19/16	P2928050	5.7	6.7	23:59	24.0	20.4	394.493	394.632	0.139		
01/25/16	P2928053	2.5	2.9	23:59	24.0	20.8	372.628	372.689	0.061		
01/31/16	P2928156	3.3	3.9	23:59	24.0	20.1	388.862	388.942	0.080		
02/06/16	P2928159	1.7	1.9	23:59	24.0	20.8	373.606	373.647	0.041		
02/12/16	P2928162	5.4	6.4	23:59	24.0	20.2	387.372	387.502	0.130		
02/18/16	P2928305	6.5	7.9	23:59	24.0	20.0	373.094	373.252	0.158		
02/24/16	P2928407	7.9	9.2	24:00	24.0	20.4	368.493	368.683	0.190		
03/01/16	P2928417	9.4	11.3	23:59	24.0	20.0	372.074	372.300	0.226		
03/07/16	P2928414	2.9	3.5	23:59	24.0	20.2	365.881	365.953	0.072		
03/13/16	P2928782	5.8	6.9	23:59	24.0	20.1	397.743	397.883	0.140		
03/19/16	P2928787	3.2	3.9	23:59	24.0	19.9	386.175	386.254	0.079		
03/25/16	P2928792	10.6	12.8	23:59	24.0	19.9	391.580	391.835	0.255		
03/31/16	P2928998	4.2	5.0	23:59	24.0	20.1	383.570	383.671	0.101		
# Valid		Recovery	Average	St. Dev.	Max	Min					
16		100%	6.1	3.5	12.8	1.0					

BGI PQ200 Air Sampling System Downloaded 2016 04 jan 13:24:42

Job Details:

Job Name: 16Jan04B.JOB
Version: 5.62
Serial No: 963
Pump Time: 2750:10
Flags:

Job Code:

Site Name:

Station Code:

Operators:

User1: |||||

User2:

	Max	Min	Avg	Units
BP	593	590	591	mmHg
TA	-0.5	-15.2	-7.8	°C
Q	---	---	16.7	Lpm

QCV 0.49 %
Max overheat 2.4 °C
occured 01-jan 10:58:16

Timer Information:

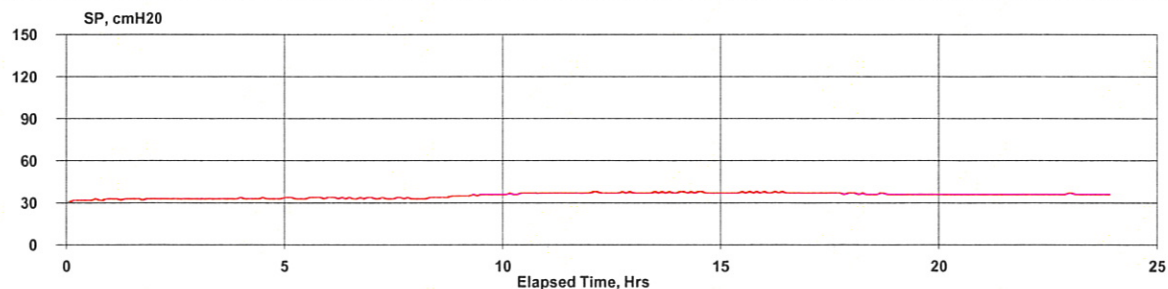
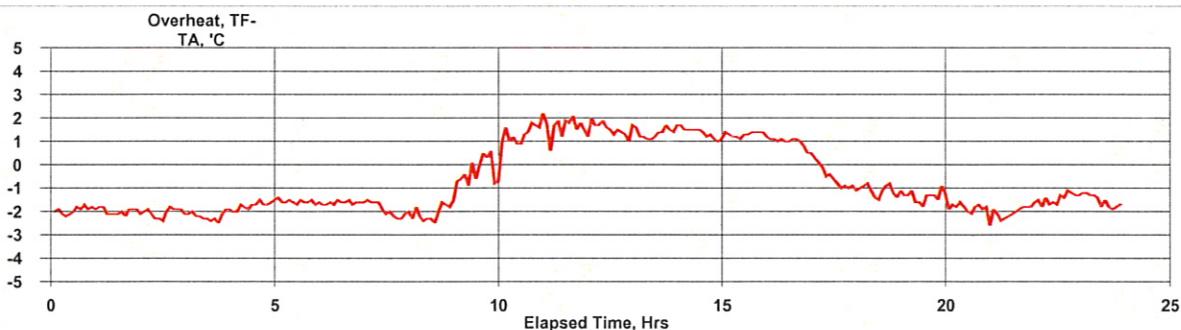
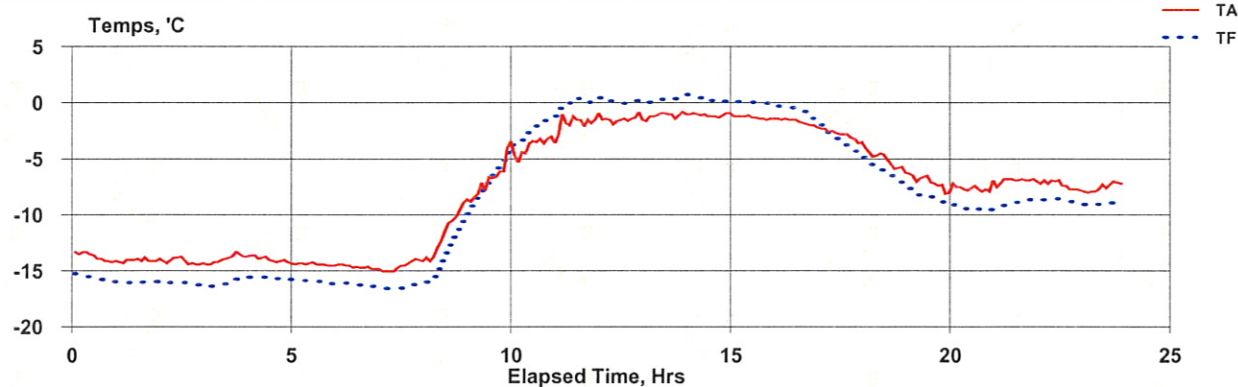
Date	Time
dd-mmm	hh:mm:ss
Start: 15-01-jan	0:00:08
Stop: 16-02-jan	0:00:05
ET: 23:59	

Mass Concentration Data:

Filter ID:	19
Final Wt:	mg
Initial Wt:	mg
Delta Wt:	0.000 mg
Total Vol:	24.034 m ³
Mass Conc:	0 µg/m ³

Notes 1:

Notes 2:



Hourly

16-01-jan	0:05:08	592	-13.7	-15.7	-1.9	32	16.72
16-01-jan	1:05:08	592	-14.0	-16.0	-2.0	33	16.71
16-01-jan	2:05:08	592	-14.1	-16.2	-2.1	33	16.71
16-01-jan	3:05:08	592	-13.9	-16.1	-2.2	33	16.73
16-01-jan	4:05:08	592	-14.0	-15.7	-1.7	33	16.71
16-01-jan	5:05:08	592	-14.4	-16.0	-1.6	34	16.71
16-01-jan	6:05:08	592	-14.6	-16.2	-1.6	34	16.71
16-01-jan	7:05:08	592	-14.5	-16.4	-1.9	33	16.72
16-01-jan	8:05:08	592	-11.4	-13.4	-2.0	34	16.71
16-01-jan	9:05:08	592	-6.6	-6.9	-0.3	36	16.71
16-01-jan	10:05:08	593	-3.8	-2.5	1.4	37	16.71
16-01-jan	11:05:08	592	-1.6	-0.1	1.6	37	16.70
16-01-jan	12:05:08	592	-1.5	0.1	1.6	37	16.71
16-01-jan	13:05:08	591	-1.1	0.3	1.4	37	16.71
16-01-jan	14:05:08	591	-1.1	0.3	1.4	37	16.71
16-01-jan	15:05:08	591	-1.3	0.0	1.3	37	16.71
16-01-jan	16:05:08	591	-1.7	-0.8	0.9	37	16.71
16-01-jan	17:05:08	592	-2.9	-3.4	-0.6	37	16.71
16-01-jan	18:05:08	592	-5.1	-6.2	-1.1	36	16.71
16-01-jan	19:05:08	592	-7.1	-8.4	-1.4	36	16.71
16-01-jan	20:05:08	592	-7.6	-9.5	-1.9	36	16.70
16-01-jan	21:05:08	592	-6.9	-8.9	-2.0	36	16.71
16-01-jan	22:05:08	593	-7.3	-8.8	-1.4	36	16.71
16-01-jan	23:05:08	593	-7.5	-9.1	-1.5	36	16.71

BGI PQ200 Air Sampling System Downloaded 2016 08 jan 12:15:58

Job Details:

Job Name: 16Jan08B.JOB
Version: 5.62
Serial No: 963
Pump Time: 2774:09
Flags:

Job Code:

Site Name:

Station Code:

Operators:

User1: |||||

User2:

	Max	Min	Avg	Units
BP	583	580	581	mmHg
TA	-0.8	-13.8	-4.7	°C
Q	---	---	16.7	Lpm

Timer Information:

Date	Time
dd-mmm	hh:mm:ss
Start: 16-07-jan	0:00:08
Stop: 16-08-jan	0:00:05
ET: 23:59	

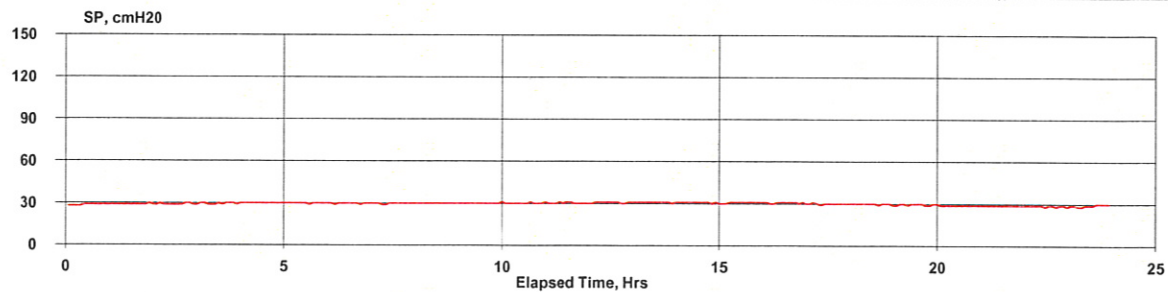
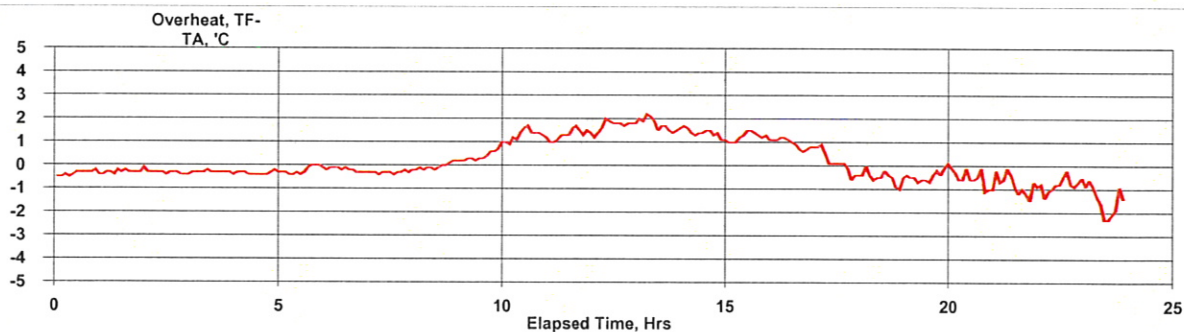
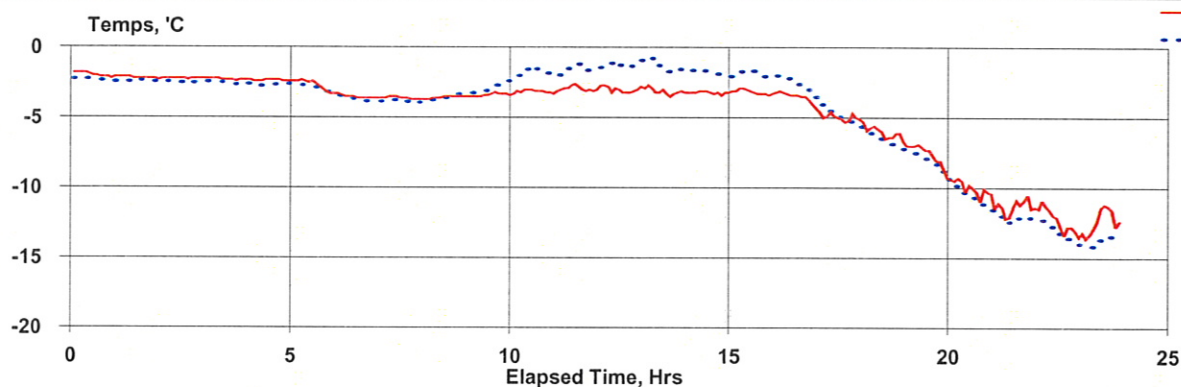
Mass Concentration Data:

Filter ID:	6
Final Wt:	mg
Initial Wt:	mg
Delta Wt:	0.000 mg
Total Vol:	24.031 m ³
Mass Conc:	0 µg/m ³

QCV 0.42 %
Max overheat 2.3 °C
occured 07-jan 13:15:12

Notes 1:

Notes 2:



Hourly

16-07-jan	0:05:08	583	-2.0	-2.3	-0.4	29	16.70
16-07-jan	1:05:08	582	-2.2	-2.5	-0.3	29	16.73
16-07-jan	2:05:08	582	-2.2	-2.5	-0.3	29	16.71
16-07-jan	3:05:08	582	-2.3	-2.6	-0.3	30	16.70
16-07-jan	4:05:08	581	-2.4	-2.7	-0.3	30	16.72
16-07-jan	5:05:08	581	-2.7	-2.9	-0.2	30	16.71
16-07-jan	6:05:08	582	-3.5	-3.7	-0.2	30	16.70
16-07-jan	7:05:08	582	-3.6	-3.9	-0.3	30	16.70
16-07-jan	8:05:08	582	-3.6	-3.6	0.0	30	16.71
16-07-jan	9:05:08	582	-3.4	-3.0	0.4	30	16.70
16-07-jan	10:05:08	582	-3.1	-1.8	1.3	30	16.71
16-07-jan	11:05:08	582	-2.9	-1.6	1.3	30	16.70
16-07-jan	12:05:08	581	-3.0	-1.3	1.7	31	16.70
16-07-jan	13:05:08	581	-3.1	-1.4	1.8	31	16.71
16-07-jan	14:05:08	581	-3.2	-1.8	1.4	31	16.72
16-07-jan	15:05:08	581	-3.2	-1.9	1.2	31	16.71
16-07-jan	16:05:08	581	-3.5	-2.6	0.9	31	16.70
16-07-jan	17:05:08	581	-5.0	-4.9	0.1	30	16.70
16-07-jan	18:05:08	581	-6.0	-6.5	-0.5	30	16.71
16-07-jan	19:05:08	581	-7.6	-8.0	-0.4	30	16.72
16-07-jan	20:05:08	581	-10.0	-10.5	-0.6	29	16.70
16-07-jan	21:05:08	581	-11.3	-12.1	-0.8	29	16.70
16-07-jan	22:05:08	581	-12.3	-13.1	-0.8	29	16.71
16-07-jan	23:05:08	581	-12.4	-13.8	-1.5	29	16.71

BGI PQ200 Air Sampling System Downloaded 2016 14 jan 13:01:18

Job Details:

Job Name: 16Jan14B.JOB
Version: 5.62
Serial No: 963
Pump Time: 2798:08
Flags:

Job Code:

Site Name:
Station Code:
Operators:

User1: |||||
User2:

	Max	Min	Avg	Units
BP	593	587	590	mmHg
TA	8.5	-13.5	-3.8	°C
Q	---	---	16.7	Lpm

Timer Information:

Date Time
dd-mmm hh:mm:ss
Start: 16-13-jan 0:00:08
Stop: 16-14-jan 0:00:05
ET: 23:59

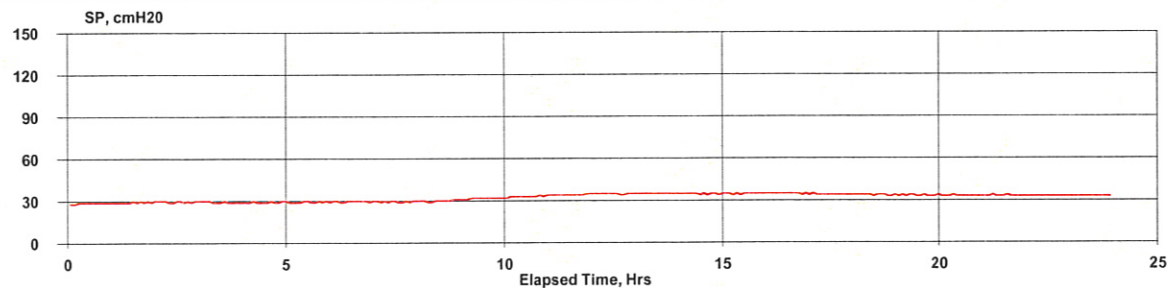
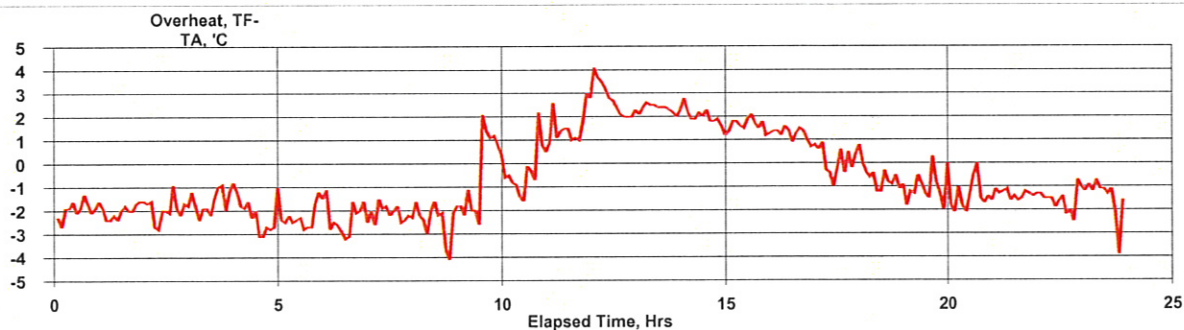
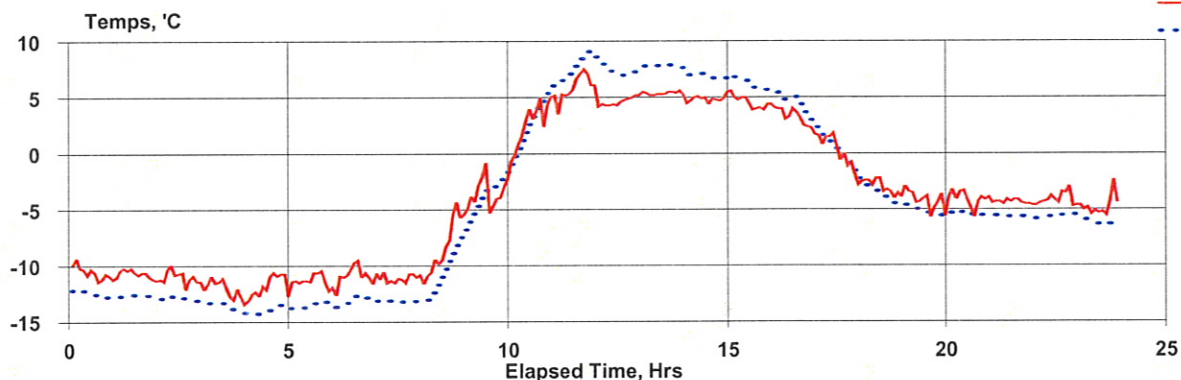
Mass Concentration Data:

Filter ID: 9
Final Wt: mg
Initial Wt: mg
Delta Wt: 0.000 mg
Total Vol: 24.014 m³
Mass Conc: 0 µg/m³

QCV 0.35 %
Max overheat 4.4 °C
occured 13-jan 12:03:34

Notes 1:

Notes 2:



Hourly

16-13-jan	0:05:08	593	-10.6	-12.5	-1.9	29	16.72
16-13-jan	1:05:08	592	-10.7	-12.7	-2.0	29	16.73
16-13-jan	2:05:08	592	-11.0	-12.9	-2.0	30	16.72
16-13-jan	3:05:08	592	-12.0	-13.6	-1.6	29	16.72
16-13-jan	4:05:08	592	-11.8	-13.9	-2.2	29	16.69
16-13-jan	5:05:08	592	-11.3	-13.5	-2.2	29	16.73
16-13-jan	6:05:08	592	-10.8	-13.1	-2.3	30	16.71
16-13-jan	7:05:08	592	-11.1	-13.2	-2.1	30	16.72
16-13-jan	8:05:08	592	-8.2	-10.6	-2.4	30	16.71
16-13-jan	9:05:08	591	-3.5	-3.9	-0.4	32	16.71
16-13-jan	10:05:08	592	2.7	2.4	-0.3	33	16.72
16-13-jan	11:05:08	591	5.9	7.5	1.6	34	16.70
16-13-jan	12:05:08	591	4.6	7.4	2.7	35	16.72
16-13-jan	13:05:08	590	5.4	7.7	2.3	35	16.72
16-13-jan	14:05:08	589	4.9	6.8	2.0	35	16.70
16-13-jan	15:05:08	589	4.6	6.2	1.6	35	16.71
16-13-jan	16:05:08	589	3.2	4.4	1.2	35	16.70
16-13-jan	17:05:08	589	0.1	0.2	0.1	34	16.71
16-13-jan	18:05:08	589	-3.0	-3.7	-0.7	34	16.71
16-13-jan	19:05:08	589	-4.2	-5.2	-1.0	33	16.70
16-13-jan	20:05:08	589	-4.1	-5.5	-1.4	33	16.69
16-13-jan	21:05:08	588	-4.3	-5.7	-1.3	33	16.70
16-13-jan	22:05:08	588	-4.1	-5.7	-1.6	33	16.71
16-13-jan	23:05:08	588	-4.7	-6.2	-1.5	33	16.70

BGI PQ200 Air Sampling System Downloaded 2016 20 Jan 12:08:11

Job Details:

Job Name: 16Jan20B.JOB
Version: 5.62
Serial No: 963
Pump Time: 2822:07
Flags:

Job Code:

Site Name: 963B
Station Code:
Operators: KN

User1: |||||
User2:

	Max	Min	Avg	Units
BP	593	588	591	mmHg
TA	4.2	-8.4	-1	°C
Q	---	---	16.7	Lpm

Timer Information:

Date Time
dd-mmm hh:mm:ss
Start: 16-19-jan 0:00:08
Stop: 16-20-jan 0:00:05
ET: 23:59

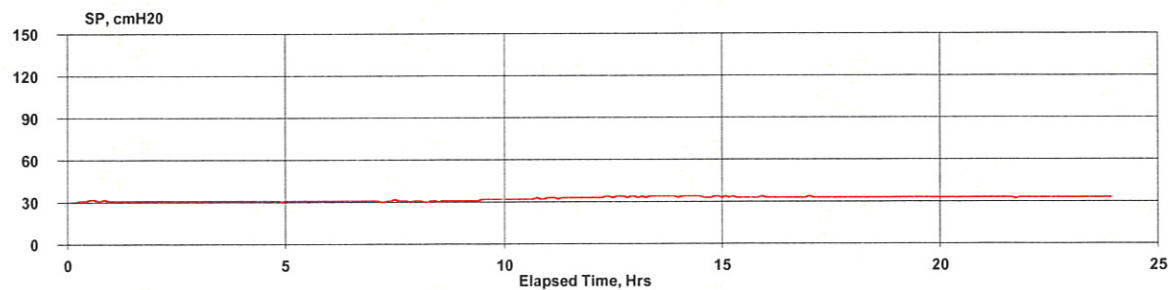
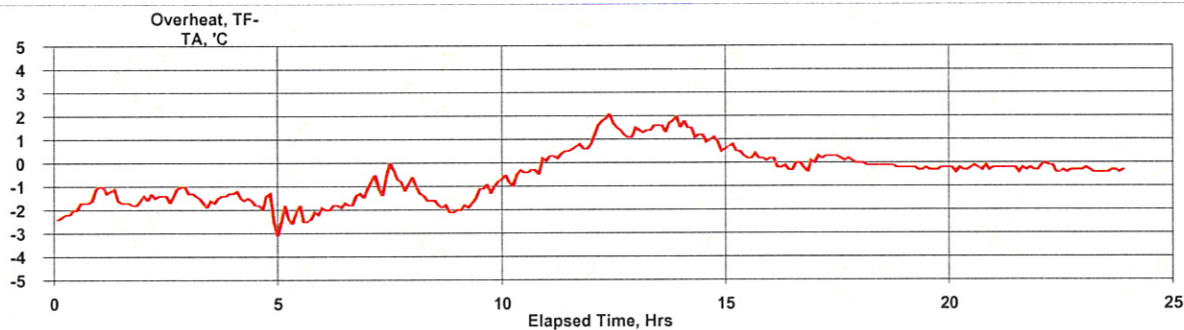
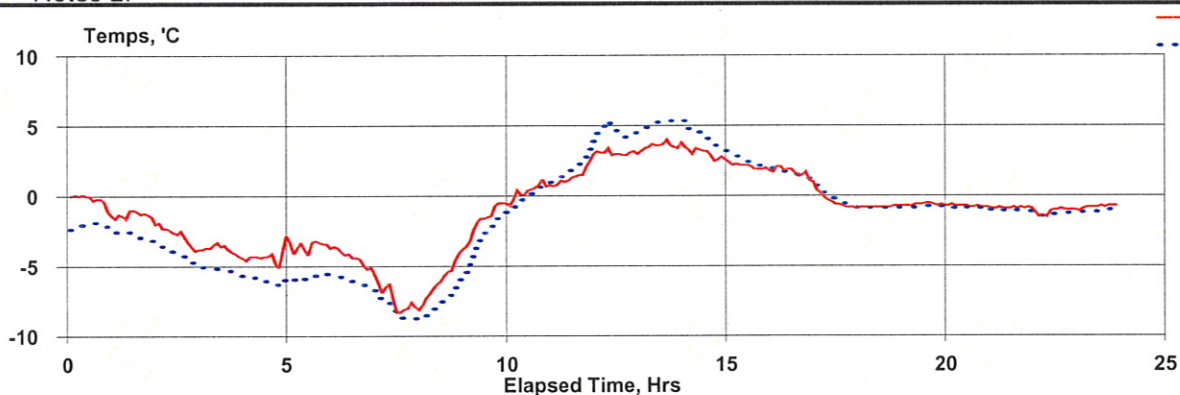
Mass Concentration Data:

Filter ID: 12
Final Wt: mg
Initial Wt: mg
Delta Wt: 0.000 mg
Total Vol: 24 m³
Mass Conc: 0 µg/m³

QCV 0.37 %
Max overheat 2.3 °C
occured 19-jan 12:22:43

Notes 1:

Notes 2:



Hourly

16-19-jan	0:05:08	591	-0.3	-2.1	-1.8	31	16.73
16-19-jan	1:05:08	591	-1.4	-2.9	-1.5	31	16.66
16-19-jan	2:05:08	591	-2.9	-4.2	-1.3	31	16.69
16-19-jan	3:05:08	591	-3.8	-5.3	-1.5	31	16.69
16-19-jan	4:05:08	591	-4.3	-6.0	-1.8	31	16.67
16-19-jan	5:05:08	591	-3.6	-5.8	-2.2	31	16.67
16-19-jan	6:05:08	591	-4.5	-6.2	-1.7	31	16.70
16-19-jan	7:05:08	592	-7.4	-8.2	-0.7	31	16.72
16-19-jan	8:05:08	592	-5.8	-7.5	-1.7	31	16.66
16-19-jan	9:05:08	592	-1.6	-2.9	-1.3	32	16.70
16-19-jan	10:05:08	593	0.4	0.0	-0.4	32	16.71
16-19-jan	11:05:08	593	1.5	2.0	0.5	33	16.74
16-19-jan	12:05:08	592	3.1	4.6	1.5	34	16.71
16-19-jan	13:05:08	591	3.6	5.1	1.6	34	16.69
16-19-jan	14:05:08	591	3.0	4.1	1.1	34	16.68
16-19-jan	15:05:08	591	2.1	2.5	0.4	33	16.71
16-19-jan	16:05:08	591	1.7	1.5	-0.1	33	16.70
16-19-jan	17:05:08	591	-0.5	-0.3	0.2	33	16.70
16-19-jan	18:05:08	591	-0.8	-0.9	-0.1	33	16.72
16-19-jan	19:05:08	591	-0.6	-0.9	-0.2	33	16.71
16-19-jan	20:05:08	591	-0.7	-1.0	-0.2	33	16.70
16-19-jan	21:05:08	591	-0.9	-1.1	-0.2	33	16.71
16-19-jan	22:05:08	591	-1.1	-1.4	-0.3	33	16.72
16-19-jan	23:05:08	591	-0.8	-1.1	-0.3	33	16.73

BGI PQ200 Air Sampling System Downloaded 2016 28 jan 12:51:41

Job Details:

Job Name: 16Jan28B.JOB
Version: 5.62
Serial No: 963
Pump Time: 2846:06
Flags:

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

	Max	Min	Avg	Units
BP	593	587	590	mmHg
TA	0.8	-11.9	-5.4	°C
Q	---	---	16.71	Lpm

Timer Information:

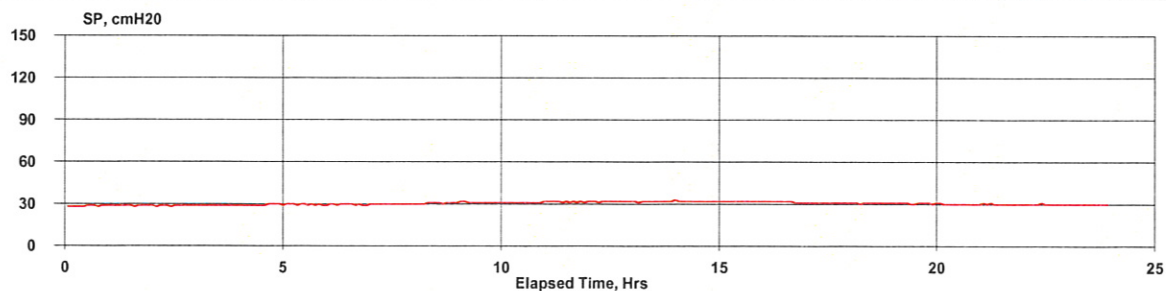
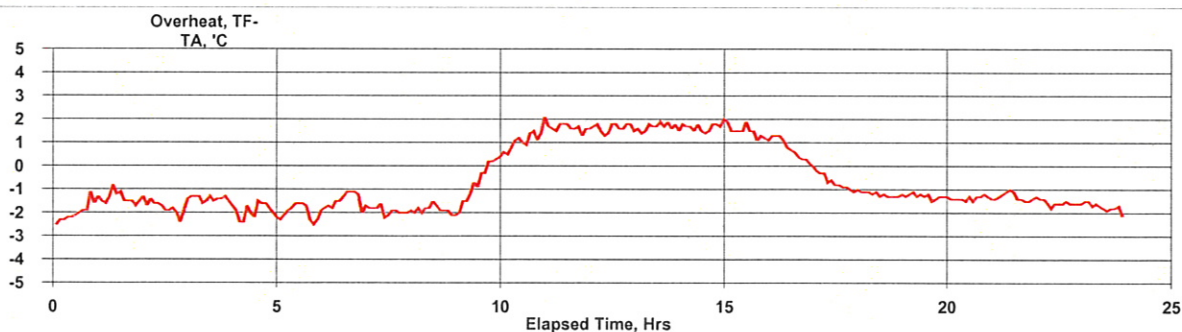
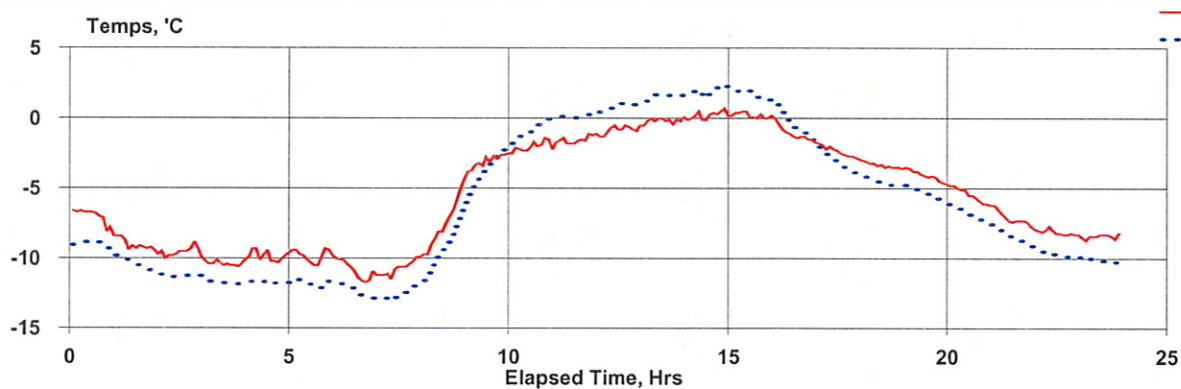
Date Time
dd-mmm hh:mm:ss
Start: 16-25-jan 0:00:08
Stop: 16-26-jan 0:00:04
ET: 23:59

Mass Concentration Data:

Filter ID: 13
Final Wt: mg
Initial Wt: mg
Delta Wt: 0.000 mg
Total Vol: 24.018 m³
Mass Conc: 0 ug/m³

QCV 0.4 %
Max overheat 2.6 °C
occured 25-jan 10:58:46

Notes 1:
Notes 2:



Hourly

16-25-jan	0:05:08	588	-7.1	-9.1	-2.0	29	16.71
16-25-jan	1:05:08	588	-9.1	-10.5	-1.4	29	16.69
16-25-jan	2:05:08	588	-9.6	-11.3	-1.8	29	16.72
16-25-jan	3:05:08	589	-10.4	-11.8	-1.4	29	16.71
16-25-jan	4:05:08	589	-9.8	-11.8	-1.9	29	16.70
16-25-jan	5:05:08	589	-9.8	-11.8	-2.0	30	16.70
16-25-jan	6:05:08	589	-10.9	-12.4	-1.5	30	16.70
16-25-jan	7:05:08	589	-10.7	-12.6	-1.9	30	16.71
16-25-jan	8:05:08	590	-7.4	-9.3	-1.9	31	16.70
16-25-jan	9:05:08	590	-3.1	-3.7	-0.6	31	16.73
16-25-jan	10:05:08	591	-2.0	-0.9	1.1	31	16.69
16-25-jan	11:05:08	591	-1.5	0.1	1.6	32	16.73
16-25-jan	12:05:08	590	-0.8	0.8	1.6	32	16.77
16-25-jan	13:05:08	590	-0.2	1.5	1.7	32	16.79
16-25-jan	14:05:08	590	0.2	1.9	1.7	32	16.79
16-25-jan	15:05:08	590	0.2	1.7	1.5	32	16.76
16-25-jan	16:05:08	590	-1.1	-0.4	0.7	32	16.73
16-25-jan	17:05:08	591	-2.4	-3.1	-0.7	31	16.68
16-25-jan	18:05:08	591	-3.4	-4.6	-1.2	31	16.69
16-25-jan	19:05:08	591	-4.1	-5.4	-1.3	31	16.67
16-25-jan	20:05:08	592	-5.5	-6.9	-1.4	30	16.69
16-25-jan	21:05:08	592	-7.2	-8.5	-1.3	30	16.69
16-25-jan	22:05:08	593	-8.1	-9.7	-1.6	30	16.69
16-25-jan	23:05:08	593	-8.4	-10.1	-1.7	30	16.70

BGI PQ200 Air Sampling System Downloaded 2016 03 feb 09:47:59

Job Details:

Job Name: 16Feb03B.JOB
Version: 5.62
Serial No: 963
Pump Time: 2870:05
Flags:

Job Code:

Site Name:

Station Code:

Operators:

User1: |||||

User2:

	Max	Min	Avg	Units
BP	585	575	580	mmHg
TA	2.5	-3.5	-0.7	°C
Q	---	---	16.7	Lpm

QCV 0.4 %
Max overheat 3.6 °C
occured 01-feb 14:22:28

Timer Information:

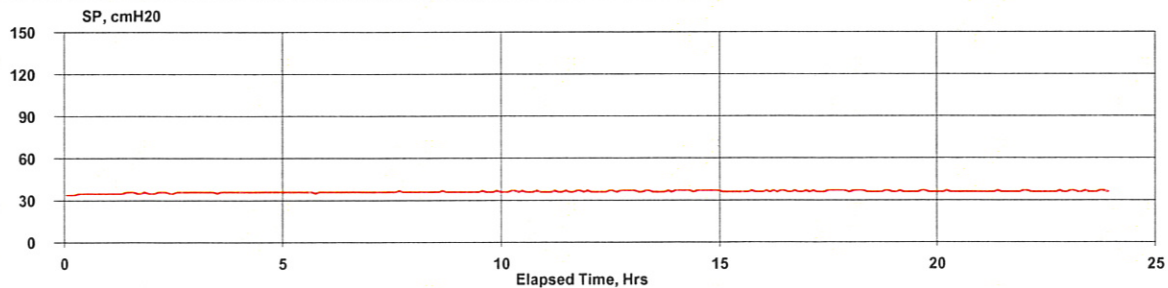
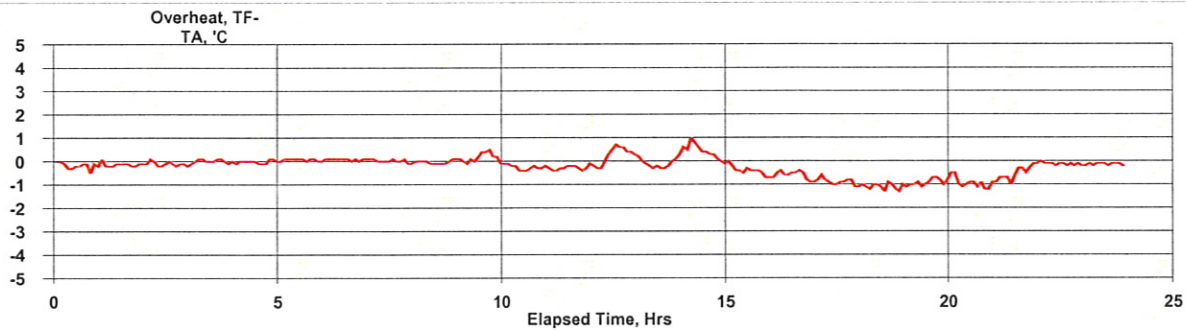
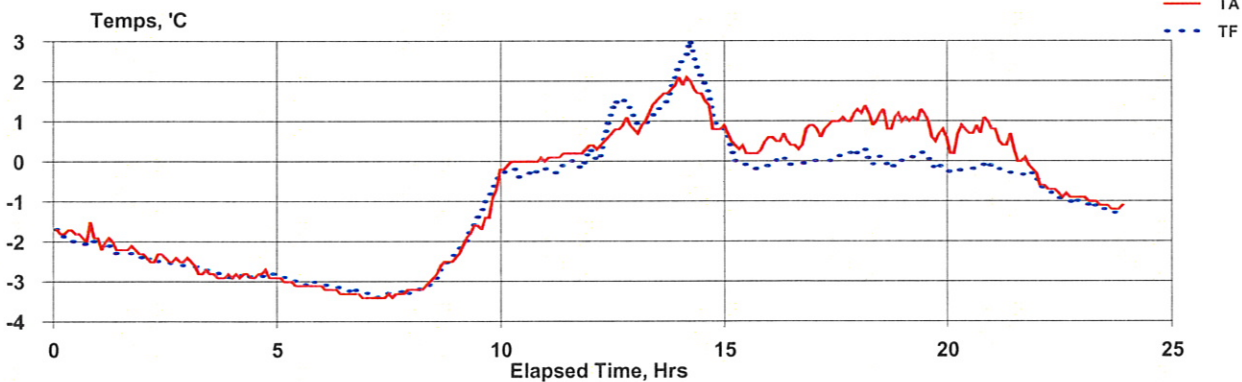
Date Time
dd-mmm hh:mm:ss
Start: 16-31-jan 0:00:08
Stop: 16-01-feb 0:00:05
ET: 23:59

Mass Concentration Data:

Filter ID: 5
Final Wt: mg
Initial Wt: mg
Delta Wt: 0.000 mg
Total Vol: 24.019 m³
Mass Conc: 0 µg/m³

Notes 1:

Notes 2:



Hourly

16-31-jan	0:05:08	584	-1.8	-2.0	-0.2	35	16.70
16-31-jan	1:05:08	584	-2.2	-2.3	-0.1	35	16.71
16-31-jan	2:05:08	584	-2.4	-2.5	-0.1	36	16.71
16-31-jan	3:05:08	584	-2.8	-2.8	0.0	36	16.71
16-31-jan	4:05:08	584	-2.8	-2.9	0.0	36	16.70
16-31-jan	5:05:08	584	-3.1	-3.0	0.1	36	16.72
16-31-jan	6:05:08	583	-3.3	-3.2	0.1	36	16.73
16-31-jan	7:05:08	583	-3.3	-3.3	0.0	36	16.73
16-31-jan	8:05:08	583	-2.8	-2.9	0.0	36	16.71
16-31-jan	9:05:08	583	-1.5	-1.3	0.2	36	16.72
16-31-jan	10:05:08	583	0.0	-0.3	-0.3	36	16.72
16-31-jan	11:05:08	583	0.2	-0.1	-0.3	36	16.73
16-31-jan	12:05:08	582	0.7	0.9	0.3	37	16.73
16-31-jan	13:05:08	581	1.5	1.4	-0.1	36	16.70
16-31-jan	14:05:08	580	1.5	1.9	0.4	37	16.72
16-31-jan	15:05:08	579	0.4	0.0	-0.4	36	16.70
16-31-jan	16:05:08	579	0.6	0.0	-0.6	37	16.71
16-31-jan	17:05:08	578	1.0	0.1	-0.9	37	16.70
16-31-jan	18:05:08	578	1.1	0.0	-1.1	37	16.70
16-31-jan	19:05:08	577	0.9	0.0	-0.9	36	16.69
16-31-jan	20:05:08	576	0.7	-0.2	-0.9	36	16.69
16-31-jan	21:05:08	576	0.2	-0.3	-0.5	36	16.70
16-31-jan	22:05:08	576	-0.8	-0.9	-0.1	36	16.70
16-31-jan	23:05:08	575	-1.1	-1.2	-0.1	36	16.71

BGI PQ200 Air Sampling System Downloaded 2016 08 feb 10:48:01

Job Details:

Job Name: 16Feb08B.JOB
Version: 5.62
Serial No: 963
Pump Time: 2894:04
Flags:

Job Code:

Site Name:
Station Code:
Operators:

User1: |||||

User2:

	Max	Min	Avg	Units
BP	598	595	596	mmHg
TA	8.5	-12	-2.8	°C
Q	---	---	16.71	Lpm

QCV 0.48 %

Max overheat 3.7 °C
occured 06-feb 14:36:09

Timer Information:

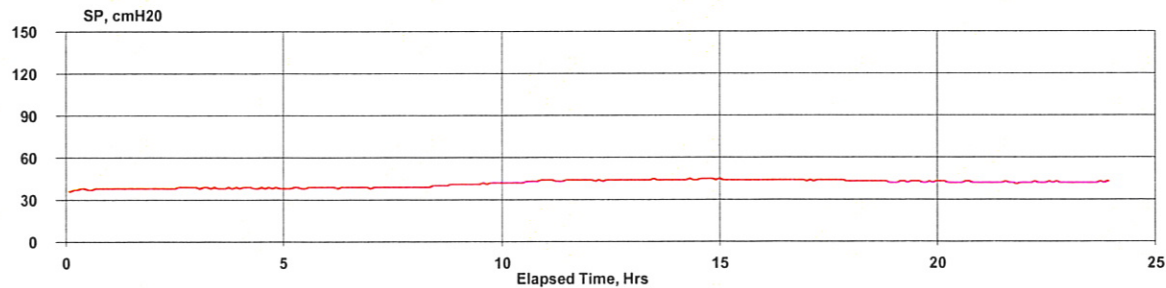
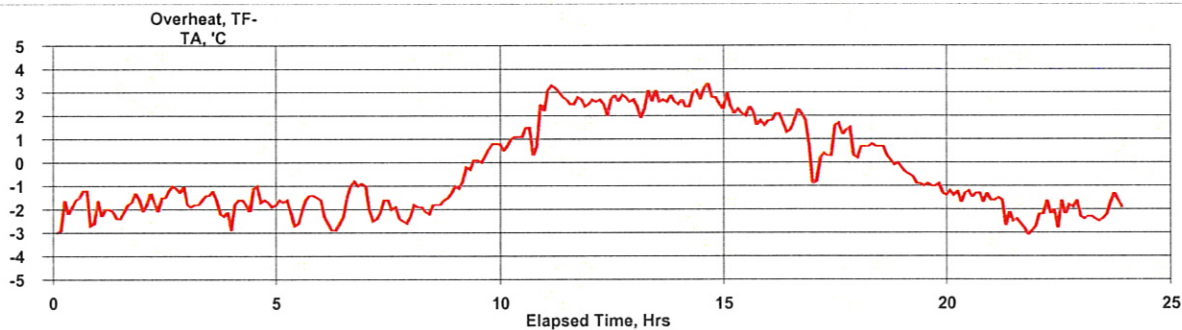
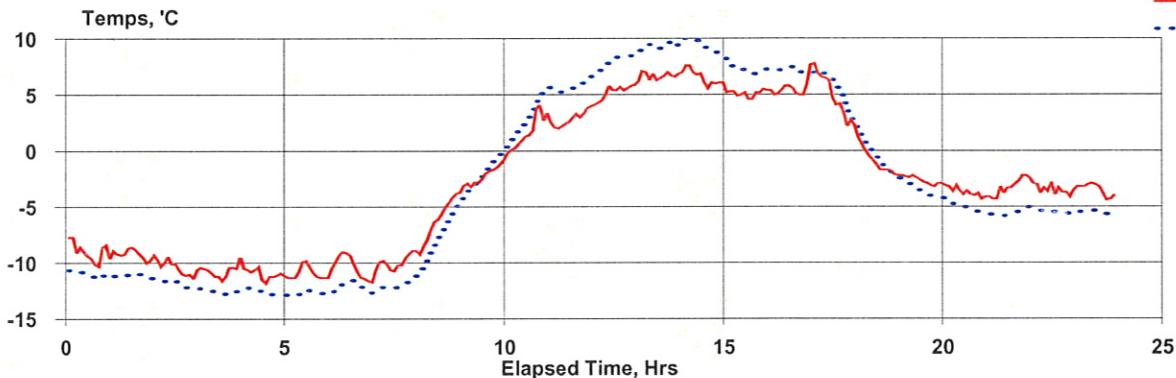
Date Time
dd-mmm hh:mm:ss
Start: 16-06-feb 0:00:08
Stop: 16-07-feb 0:00:05
ET: 23:59

Mass Concentration Data:

Filter ID: 13
Final Wt: mg
Initial Wt: mg
Delta Wt: 0.000 mg
Total Vol: 24.042 m³
Mass Conc: 0 µg/m³

Notes 1:

Notes 2:



Hourly

16-06-feb	0:05:08	597	-9.0	-11.0	-2.0	38	16.71
16-06-feb	1:05:08	597	-9.2	-11.2	-2.0	38	16.70
16-06-feb	2:05:08	597	-10.4	-11.9	-1.4	39	16.71
16-06-feb	3:05:08	597	-10.7	-12.6	-1.9	38	16.72
16-06-feb	4:05:08	597	-11.0	-12.6	-1.6	39	16.70
16-06-feb	5:05:08	597	-10.9	-12.7	-1.8	39	16.72
16-06-feb	6:05:08	597	-10.3	-12.1	-1.8	39	16.71
16-06-feb	7:05:08	597	-9.9	-12.1	-2.2	39	16.71
16-06-feb	8:05:08	597	-6.0	-7.7	-1.7	40	16.71
16-06-feb	9:05:08	597	-2.2	-2.1	0.1	41	16.71
16-06-feb	10:05:08	597	1.7	2.9	1.2	43	16.71
16-06-feb	11:05:08	597	2.9	5.6	2.8	44	16.71
16-06-feb	12:05:08	597	5.2	7.9	2.6	44	16.70
16-06-feb	13:05:08	596	6.7	9.3	2.6	44	16.71
16-06-feb	14:05:08	596	6.6	9.4	2.8	45	16.72
16-06-feb	15:05:08	596	5.1	7.2	2.1	44	16.69
16-06-feb	16:05:08	596	5.6	7.1	1.5	44	16.72
16-06-feb	17:05:08	595	4.8	5.5	0.7	44	16.75
16-06-feb	18:05:08	596	-1.0	-0.6	0.4	43	16.70
16-06-feb	19:05:08	596	-2.7	-3.6	-0.9	43	16.72
16-06-feb	20:05:08	596	-3.7	-5.1	-1.4	42	16.72
16-06-feb	21:05:08	596	-3.2	-5.6	-2.4	42	16.71
16-06-feb	22:05:08	596	-3.5	-5.5	-2.0	42	16.71
16-06-feb	23:05:08	596	-3.5	-5.6	-2.1	42	16.71

BGI PQ200 Air Sampling System Downloaded 2016 15 feb 10:11:15

Job Details:

Job Name: 16Feb15B.JOB
Version: 5.62
Serial No: 963
Pump Time: 2918:03
Flags:

Job Code:

Site Name:
Station Code:
Operators:

User1: |||||

User2:

	Max	Min	Avg	Units
BP	597	594	595	mmHg
TA	14.7	-4.2	4.1	°C
Q	---	---	16.71	Lpm

QCV 0.57 %

Max overheat 3 °C
occured 12-feb 14:38:45

Timer Information:

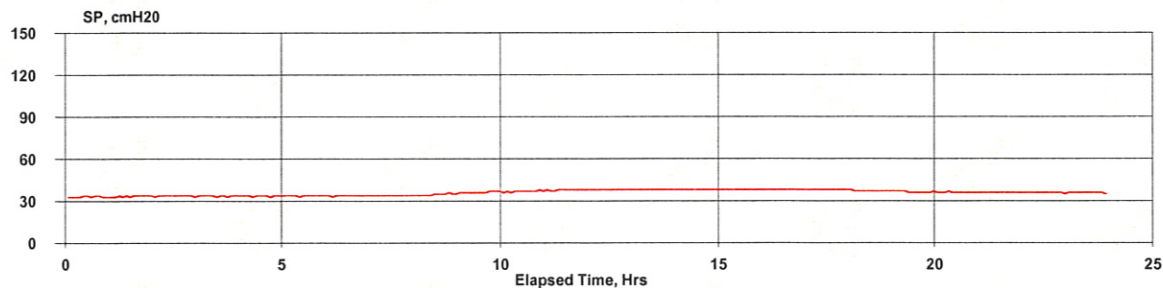
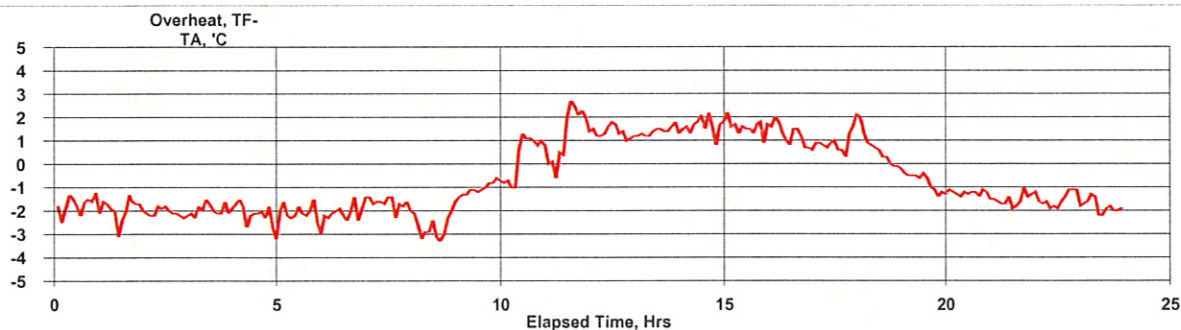
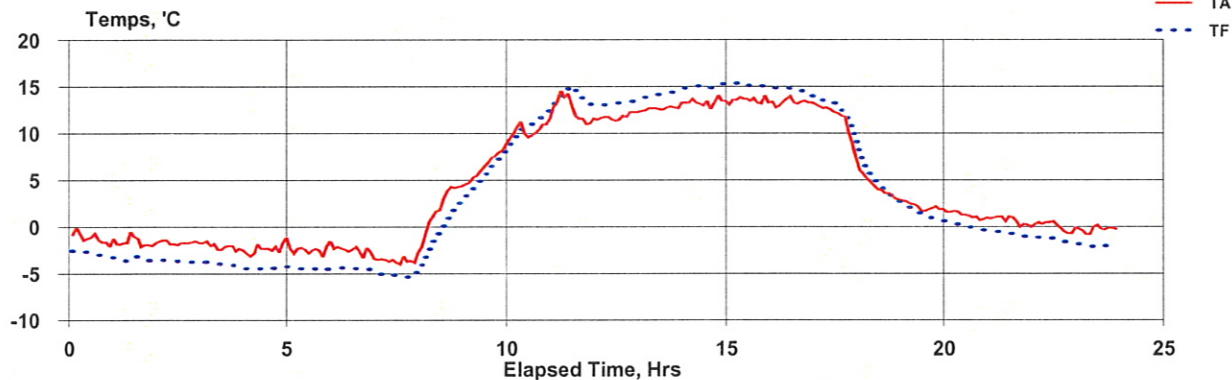
Date Time
dd-mmm hh:mm:ss
Start: 16-12-feb 0:00:08
Stop: 16-13-feb 0:00:04
ET: 23:59

Mass Concentration Data:

Filter ID: 17
Final Wt: mg
Initial Wt: mg
Delta Wt: 0.000 mg
Total Vol: 24.04 m³
Mass Conc: 0 µg/m³

Notes 1:

Notes 2:



Hourly

16-12-feb	0:05:08	596	-1.2	-2.9	-1.8	33	16.72
16-12-feb	1:05:08	596	-1.6	-3.5	-1.9	34	16.72
16-12-feb	2:05:08	596	-1.6	-3.7	-2.1	34	16.72
16-12-feb	3:05:08	596	-2.1	-4.0	-1.9	34	16.72
16-12-feb	4:05:08	595	-2.3	-4.5	-2.2	34	16.70
16-12-feb	5:05:08	596	-2.4	-4.5	-2.1	34	16.72
16-12-feb	6:05:08	596	-2.5	-4.6	-2.0	34	16.71
16-12-feb	7:05:08	596	-3.5	-5.2	-1.7	34	16.71
16-12-feb	8:05:08	596	2.2	-0.4	-2.6	35	16.71
16-12-feb	9:05:08	596	6.6	5.6	-1.0	36	16.72
16-12-feb	10:05:08	596	10.4	10.8	0.3	37	16.70
16-12-feb	11:05:08	596	12.6	13.9	1.3	38	16.70
16-12-feb	12:05:08	596	11.8	13.2	1.4	38	16.70
16-12-feb	13:05:08	595	12.7	14.1	1.4	38	16.72
16-12-feb	14:05:08	595	13.4	15.0	1.6	38	16.71
16-12-feb	15:05:08	595	13.6	15.1	1.6	38	16.71
16-12-feb	16:05:08	595	13.4	14.6	1.2	38	16.71
16-12-feb	17:05:08	595	11.6	12.6	1.0	38	16.70
16-12-feb	18:05:08	595	4.2	4.8	0.5	37	16.71
16-12-feb	19:05:08	595	2.2	1.4	-0.8	36	16.71
16-12-feb	20:05:08	595	1.2	0.0	-1.3	36	16.71
16-12-feb	21:05:08	595	0.7	-0.9	-1.5	36	16.70
16-12-feb	22:05:08	595	0.1	-1.5	-1.6	36	16.71
16-12-feb	23:05:08	594	-0.3	-2.1	-1.8	36	16.72

BGI PQ200 Air Sampling System

Downloaded 2016 19 feb 10:58:48

Job Details:

Job Name: 16Feb19B.JOB

Version: 5.62

Serial No: 963

Pump Time: 2942:02

Flags:

Job Code:

Site Name:

Station Code:

Operators:

User1: ++++++

User2:

	Max	Min	Avg	Units
BP	591	584	587	mmHg
TA	9.6	-3.2	3.7	°C
Q	---	---	16.7	Lpm

QCV 0.49 %

Max overheat 1.4 °C

occured 18-feb 16:48:47

Timer Information:

Date	Time
dd-mmm	hh:mm:ss
Start: 16-18-feb	0:00:08
Stop: 16-19-feb	0:00:05

ET: 23:59

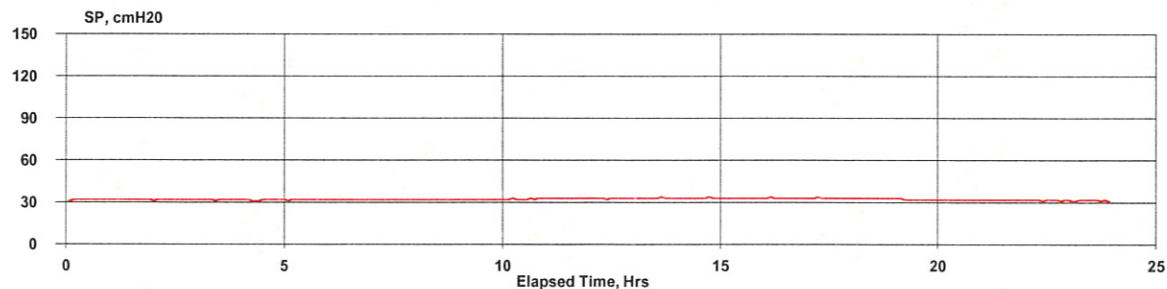
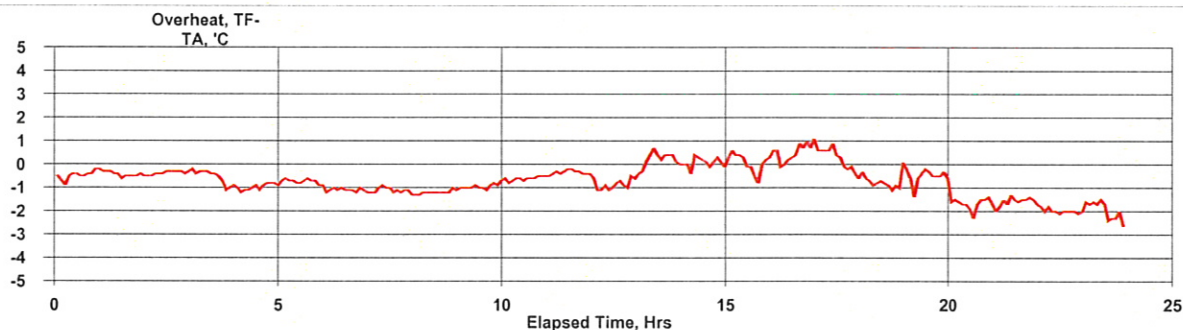
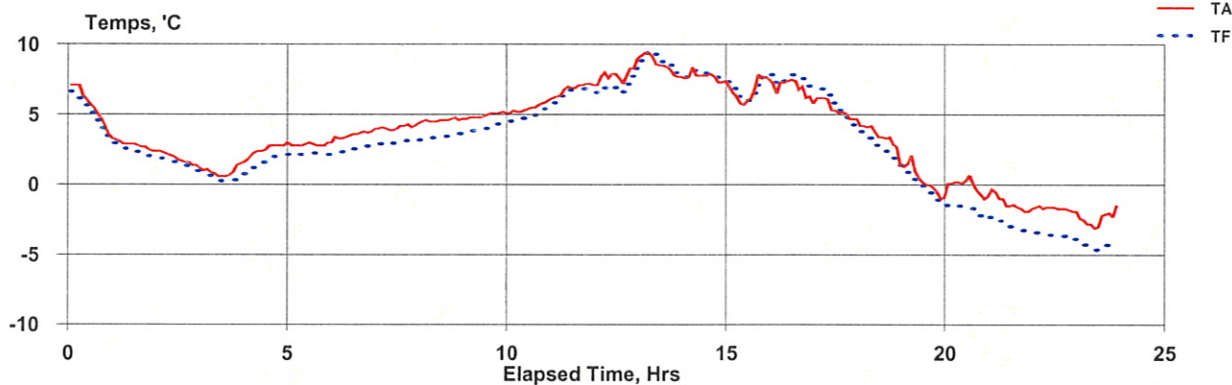
Mass Concentration Data:

Filter ID:	11
Final Wt:	mg
Initial Wt:	mg
Delta Wt:	0.000 mg
Total Vol:	24.037 m ³

Mass Conc: 0 µg/m³

Notes 1:

Notes 2:



Hourly

16-18-feb	0:05:08	587	5.5	5.0	-0.5	32	16.71
16-18-feb	1:05:08	587	2.8	2.4	-0.4	32	16.70
16-18-feb	2:05:08	587	1.8	1.4	-0.4	32	16.70
16-18-feb	3:05:08	587	1.0	0.4	-0.5	32	16.71
16-18-feb	4:05:08	586	2.5	1.6	-1.0	32	16.71
16-18-feb	5:05:08	586	2.9	2.1	-0.7	32	16.71
16-18-feb	6:05:08	586	3.6	2.5	-1.1	32	16.71
16-18-feb	7:05:08	586	4.1	3.0	-1.1	32	16.71
16-18-feb	8:05:08	586	4.6	3.4	-1.2	32	16.70
16-18-feb	9:05:08	586	5.0	4.0	-0.9	32	16.71
16-18-feb	10:05:08	585	5.5	4.9	-0.6	32	16.71
16-18-feb	11:05:08	585	6.9	6.5	-0.3	33	16.71
16-18-feb	12:05:08	585	7.9	7.0	-0.9	33	16.72
16-18-feb	13:05:08	585	8.5	8.7	0.2	33	16.72
16-18-feb	14:05:08	586	7.7	7.8	0.1	33	16.71
16-18-feb	15:05:08	587	6.8	6.9	0.1	33	16.70
16-18-feb	16:05:08	587	6.9	7.4	0.5	33	16.73
16-18-feb	17:05:08	588	5.4	5.6	0.2	33	16.72
16-18-feb	18:05:08	589	3.4	2.7	-0.7	33	16.71
16-18-feb	19:05:08	590	0.3	-0.2	-0.5	32	16.71
16-18-feb	20:05:08	590	-0.1	-1.8	-1.7	32	16.71
16-18-feb	21:05:08	590	-1.3	-2.9	-1.6	32	16.71
16-18-feb	22:05:08	590	-1.7	-3.7	-2.0	32	16.71
16-18-feb	23:05:08	590	-2.4	-4.4	-1.9	32	16.71

BGI PQ200 Air Sampling System Downloaded 2016 25 feb 14:25:21

Job Details:

Job Name: 16Feb25B.JOB
Version: 5.62
Serial No: 963
Pump Time: 2966:02
Flags:

Job Code:

Site Name:

Station Code:

Operators:

User1: |||||

User2:

	Max	Min	Avg	Units
BP	595	592	593	mmHg
TA	11	-8.3	0.5	°C
Q	---	---	16.71	Lpm

Timer Information:

Date Time
dd-mmm hh:mm:ss
Start: 16-24-feb 0:00:08
Stop: 16-25-feb 0:00:05
ET: 24:00:00

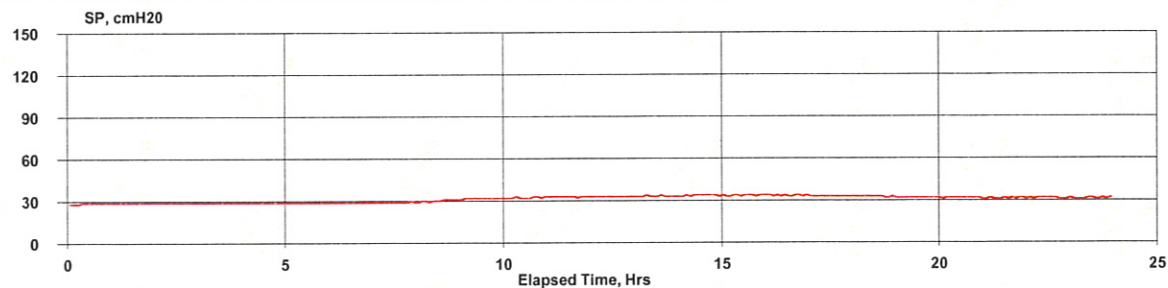
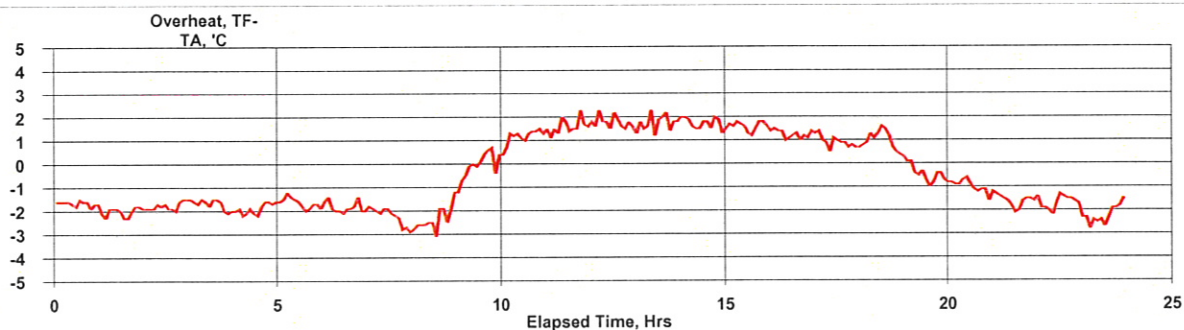
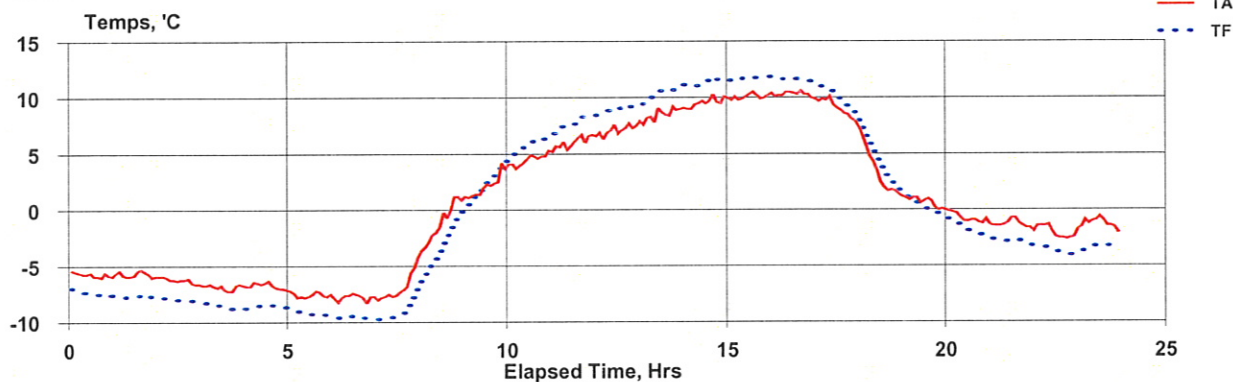
Mass Concentration Data:

Filter ID: 5
Final Wt: mg
Initial Wt: mg
Delta Wt: 0.000 mg
Total Vol: 24.041 m³
Mass Conc: 0 µg/m³

QCV 0.57 %
Max overheat 2.4 °C
occured 24-feb 11:49:20

Notes 1:

Notes 2:



Hourly

16-24-feb	0:04:50	594	-5.7	-7.4	-1.7	29	16.71
16-24-feb	1:04:50	594	-5.7	-7.7	-2.0	29	16.71
16-24-feb	2:04:50	594	-6.2	-8.0	-1.8	29	16.71
16-24-feb	3:04:50	594	-6.8	-8.5	-1.7	29	16.71
16-24-feb	4:04:50	594	-6.7	-8.6	-1.9	29	16.71
16-24-feb	5:04:50	594	-7.5	-9.2	-1.7	29	16.71
16-24-feb	6:04:50	594	-7.8	-9.6	-1.8	29	16.71
16-24-feb	7:04:50	594	-6.9	-9.1	-2.2	29	16.71
16-24-feb	8:04:50	594	-1.1	-3.4	-2.3	30	16.71
16-24-feb	9:04:50	594	2.1	2.1	-0.1	32	16.71
16-24-feb	10:04:50	594	4.5	5.6	1.2	32	16.71
16-24-feb	11:04:50	594	6.0	7.6	1.6	33	16.71
16-24-feb	12:04:50	594	7.1	8.9	1.8	33	16.70
16-24-feb	13:04:50	593	8.5	10.2	1.7	33	16.71
16-24-feb	14:04:50	593	9.5	11.3	1.7	34	16.72
16-24-feb	15:04:50	592	10.1	11.7	1.6	34	16.72
16-24-feb	16:04:50	592	10.3	11.6	1.3	34	16.71
16-24-feb	17:04:50	592	9.2	10.1	0.9	33	16.71
16-24-feb	18:04:50	593	3.6	4.6	1.0	33	16.72
16-24-feb	19:04:50	593	0.7	0.4	-0.4	32	16.71
16-24-feb	20:04:50	593	-0.7	-1.7	-1.0	32	16.71
16-24-feb	21:04:50	593	-1.3	-2.9	-1.6	31	16.71
16-24-feb	22:04:50	593	-2.0	-3.7	-1.7	32	16.71
16-24-feb	23:04:50	593	-1.3	-3.5	-2.2	31	16.71

BGI PQ200 Air Sampling System Downloaded 2016 03 mar 09:22:45

Job Details:

Job Name: 16Mar03B.JOB
Version: 5.62
Serial No: 963
Pump Time: 2990:01
Flags:

Job Code:

Site Name:

Station Code:

Operators:

User1: |||||

User2:

	Max	Min	Avg	Units
BP	594	590	592	mmHg
TA	16.8	-1.8	6.2	°C
Q	---	---	16.7	Lpm

QCV 0.55 %
Max overheat 2.4 °C
occured 02-mar 14:53:10

Timer Information:

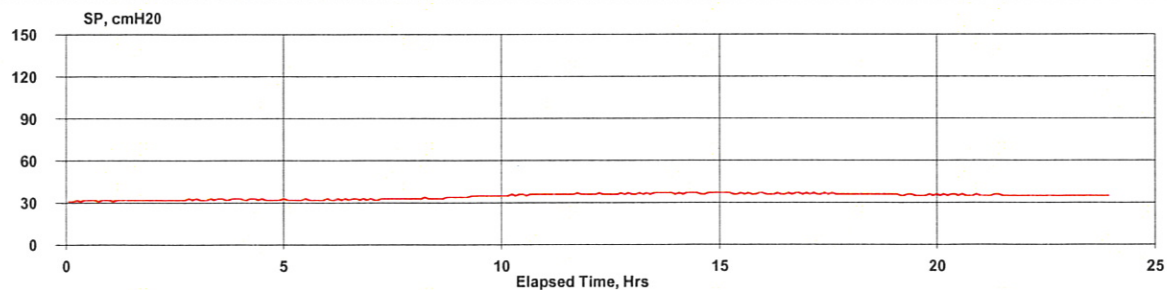
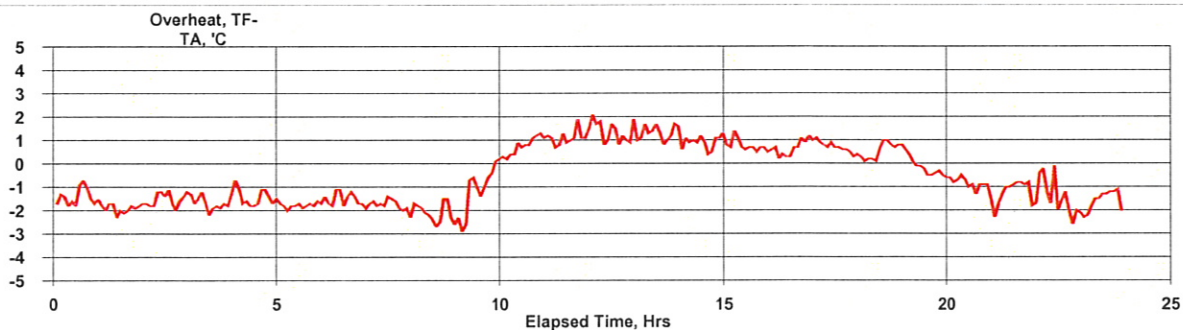
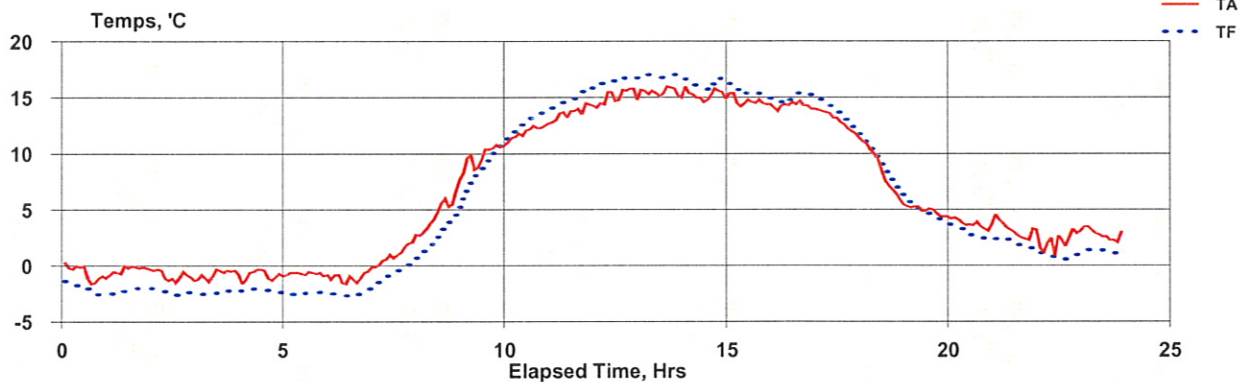
Date Time
dd-mmm hh:mm:ss
Start: 16-01-mar 0:00:08
Stop: 16-02-mar 0:00:04
ET: 23:59

Mass Concentration Data:

Filter ID: JBR12
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

16-01-mar	0:05:08	592	-0.6	-2.0	-1.4	32	16.71
16-01-mar	1:05:08	593	-0.3	-2.2	-1.9	32	16.71
16-01-mar	2:05:08	592	-0.9	-2.4	-1.5	32	16.72
16-01-mar	3:05:08	592	-0.7	-2.4	-1.7	33	16.71
16-01-mar	4:05:08	592	-0.8	-2.3	-1.4	32	16.71
16-01-mar	5:05:08	593	-0.7	-2.5	-1.8	32	16.72
16-01-mar	6:05:08	593	-1.0	-2.5	-1.5	33	16.71
16-01-mar	7:05:08	593	1.1	-0.6	-1.8	33	16.71
16-01-mar	8:05:08	594	4.9	2.8	-2.1	33	16.72
16-01-mar	9:05:08	594	9.8	8.7	-1.1	35	16.70
16-01-mar	10:05:08	594	12.0	12.8	0.8	36	16.71
16-01-mar	11:05:08	594	13.7	14.9	1.1	36	16.71
16-01-mar	12:05:08	593	15.1	16.5	1.4	36	16.70
16-01-mar	13:05:08	593	15.5	16.8	1.3	37	16.71
16-01-mar	14:05:08	592	15.3	16.2	0.9	37	16.71
16-01-mar	15:05:08	592	14.7	15.4	0.8	37	16.70
16-01-mar	16:05:08	592	14.3	14.9	0.7	36	16.71
16-01-mar	17:05:08	592	12.9	13.5	0.7	36	16.71
16-01-mar	18:05:08	593	8.3	8.9	0.6	36	16.71
16-01-mar	19:05:08	593	4.9	4.7	-0.2	35	16.71
16-01-mar	20:05:08	592	3.7	2.8	-0.9	35	16.72
16-01-mar	21:05:08	592	3.2	2.0	-1.3	35	16.71
16-01-mar	22:05:08	592	2.2	0.8	-1.4	35	16.71
16-01-mar	23:05:08	592	2.8	1.2	-1.6	35	16.71

BGI PQ200 Air Sampling System Downloaded 2016 10 mar 11:50:27

Job Details:

Job Name: 16Mar10B.JOB
Version: 5.62
Serial No: 963
Pump Time: 3014:00
Flags:

Job Code:

Site Name:

Station Code:

Operators:

User1: |||||

User2:

	Max	Min	Avg	Units
BP	584	581	582	mmHg
TA	6.6	-9.1	-1.2	°C
Q	---	---	16.71	Lpm

Timer Information:

	Date	Time
	dd-mmm	hh:mm:ss
Start:	16-07-mar	0:00:08
Stop:	16-08-mar	0:00:04
ET:	23:59	

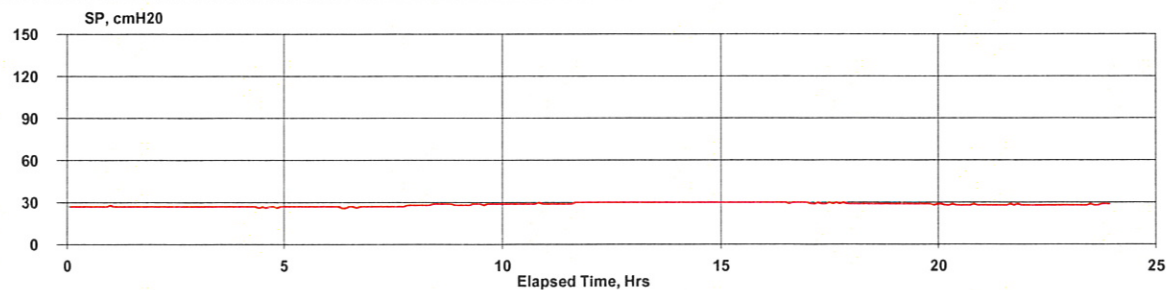
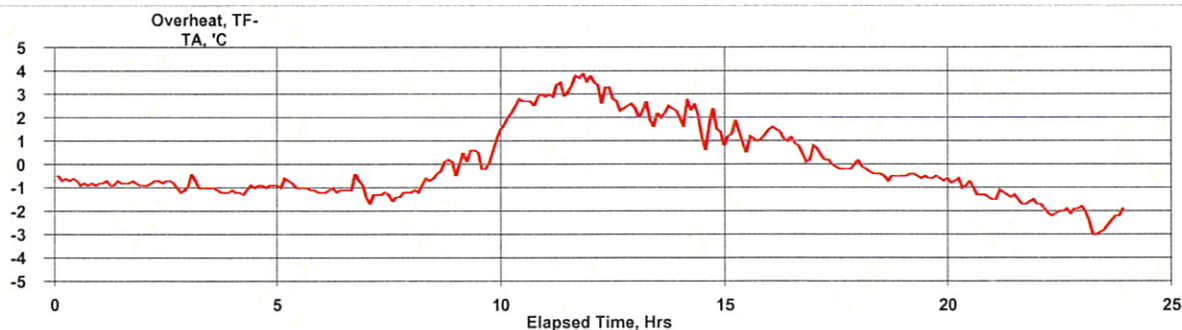
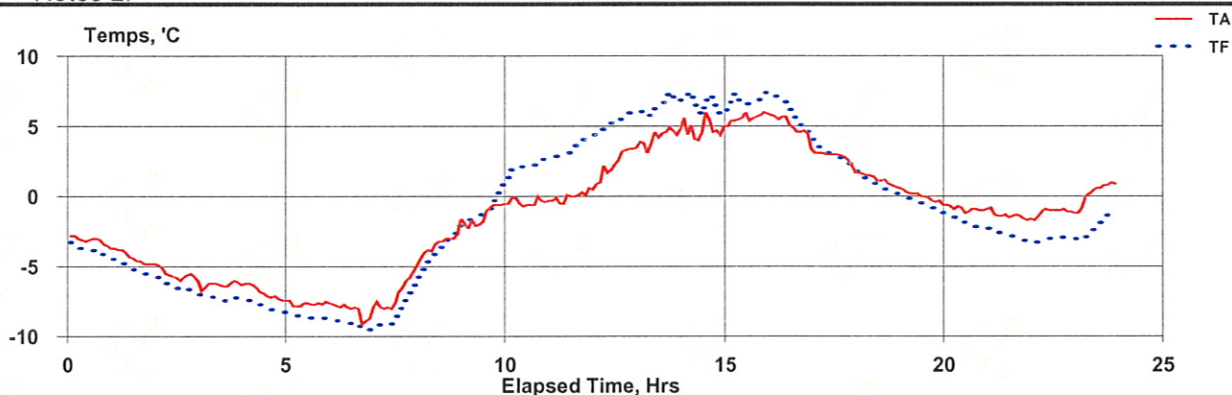
Mass Concentration Data:

Filter ID:	JBR-7	
Final Wt:		mg
Initial Wt:		mg
Delta Wt:	0.000	mg
Total Vol:	24.038	m^3
Mass Conc:	0	ug/m3

QCV 0.49 %
Max overheat 4 °C
occured 07-mar 11:37:11

Notes 1:

Notes 2:



Hourly

16-07-mar	0:05:08	583	-3.1	-3.9	-0.7	27	16.71
16-07-mar	1:05:08	583	-4.4	-5.2	-0.8	27	16.71
16-07-mar	2:05:08	583	-5.6	-6.5	-0.9	27	16.70
16-07-mar	3:05:08	583	-6.3	-7.3	-1.0	27	16.70
16-07-mar	4:05:08	583	-6.9	-7.9	-1.0	27	16.70
16-07-mar	5:05:08	583	-7.7	-8.6	-1.0	27	16.71
16-07-mar	6:05:08	583	-8.1	-9.2	-1.0	27	16.71
16-07-mar	7:05:08	583	-6.9	-8.2	-1.3	27	16.71
16-07-mar	8:05:08	583	-3.3	-3.8	-0.5	29	16.72
16-07-mar	9:05:08	583	-1.3	-0.9	0.4	29	16.70
16-07-mar	10:05:08	583	-0.4	2.2	2.6	29	16.70
16-07-mar	11:05:08	584	0.0	3.4	3.4	29	16.71
16-07-mar	12:05:08	583	2.5	5.3	2.8	30	16.72
16-07-mar	13:05:08	582	4.3	6.5	2.2	30	16.69
16-07-mar	14:05:08	582	4.8	6.6	1.8	30	16.69
16-07-mar	15:05:08	582	5.6	6.8	1.2	30	16.70
16-07-mar	16:05:08	582	5.0	5.9	0.9	30	16.71
16-07-mar	17:05:08	582	2.8	2.9	0.1	29	16.71
16-07-mar	18:05:08	582	1.2	0.8	-0.4	29	16.72
16-07-mar	19:05:08	582	0.0	-0.6	-0.5	29	16.71
16-07-mar	20:05:08	582	-0.9	-1.9	-1.0	28	16.70
16-07-mar	21:05:08	582	-1.4	-2.9	-1.5	28	16.73
16-07-mar	22:05:08	583	-1.1	-3.1	-2.0	28	16.70
16-07-mar	23:05:08	583	0.3	-2.2	-2.5	28	16.72

BGI PQ200 Air Sampling System Downloaded 2016 14 mar 15:11:20

Job Details:

Job Name: 16Mar14B.JOB

Version: 5.62

Serial No: 963

Pump Time: 3037:59

Flags:

Job Code:

Site Name:

Station Code:

Operators:

User1: |||||

User2:

	Max	Min	Avg	Units
BP	590	587	588	mmHg
TA	10.6	-4.3	2.9	°C
Q	---	---	16.7	Lpm

QCV 0.55 %

Max overheat 2.7 °C

occured 13-mar 14:39:02

Timer Information:

Date	Time
dd-mmm	hh:mm:ss
Start: 16-13-mar	0:00:08
Stop: 16-14-mar	0:00:04

ET: 23:59

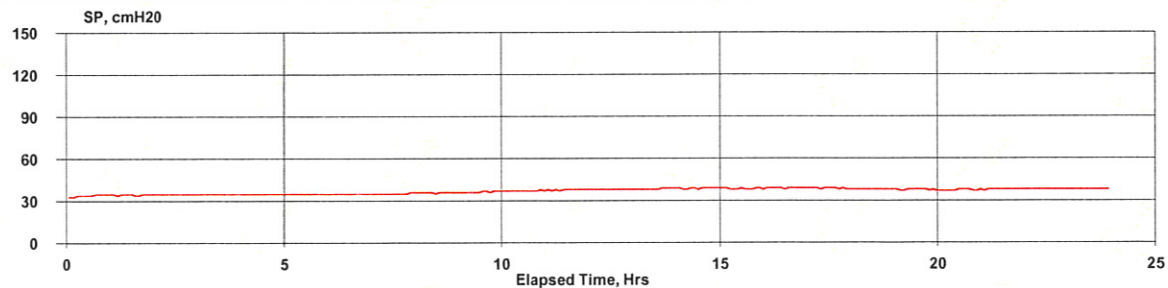
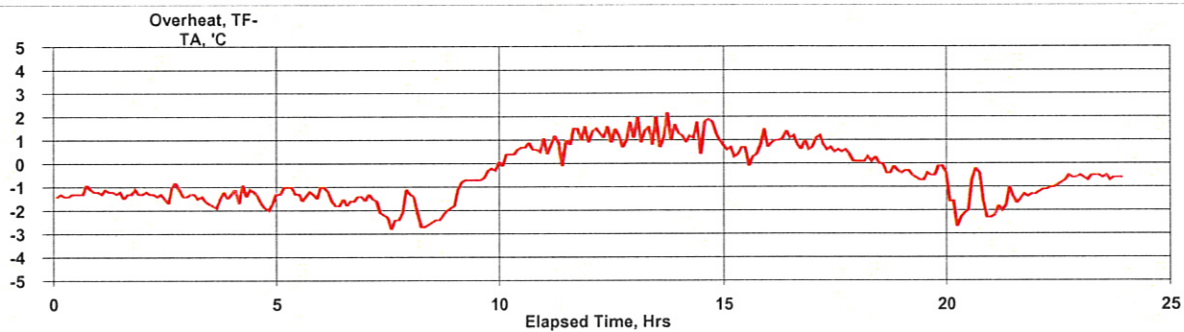
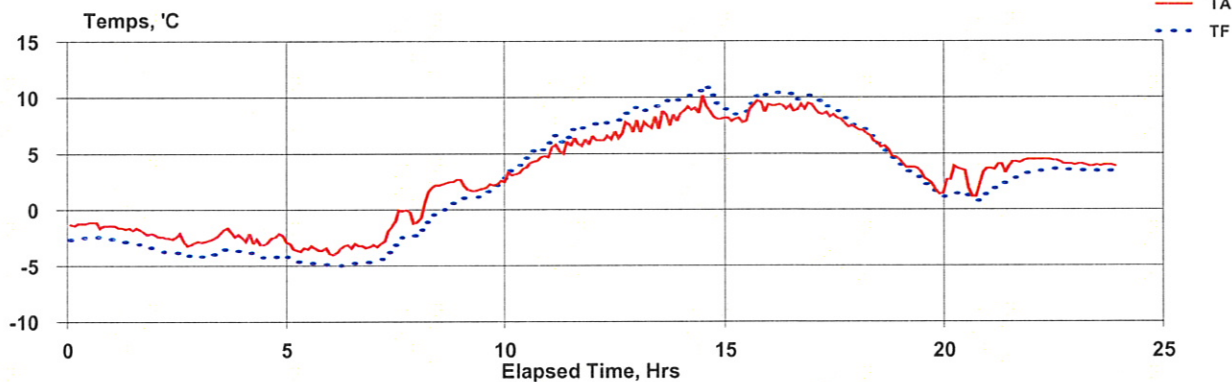
Mass Concentration Data:

Filter ID:	
Final Wt:	
Initial Wt:	12.000 mg
Delta Wt:	-12.000 mg
Total Vol:	24.042 m ³

Mass Conc: -499.13 µg/m³

Notes 1:

Notes 2:



Hourly

16-13-mar	0:05:08	589	-1.3	-2.5	-1.3	34	16.71
16-13-mar	1:05:08	589	-1.8	-3.1	-1.3	35	16.71
16-13-mar	2:05:08	589	-2.6	-3.9	-1.3	35	16.71
16-13-mar	3:05:08	589	-2.3	-3.8	-1.5	35	16.72
16-13-mar	4:05:08	589	-2.7	-4.1	-1.5	35	16.71
16-13-mar	5:05:08	589	-3.5	-4.7	-1.2	35	16.71
16-13-mar	6:05:08	589	-3.3	-4.9	-1.5	35	16.70
16-13-mar	7:05:08	589	-1.3	-3.3	-1.9	35	16.71
16-13-mar	8:05:08	589	1.9	-0.3	-2.2	36	16.71
16-13-mar	9:05:08	589	2.1	1.5	-0.6	36	16.72
16-13-mar	10:05:08	589	4.0	4.5	0.6	37	16.71
16-13-mar	11:05:08	589	5.8	6.8	1.0	38	16.71
16-13-mar	12:05:08	589	6.8	8.1	1.3	38	16.71
16-13-mar	13:05:08	588	7.9	9.3	1.4	38	16.71
16-13-mar	14:05:08	588	8.8	10.1	1.3	39	16.71
16-13-mar	15:05:08	587	8.7	9.2	0.6	38	16.71
16-13-mar	16:05:08	587	9.2	10.2	1.0	39	16.71
16-13-mar	17:05:08	587	8.1	8.7	0.6	39	16.70
16-13-mar	18:05:08	587	5.9	5.8	-0.1	38	16.71
16-13-mar	19:05:08	587	2.9	2.5	-0.4	38	16.71
16-13-mar	20:05:08	588	2.8	1.2	-1.7	37	16.72
16-13-mar	21:05:08	588	4.1	2.5	-1.6	38	16.71
16-13-mar	22:05:08	587	4.3	3.5	-0.8	38	16.71
16-13-mar	23:05:08	587	4.0	3.4	-0.6	38	16.71

BGI PQ200 Air Sampling System

Downloaded 2016 22 mar 14:48:06

Job Details:

Job Name: 16Mar22B.JOB
Version: 5.62
Serial No: 963
Pump Time: 3061:58
Flags:

Job Code:

Site Name:

Station Code:

Operators:

User1: |||||

User2:

	Max	Min	Avg	Units
BP	592	588	591	mmHg
TA	17.9	-2	7.2	°C
Q	---	---	16.7	Lpm

QCV 0.56 %

Max overheat 4.4 °C
occured 22-mar 13:00:49

Timer Information:

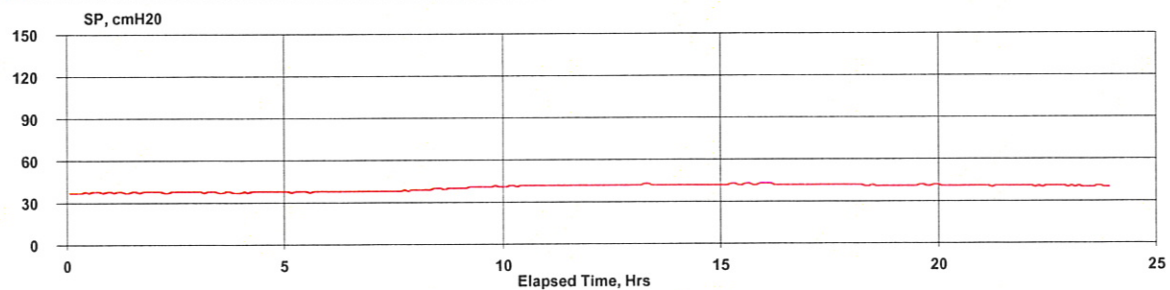
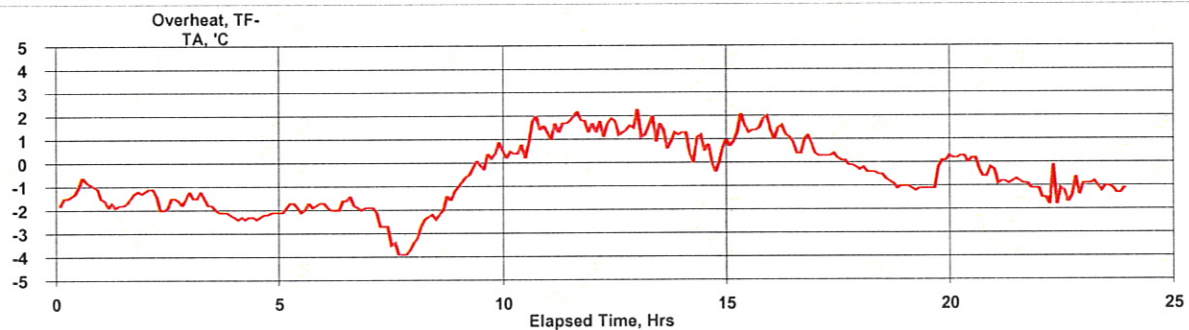
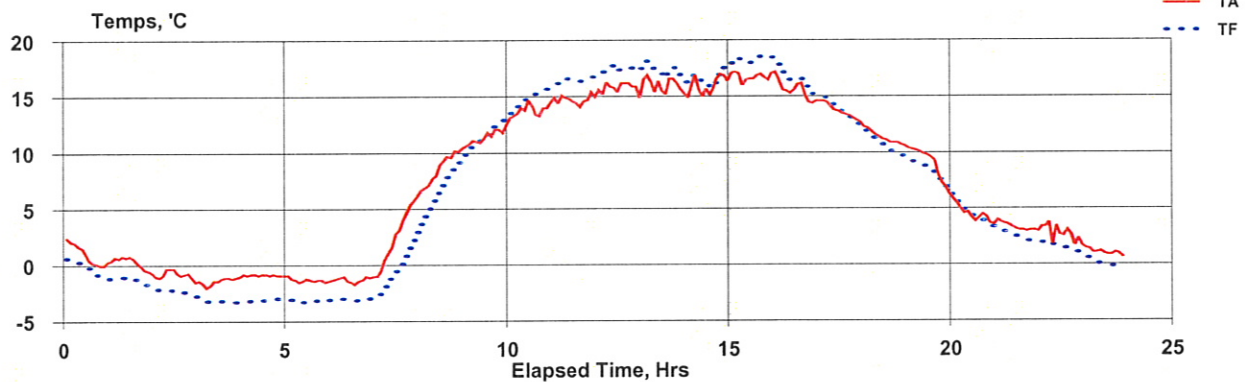
Date	Time
dd-mmm	hh:mm:ss
Start: 16-19-mar	0:00:08
Stop: 16-20-mar	0:00:04
ET: 23:59	

Mass Concentration Data:

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

Notes 1:

Notes 2:



Hourly

16-19-mar	0:05:08	591	1.0	-0.2	-1.2	38	16.71
16-19-mar	1:05:08	591	0.3	-1.3	-1.6	38	16.71
16-19-mar	2:05:08	591	-0.8	-2.4	-1.6	38	16.71
16-19-mar	3:05:08	591	-1.4	-3.2	-1.8	38	16.71
16-19-mar	4:05:08	591	-0.9	-3.1	-2.3	38	16.71
16-19-mar	5:05:08	591	-1.3	-3.2	-1.9	38	16.71
16-19-mar	6:05:08	591	-1.3	-3.1	-1.8	38	16.71
16-19-mar	7:05:08	591	2.8	-0.3	-3.2	38	16.72
16-19-mar	8:05:08	592	8.7	6.7	-2.1	40	16.71
16-19-mar	9:05:08	592	11.5	11.5	0.0	41	16.71
16-19-mar	10:05:08	592	13.8	14.8	1.0	42	16.72
16-19-mar	11:05:08	592	14.7	16.4	1.7	42	16.71
16-19-mar	12:05:08	592	15.8	17.4	1.6	42	16.70
16-19-mar	13:05:08	591	16.1	17.3	1.3	42	16.71
16-19-mar	14:05:08	591	16.0	16.5	0.5	42	16.71
16-19-mar	15:05:08	591	16.8	18.2	1.5	43	16.71
16-19-mar	16:05:08	591	15.5	16.5	1.0	42	16.71
16-19-mar	17:05:08	591	13.7	13.8	0.1	42	16.71
16-19-mar	18:05:08	591	11.3	10.7	-0.7	41	16.71
16-19-mar	19:05:08	591	9.0	8.3	-0.7	41	16.71
16-19-mar	20:05:08	592	4.5	4.5	0.0	41	16.71
16-19-mar	21:05:08	592	3.3	2.4	-0.9	41	16.71
16-19-mar	22:05:08	592	2.7	1.5	-1.3	41	16.71
16-19-mar	23:05:08	592	1.1	0.0	-1.1	40	16.71

BGI PQ200 Air Sampling System

Downloaded 2016 28 mar 15:34:21

Job Details:

Job Name: 16Mar28B.JOB
Version: 5.62
Serial No: 963
Pump Time: 3085:57
Flags:

Job Code:

Site Name:

Station Code:

Operators:

User1: |||||

User2:

	Max	Min	Avg	Units
BP	588	583	585	mmHg
TA	13.1	-4.4	4.2	°C
Q	---	---	16.7	Lpm

Timer Information:

	Date	Time
	dd-mmm	hh:mm:ss
Start:	16-25-mar	0:00:08
Stop:	16-26-mar	0:00:04
ET:	23:59	

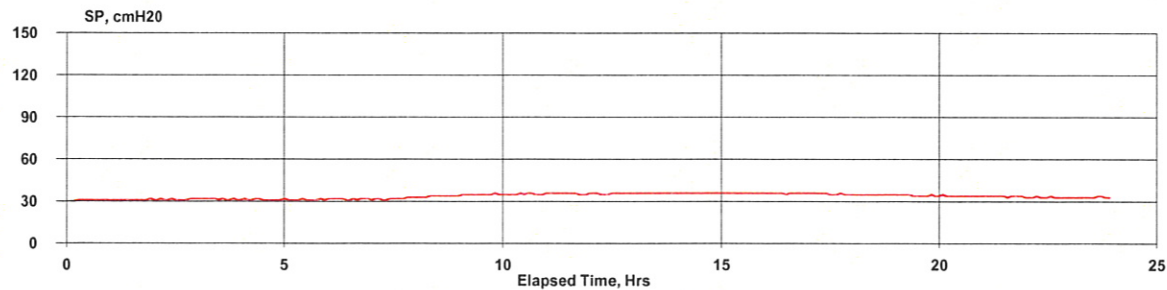
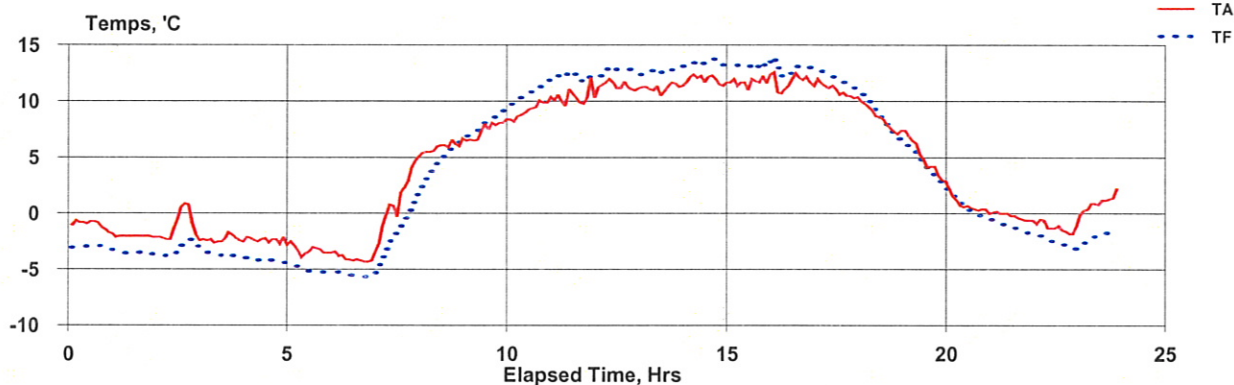
Mass Concentration Data:

Filter ID:	25
Final Wt:	mg
Initial Wt:	mg
Delta Wt:	0.000 mg
Total Vol:	24.039 m ³
Mass Conc:	0 ug/m3

QCV 0.56 %
Max overheat 2.9 °C
occured 25-mar 11:07:20

Notes 1:

Notes 2:



Hourly

16-25-mar	0:05:08	587	-1.0	-3.1	-2.0	31	16.71
16-25-mar	1:05:08	587	-2.0	-3.6	-1.6	31	16.70
16-25-mar	2:05:08	587	-1.1	-3.2	-2.1	31	16.71
16-25-mar	3:05:08	587	-2.3	-3.8	-1.5	32	16.71
16-25-mar	4:05:08	586	-2.4	-4.3	-1.9	31	16.71
16-25-mar	5:05:08	587	-3.3	-5.1	-1.8	31	16.70
16-25-mar	6:05:08	587	-4.0	-5.5	-1.6	32	16.72
16-25-mar	7:05:08	587	1.5	-1.5	-3.1	32	16.70
16-25-mar	8:05:08	587	6.0	4.8	-1.2	34	16.71
16-25-mar	9:05:08	587	7.5	8.0	0.6	35	16.70
16-25-mar	10:05:08	587	9.3	10.7	1.4	35	16.71
16-25-mar	11:05:08	587	10.4	12.1	1.7	36	16.71
16-25-mar	12:05:08	586	11.4	12.7	1.3	36	16.72
16-25-mar	13:05:08	586	11.2	12.7	1.5	36	16.72
16-25-mar	14:05:08	585	12.0	13.4	1.4	36	16.72
16-25-mar	15:05:08	585	11.8	13.2	1.4	36	16.72
16-25-mar	16:05:08	584	11.7	12.9	1.2	36	16.71
16-25-mar	17:05:08	584	11.0	12.0	1.0	36	16.70
16-25-mar	18:05:08	584	8.5	8.6	0.1	35	16.70
16-25-mar	19:05:08	584	4.9	4.4	-0.5	34	16.71
16-25-mar	20:05:08	584	0.7	0.5	-0.2	34	16.72
16-25-mar	21:05:08	584	-0.2	-1.3	-1.0	34	16.72
16-25-mar	22:05:08	584	-1.2	-2.6	-1.3	33	16.71
16-25-mar	23:05:08	584	1.0	-2.1	-3.0	33	16.71

Collocated Monitor 964C

PM₁₀ Sampler Summary

January 1, 2016 - March 31, 2016

Network: Alton Coal Development

Site: Coal Hollow

Sampler ID: Coal Hollow-C

AQS ID:

Sampler Type: BGI FRM Single

Date	Filter ID	Concentration (µg/m3)	Concentration (µg/m3)	Sample Period (hr:min)	Sample Volume (m3)	Std Volume (m3)	Mass (mg)			Flag	Comments	
		LTP	STP				Tare	Gross	Net			
01/01/16	P2926663	Invalid - AG	Invalid - AG	85:20	85.5	73.7	379.427	379.713	0.286	SP,CI		
01/07/16	P2927857	0.9	1.1	23:59	24.0	20.5	360.809	360.832	0.023			
01/13/16	P2927860	11.4	13.2	23:59	24.0	20.7	365.494	365.769	0.275			
01/19/16	P2928051	6.4	7.4	23:59	24.0	20.5	379.360	379.514	0.154			
01/25/16	P2928054	2.4	2.8	23:59	24.0	20.8	385.361	385.421	0.060			
01/31/16	P2928157	0.7	0.9	23:59	24.0	20.2	397.168	397.187	0.019			
02/06/16	P2928160	2.4	2.7	23:59	24.0	20.9	390.999	391.057	0.058			
02/12/16	P2928163	5.4	6.4	23:59	24.0	20.3	391.124	391.254	0.130			
02/18/16	P2928306	6.5	7.8	23:59	24.0	20.1	364.726	364.884	0.158			
02/24/16	P2928408	7.0	8.2	24:00	24.0	20.5	378.380	378.549	0.169			
03/01/16	P2928411	8.4	10.1	23:59	24.0	20.0	377.447	377.651	0.204			
03/07/16	P2928457	3.4	4.0	23:59	24.0	20.2	372.044	372.126	0.082			
03/13/16	P2928783	6.0	7.1	23:59	24.0	20.2	381.807	381.952	0.145			
03/19/16	P2928788	4.9	6.0	23:59	24.0	19.9	404.779	404.899	0.120			
03/25/16	P2928793	9.0	10.8	23:59	24.0	19.9	366.853	367.070	0.217			
03/31/16	P2928999	3.4	4.1	23:59	24.0	20.2	351.987	352.070	0.083			
# Valid		Recovery	Average	St. Dev.	Max	Min						
15		94%	6.2	3.6	13.2	0.9						

BGI PQ200 Air Sampling System

Downloaded 2016 04 jan 13:25:58

Job Details:

Job Name: 16Jan04C.JOB

Version: 5.62

Serial No: 964

Pump Time: 4897:29

Flags:

Job Code:

Site Name:

Station Code:

Operators:

User1:

User2:

	Max	Min	Avg	Units
BP	596	588	593	mmHg
TA	5	-15.1	-3.1	°C
Q	---	---	16.7	Lpm

QCV 0.48 %

Max overheat 3.3 °C

occured 02-jan 12:34:12

Timer Information:

	Date	Time
	dd-mmm	hh:mm:ss
Start:	15-01-jan	0:00:08
Stop:	16-04-jan	13:20:43

ET: 85:20:00

Mass Concentration Data:

Filter ID: 20

Final Wt: mg

Initial Wt: mg

Delta Wt: 0.000 mg

Total Vol: 85.501 m³

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 2016_08_jan 12:15:57

Job Details:

Job Name: 16Jan08C.JOB
Version: 5.62
Serial No: 964
Pump Time: 4921:28
Flags:

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

	Max	Min	Avg	Units
BP	585	583	583	mmHg
TA	-0.6	-13.7	-4.6	°C
Q	---	---	16.71	Lpm

Timer Information:

Date Time
dd-mm hh:mm:ss
Start: 16-07-jan 0:00:08
Stop: 16-08-jan 0:00:05
ET: 23:59

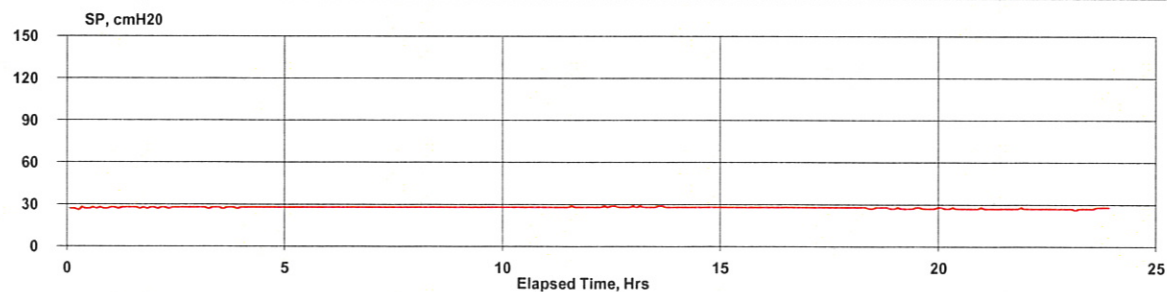
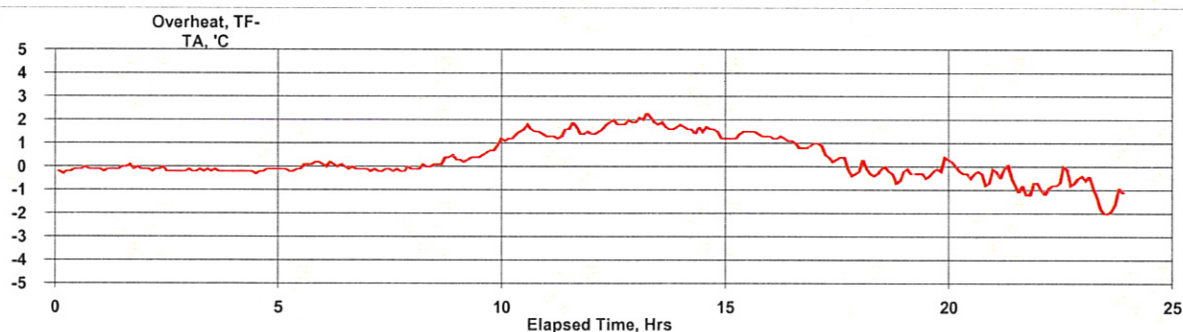
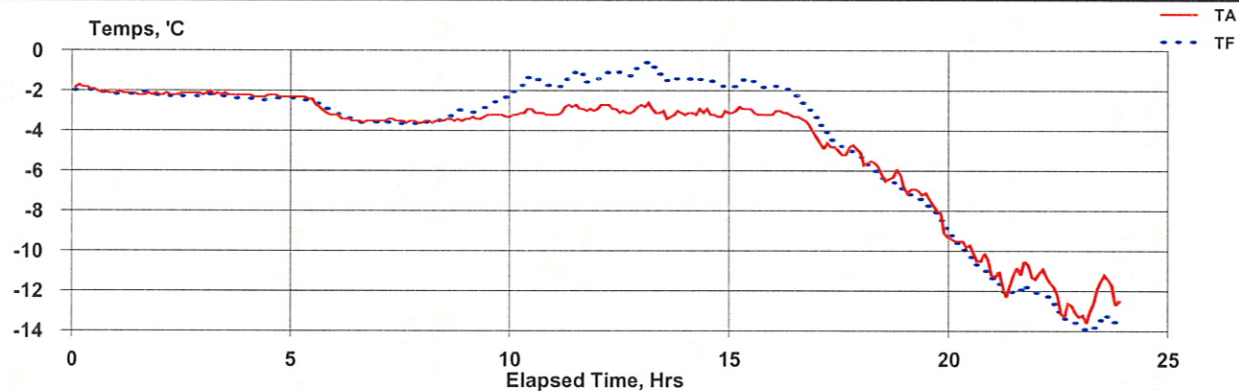
Mass Concentration Data:

Filter ID: 7
Final Wt: mg
Initial Wt: mg
Delta Wt: 0.000 mg
Total Vol: 24.043 m³
Mass Conc: 0 µg/m³

QCV 0.46 %
Max overheat 2.5 °C
occured 07-jan 13:13:59

Notes 1:

Notes 2:



Hourly

16-07-jan	0:05:08	585	-1.9	-2.1	-0.1	27	16.71
16-07-jan	1:05:08	585	-2.1	-2.2	-0.1	28	16.71
16-07-jan	2:05:08	584	-2.1	-2.3	-0.2	28	16.71
16-07-jan	3:05:08	584	-2.2	-2.3	-0.2	28	16.72
16-07-jan	4:05:08	584	-2.3	-2.4	-0.2	28	16.71
16-07-jan	5:05:08	584	-2.7	-2.7	0.0	28	16.70
16-07-jan	6:05:08	584	-3.5	-3.5	0.0	28	16.72
16-07-jan	7:05:08	584	-3.5	-3.7	-0.1	28	16.70
16-07-jan	8:05:08	584	-3.5	-3.3	0.2	28	16.71
16-07-jan	9:05:08	585	-3.3	-2.7	0.6	28	16.73
16-07-jan	10:05:08	585	-3.1	-1.7	1.4	28	16.71
16-07-jan	11:05:08	584	-2.9	-1.4	1.5	28	16.71
16-07-jan	12:05:08	584	-2.9	-1.1	1.8	28	16.72
16-07-jan	13:05:08	583	-3.1	-1.2	1.9	28	16.71
16-07-jan	14:05:08	583	-3.1	-1.6	1.5	28	16.70
16-07-jan	15:05:08	583	-3.1	-1.7	1.4	28	16.71
16-07-jan	16:05:08	583	-3.4	-2.4	1.0	28	16.71
16-07-jan	17:05:08	583	-4.9	-4.6	0.3	28	16.71
16-07-jan	18:05:08	583	-6.0	-6.3	-0.2	28	16.70
16-07-jan	19:05:08	583	-7.7	-7.8	-0.2	27	16.72
16-07-jan	20:05:08	584	-10.0	-10.3	-0.3	27	16.71
16-07-jan	21:05:08	584	-11.3	-11.9	-0.6	27	16.72
16-07-jan	22:05:08	584	-12.3	-12.9	-0.7	27	16.71
16-07-jan	23:05:08	584	-12.3	-13.6	-1.3	27	16.73

BGI PQ200 Air Sampling System Downloaded 2016 14 jan 13:01:41

Job Details:

Job Name: 16Jan14C.JOB
Version: 5.62
Serial No: 964
Pump Time: 4945:27
Flags:

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

	Max	Min	Avg	Units
BP	596	590	592	mmHg
TA	8.1	-13.3	-3.7	°C
Q	---	---	16.71	Lpm

Timer Information:

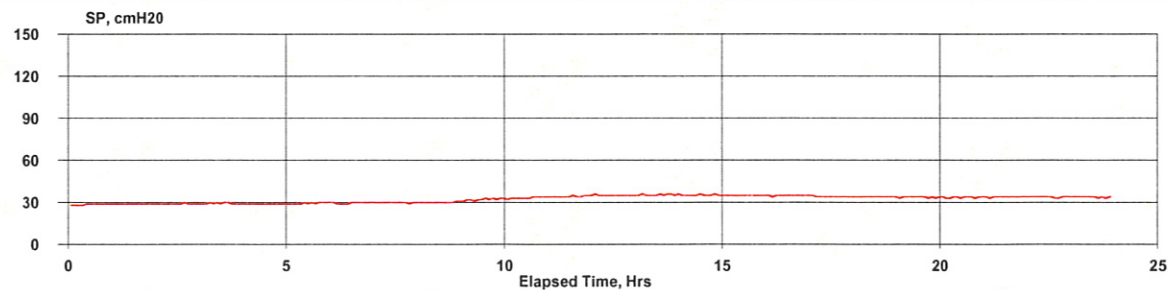
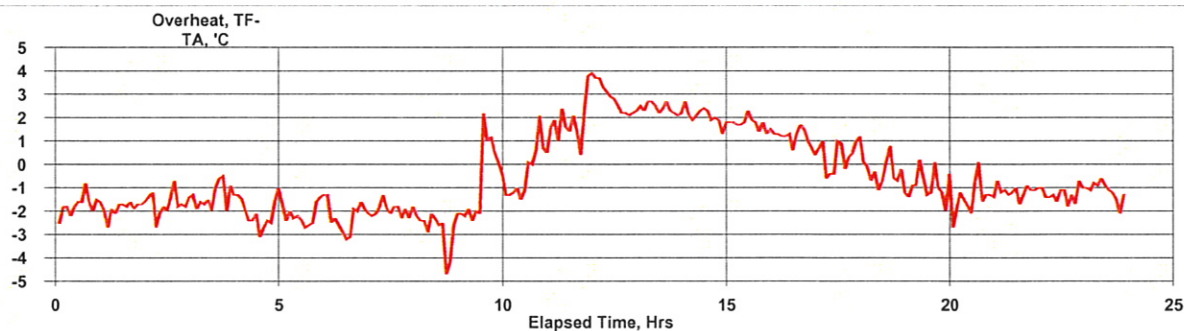
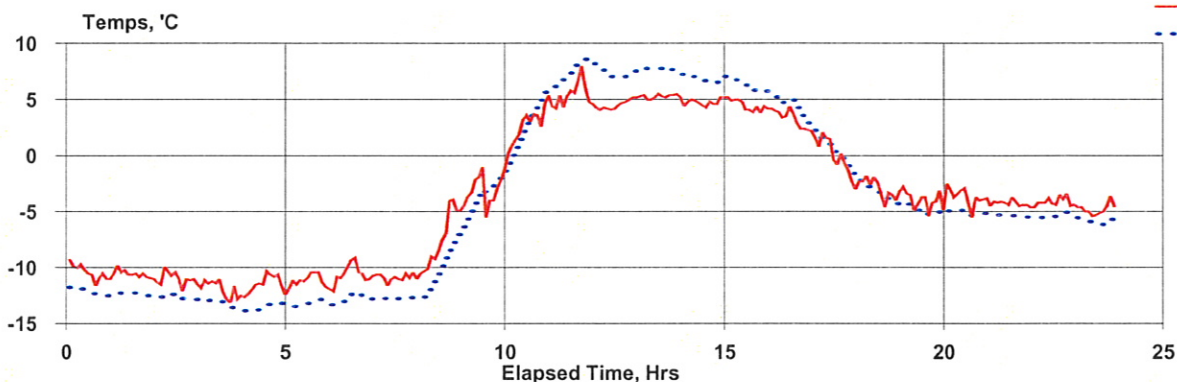
Date Time
dd-mm hh:mm:ss
Start: 16-13-jan 0:00:08
Stop: 16-14-jan 0:00:04
ET: 23:59

Mass Concentration Data:

Filter ID: 10
Final Wt: mg
Initial Wt: mg
Delta Wt: 0.000 mg
Total Vol: 24.042 m³
Mass Conc: 0 µg/m³

QCV 0.58 %
Max overheat 4.2 °C
occured 13-jan 12:00:38

Notes 1:
Notes 2:



Hourly

16-13-jan	0:05:08	595	-10.4	-12.2	-1.7	29	16.71
16-13-jan	1:05:08	595	-10.6	-12.4	-1.9	29	16.71
16-13-jan	2:05:08	594	-11.0	-12.7	-1.7	29	16.71
16-13-jan	3:05:08	594	-11.9	-13.3	-1.4	29	16.70
16-13-jan	4:05:08	594	-11.5	-13.5	-2.1	29	16.71
16-13-jan	5:05:08	594	-11.1	-13.2	-2.1	30	16.71
16-13-jan	6:05:08	594	-10.5	-12.8	-2.3	30	16.71
16-13-jan	7:05:08	594	-10.9	-12.8	-1.9	30	16.71
16-13-jan	8:05:08	594	-7.5	-10.2	-2.8	30	16.72
16-13-jan	9:05:08	594	-3.0	-3.7	-0.7	32	16.70
16-13-jan	10:05:08	594	2.9	2.6	-0.3	33	16.69
16-13-jan	11:05:08	594	5.4	7.4	2.0	34	16.71
16-13-jan	12:05:08	593	4.6	7.3	2.8	35	16.72
16-13-jan	13:05:08	592	5.3	7.7	2.4	35	16.71
16-13-jan	14:05:08	592	4.8	6.8	2.1	35	16.71
16-13-jan	15:05:08	591	4.5	6.2	1.7	35	16.71
16-13-jan	16:05:08	591	3.3	4.4	1.1	35	16.71
16-13-jan	17:05:08	591	-0.1	0.4	0.4	34	16.71
16-13-jan	18:05:08	591	-3.0	-3.3	-0.4	34	16.71
16-13-jan	19:05:08	591	-4.0	-4.9	-0.9	34	16.70
16-13-jan	20:05:08	591	-3.6	-5.1	-1.5	34	16.71
16-13-jan	21:05:08	591	-4.3	-5.4	-1.1	34	16.72
16-13-jan	22:05:08	590	-4.1	-5.4	-1.3	34	16.72
16-13-jan	23:05:08	590	-4.8	-5.9	-1.1	34	16.72

BGI PQ200 Air Sampling System

Downloaded 2016 20 jan 12:11:38

Job Details:

Job Name: 16Jan20C.JOB
Version: 5.62
Serial No: 964
Pump Time: 4969:26
Flags:

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

	Max	Min	Avg	Units
BP	595	591	593	mmHg
TA	4.3	-8.3	-0.9	°C
Q	---	---	16.71	Lpm

QCV 0.56 %
Max overheat 2.4 °C
occured 19-jan 12:20:50

Timer Information:

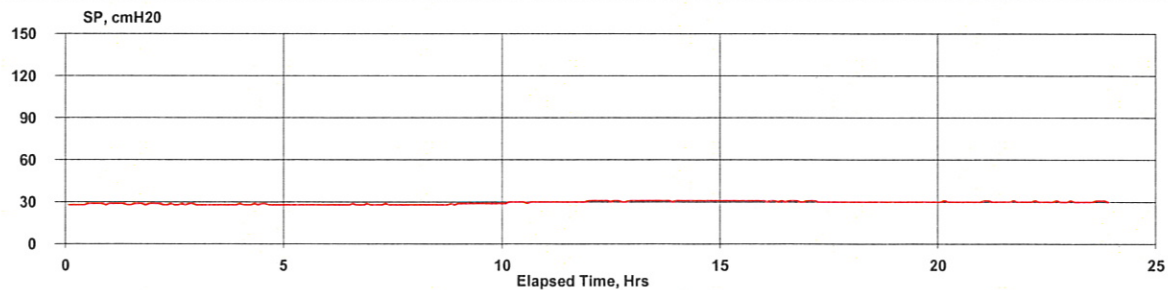
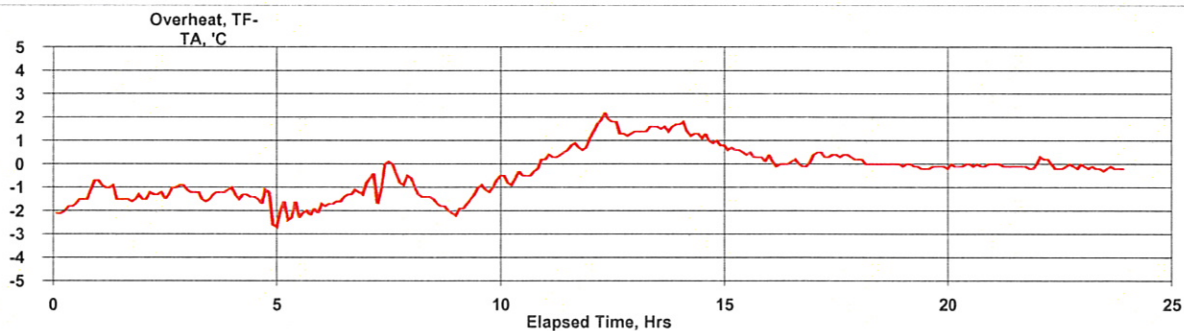
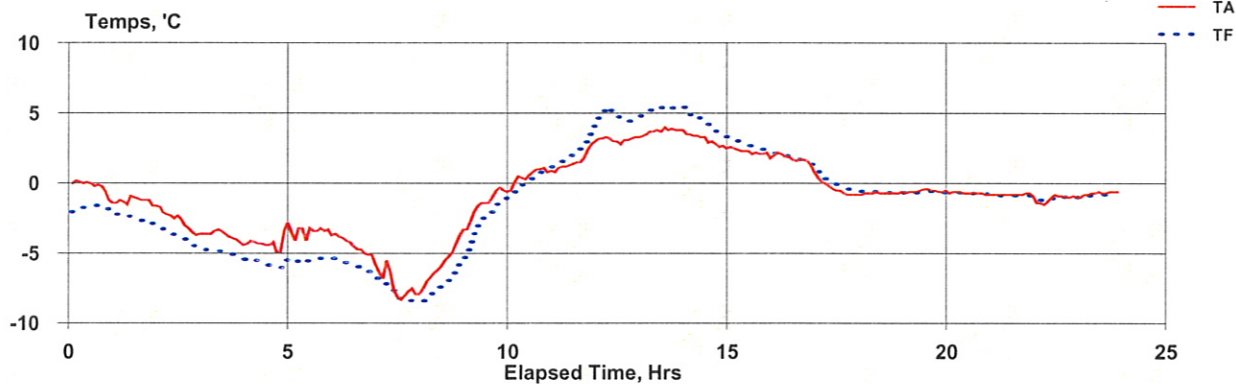
Date	Time
dd-mmm	hh:mm:ss
Start: 16-19-jan	0:00:08
Stop: 16-20-jan	0:00:04
ET: 23:59	

Mass Concentration Data:

Filter ID:	14
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

16-19-jan	0:05:08	593	-0.3	-1.8	-1.5	29	16.72
16-19-jan	1:05:08	594	-1.3	-2.6	-1.3	29	16.73
16-19-jan	2:05:08	594	-2.7	-3.9	-1.2	29	16.71
16-19-jan	3:05:08	593	-3.7	-5.0	-1.3	28	16.71
16-19-jan	4:05:08	593	-4.2	-5.8	-1.6	28	16.71
16-19-jan	5:05:08	594	-3.5	-5.5	-2.0	28	16.71
16-19-jan	6:05:08	594	-4.5	-5.9	-1.4	28	16.71
16-19-jan	7:05:08	594	-7.3	-7.9	-0.6	28	16.70
16-19-jan	8:05:08	594	-5.6	-7.2	-1.6	28	16.72
16-19-jan	9:05:08	595	-1.4	-2.6	-1.2	29	16.71
16-19-jan	10:05:08	595	0.6	0.2	-0.4	30	16.71
16-19-jan	11:05:08	595	1.7	2.3	0.6	30	16.71
16-19-jan	12:05:08	594	3.1	4.7	1.6	31	16.71
16-19-jan	13:05:08	593	3.7	5.3	1.5	31	16.72
16-19-jan	14:05:08	593	3.1	4.2	1.2	31	16.71
16-19-jan	15:05:08	593	2.2	2.7	0.4	31	16.71
16-19-jan	16:05:08	593	1.7	1.8	0.0	31	16.71
16-19-jan	17:05:08	593	-0.4	-0.1	0.4	30	16.72
16-19-jan	18:05:08	593	-0.7	-0.7	0.0	30	16.71
16-19-jan	19:05:08	593	-0.5	-0.7	-0.1	30	16.71
16-19-jan	20:05:08	593	-0.7	-0.7	-0.1	30	16.71
16-19-jan	21:05:08	593	-0.8	-0.9	-0.1	30	16.71
16-19-jan	22:05:08	593	-1.1	-1.1	0.0	30	16.71
16-19-jan	23:05:08	593	-0.7	-0.9	-0.2	30	16.70

BGI PQ200 Air Sampling System Downloaded 2016 28 jan 12:51:03

Job Details:

Job Name: 16Jan28C.JOB
Version: 5.62
Serial No: 964
Pump Time: 4993:25
Flags:

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

	Max	Min	Avg	Units
BP	595	589	592	mmHg
TA	0.9	-11.8	-5.3	°C
Q	---	---	16.7	Lpm

QCV 0.59 %
Max overheat 2.6 °C
occured 25-jan 10:56:27

Timer Information:

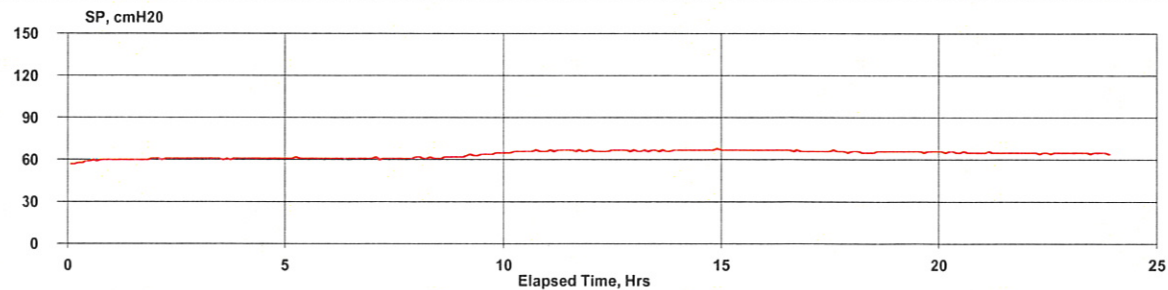
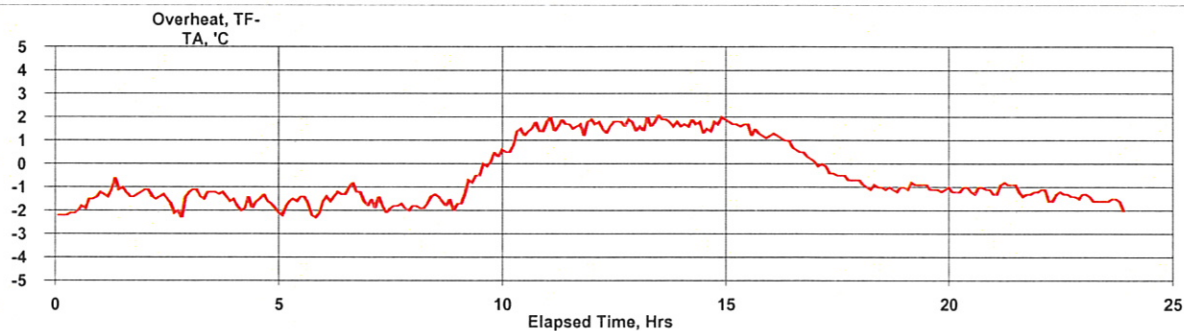
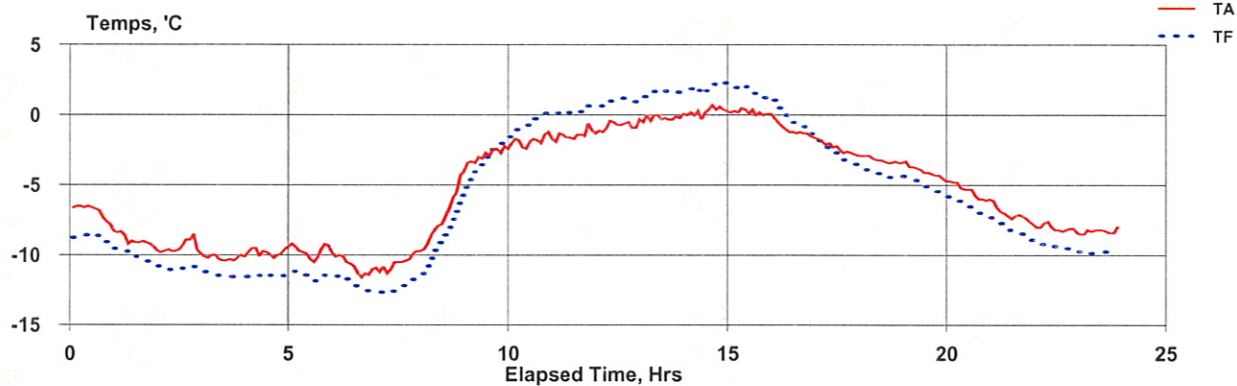
Date Time
dd-mm hh:mm:ss
Start: 16-25-jan 0:00:08
Stop: 16-26-jan 0:00:05
ET: 23:59

Mass Concentration Data:

Filter ID: imlbgi1
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

16-25-jan	0:05:08	591	-7.0	-8.8	-1.8	59	16.71
16-25-jan	1:05:08	591	-9.0	-10.2	-1.2	60	16.71
16-25-jan	2:05:08	591	-9.4	-11.0	-1.6	61	16.71
16-25-jan	3:05:08	591	-10.2	-11.5	-1.3	61	16.71
16-25-jan	4:05:08	591	-9.8	-11.5	-1.7	61	16.70
16-25-jan	5:05:08	591	-9.7	-11.5	-1.8	61	16.71
16-25-jan	6:05:08	591	-10.8	-12.1	-1.3	61	16.70
16-25-jan	7:05:08	592	-10.5	-12.3	-1.8	61	16.71
16-25-jan	8:05:08	592	-7.1	-8.7	-1.7	62	16.72
16-25-jan	9:05:08	592	-2.8	-3.2	-0.3	64	16.72
16-25-jan	10:05:08	593	-1.8	-0.6	1.3	66	16.71
16-25-jan	11:05:08	593	-1.4	0.3	1.7	67	16.71
16-25-jan	12:05:08	593	-0.7	0.9	1.7	67	16.71
16-25-jan	13:05:08	592	-0.2	1.6	1.8	67	16.68
16-25-jan	14:05:08	592	0.3	2.0	1.7	67	16.72
16-25-jan	15:05:08	592	0.2	1.7	1.5	67	16.72
16-25-jan	16:05:08	593	-1.1	-0.4	0.7	67	16.72
16-25-jan	17:05:08	593	-2.4	-2.8	-0.4	66	16.71
16-25-jan	18:05:08	593	-3.2	-4.2	-1.0	66	16.71
16-25-jan	19:05:08	594	-4.1	-5.1	-1.0	66	16.71
16-25-jan	20:05:08	594	-5.4	-6.6	-1.1	65	16.71
16-25-jan	21:05:08	595	-7.1	-8.2	-1.1	65	16.71
16-25-jan	22:05:08	595	-8.1	-9.4	-1.3	65	16.72
16-25-jan	23:05:08	595	-8.3	-9.9	-1.6	65	16.72

BGI PQ200 Air Sampling System Downloaded 2016 03 feb 09:47:55

Job Details:

Job Name: 16Feb03C.JOB
Version: 5.62
Serial No: 964
Pump Time: 5017:24
Flags:

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

	Max	Min	Avg	Units
BP	587	577	583	mmHg
TA	2.4	-3.4	-0.6	°C
Q	---	---	16.71	Lpm

Timer Information:

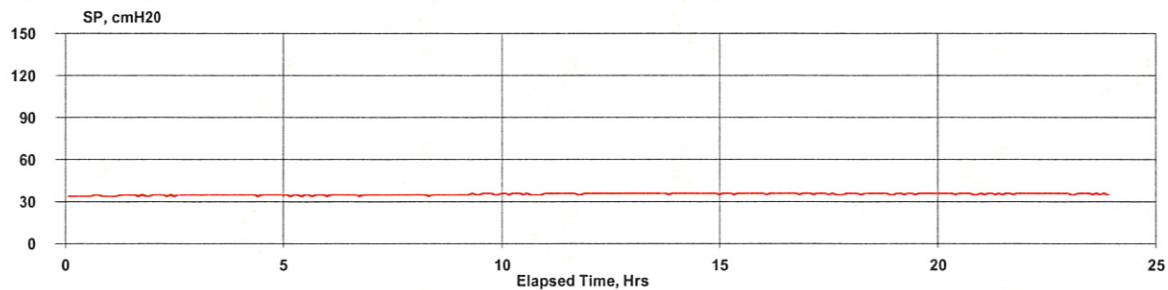
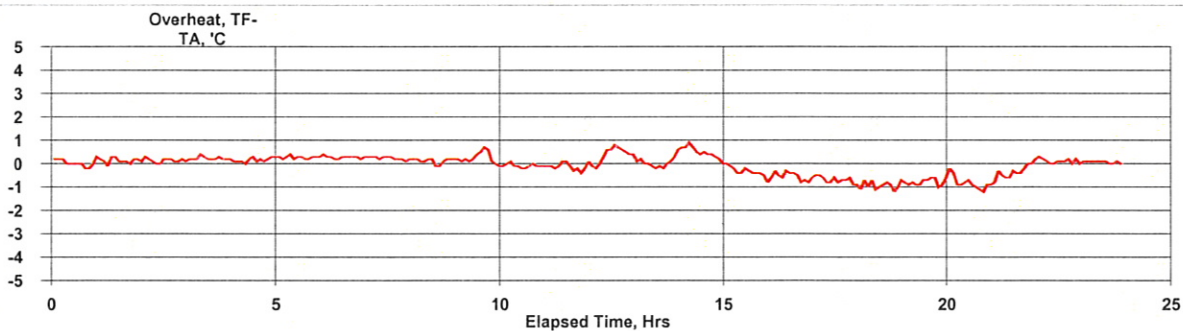
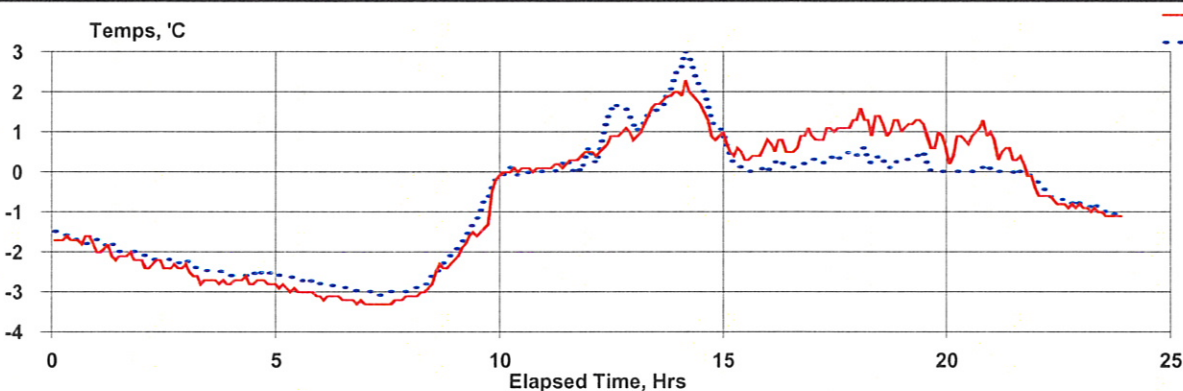
Date Time
dd-mmm hh:mm:ss
Start: 16-31-jan 0:00:08
Stop: 16-01-feb 0:00:05
ET: 23:59

Mass Concentration Data:

Filter ID: 6
Final Wt: mg
Initial Wt: mg
Delta Wt: 0.000 mg
Total Vol: 24.044 m³
Mass Conc: 0 ug/m³

QCV 0.58 %
Max overheat 3.5 °C
occured 01-feb 14:20:37

Notes 1:
Notes 2:



Hourly

16-31-jan	0:05:08	587	-1.7	-1.7	0.0	34	16.71
16-31-jan	1:05:08	586	-2.1	-1.9	0.1	35	16.72
16-31-jan	2:05:08	586	-2.3	-2.2	0.1	35	16.71
16-31-jan	3:05:08	586	-2.7	-2.5	0.2	35	16.71
16-31-jan	4:05:08	586	-2.7	-2.6	0.2	35	16.71
16-31-jan	5:05:08	586	-3.0	-2.7	0.3	35	16.71
16-31-jan	6:05:08	586	-3.2	-2.9	0.3	35	16.72
16-31-jan	7:05:08	586	-3.2	-3.0	0.2	35	16.71
16-31-jan	8:05:08	585	-2.7	-2.5	0.1	35	16.71
16-31-jan	9:05:08	585	-1.3	-1.0	0.3	35	16.71
16-31-jan	10:05:08	585	0.1	0.0	-0.1	36	16.71
16-31-jan	11:05:08	585	0.3	0.2	-0.1	36	16.71
16-31-jan	12:05:08	584	0.8	1.2	0.4	36	16.72
16-31-jan	13:05:08	584	1.6	1.7	0.1	36	16.72
16-31-jan	14:05:08	582	1.5	2.0	0.5	36	16.71
16-31-jan	15:05:08	582	0.5	0.2	-0.3	36	16.71
16-31-jan	16:05:08	581	0.7	0.2	-0.5	36	16.72
16-31-jan	17:05:08	581	1.1	0.4	-0.7	36	16.71
16-31-jan	18:05:08	580	1.2	0.3	-0.9	36	16.71
16-31-jan	19:05:08	580	1.0	0.2	-0.8	36	16.70
16-31-jan	20:05:08	579	0.8	0.0	-0.8	36	16.70
16-31-jan	21:05:08	578	0.3	0.0	-0.3	36	16.71
16-31-jan	22:05:08	578	-0.7	-0.6	0.1	36	16.73
16-31-jan	23:05:08	578	-1.0	-0.9	0.1	36	16.71

BGI PQ200 Air Sampling System Downloaded 2016 08 feb 10:47:30

Job Details:

Job Name: 16Feb08C.JOB
Version: 5.62
Serial No: 964
Pump Time: 5041:23
Flags:

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

	Max	Min	Avg	Units
BP	600	597	598	mmHg
TA	8.7	-11.9	-2.7	°C
Q	---	---	16.71	Lpm

Timer Information:

Date Time
dd-mmm hh:mm:ss
Start: 16-06-feb 0:00:08
Stop: 16-07-feb 0:00:04
ET: 23:59

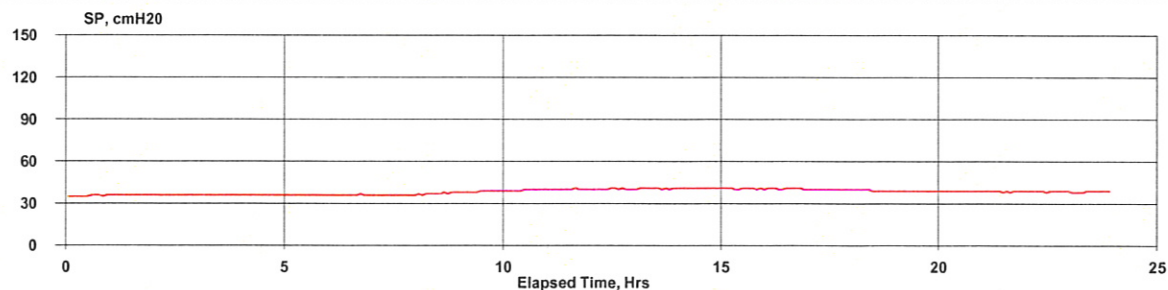
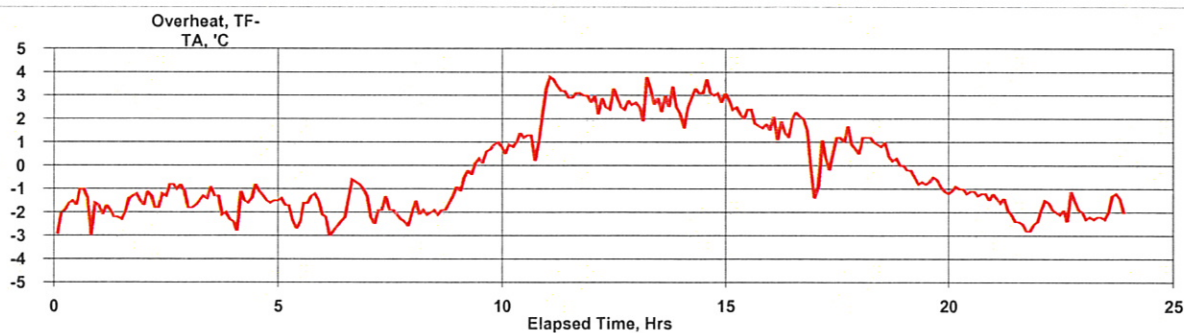
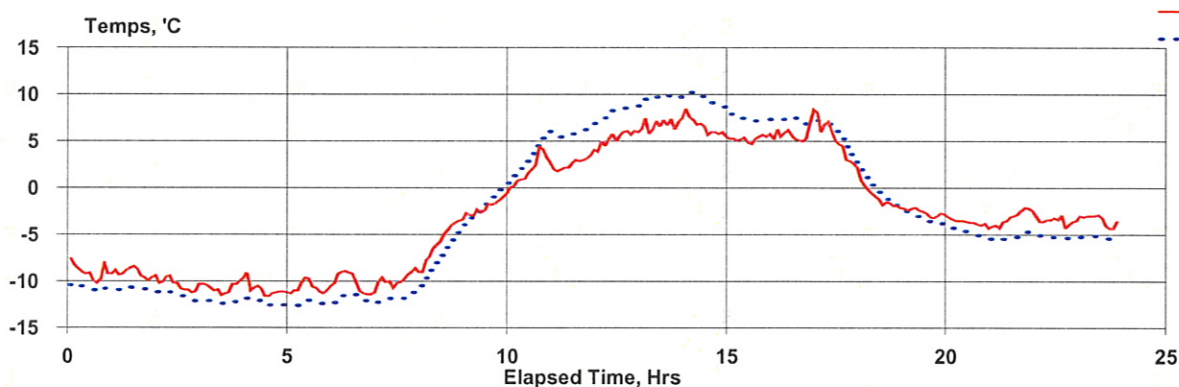
Mass Concentration Data:

Filter ID: 15
Final Wt: mg
Initial Wt: mg
Delta Wt: 0.000 mg
Total Vol: 24.044 m³
Mass Conc: 0 µg/m³

QCV 0.51 %
Max overheat 3.9 °C
occured 06-feb 11:02:08

Notes 1:

Notes 2:



Hourly

16-06-feb	0:05:08	600	-9.0	-10.8	-1.8	35	16.72
16-06-feb	1:05:08	600	-9.1	-10.9	-1.8	36	16.72
16-06-feb	2:05:08	600	-10.4	-11.6	-1.2	36	16.71
16-06-feb	3:05:08	600	-10.6	-12.3	-1.7	36	16.70
16-06-feb	4:05:08	599	-10.9	-12.4	-1.5	36	16.71
16-06-feb	5:05:08	599	-10.7	-12.5	-1.8	36	16.71
16-06-feb	6:05:08	600	-10.2	-11.9	-1.8	36	16.71
16-06-feb	7:05:08	600	-9.7	-11.8	-2.1	36	16.71
16-06-feb	8:05:08	600	-5.5	-7.3	-1.8	37	16.71
16-06-feb	9:05:08	600	-2.0	-1.8	0.2	39	16.72
16-06-feb	10:05:08	600	2.0	3.2	1.3	40	16.72
16-06-feb	11:05:08	600	2.7	5.9	3.2	40	16.72
16-06-feb	12:05:08	599	5.4	8.1	2.7	40	16.71
16-06-feb	13:05:08	598	6.8	9.6	2.7	41	16.71
16-06-feb	14:05:08	598	6.6	9.5	2.9	41	16.71
16-06-feb	15:05:08	598	5.3	7.4	2.1	41	16.73
16-06-feb	16:05:08	598	5.9	7.2	1.3	41	16.71
16-06-feb	17:05:08	598	4.9	5.6	0.7	40	16.72
16-06-feb	18:05:08	598	-1.0	-0.4	0.7	39	16.72
16-06-feb	19:05:08	598	-2.6	-3.3	-0.7	39	16.71
16-06-feb	20:05:08	598	-3.7	-4.8	-1.2	39	16.71
16-06-feb	21:05:08	598	-3.1	-5.3	-2.2	39	16.71
16-06-feb	22:05:08	598	-3.5	-5.3	-1.8	39	16.72
16-06-feb	23:05:08	598	-3.4	-5.3	-1.9	39	16.71

BGI PQ200 Air Sampling System Downloaded 2016 15 feb 10:10:22

Job Details:

Job Name: 16Feb15C.JOB
Version: 5.62
Serial No: 964
Pump Time: 5065:22
Flags:

Job Code:

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

	Max	Min	Avg	Units
BP	599	596	597	mmHg
TA	14.5	-4.1	4.3	°C
Q	---	---	16.71	Lpm

QCV 0.56 %
Max overheat 3 °C
occured 12-feb 11:46:27

Timer Information:

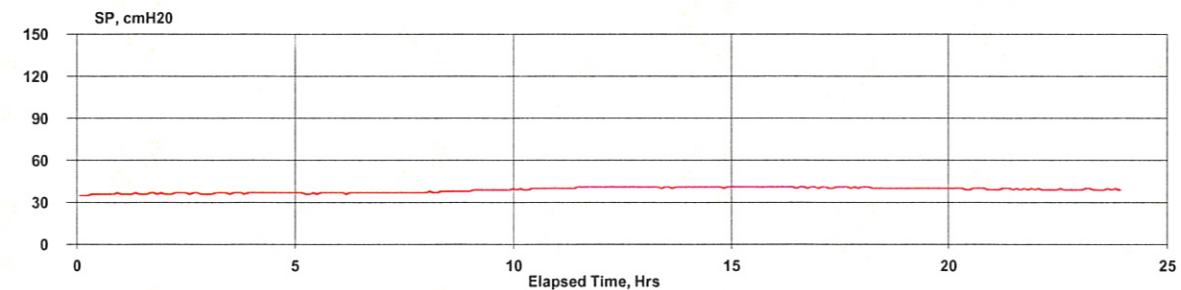
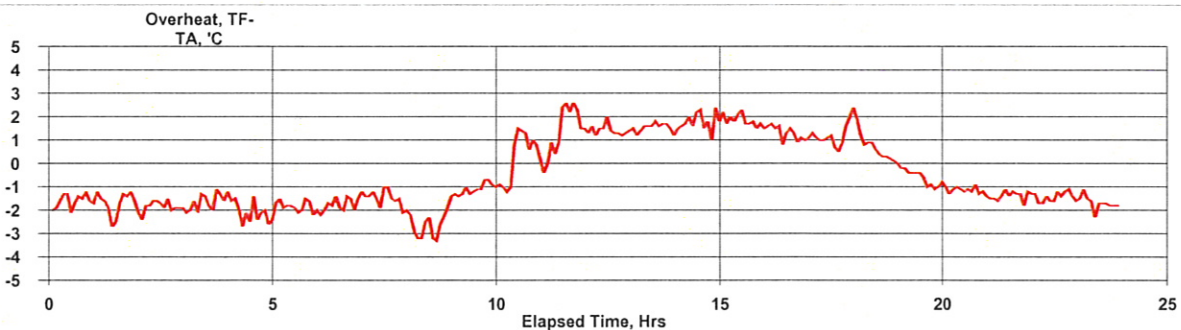
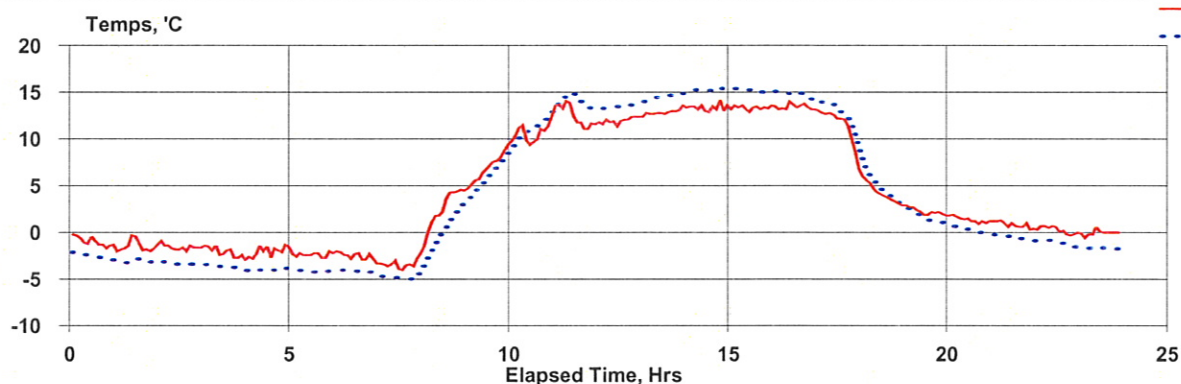
Date Time
dd-mmm hh:mm:ss
Start: 16-12-feb 0:00:08
Stop: 16-13-feb 0:00:05
ET: 23:59

Mass Concentration Data:

Filter ID: 18
Final Wt: mg
Initial Wt: mg
Delta Wt: 0.000 mg
Total Vol: 24.043 m³
Mass Conc: 0 ug/m³

Notes 1:

Notes 2:



Hourly

16-12-feb	0:05:08	598	-1.0	-2.6	-1.6	36	16.70
16-12-feb	1:05:08	598	-1.5	-3.2	-1.7	36	16.71
16-12-feb	2:05:08	598	-1.6	-3.4	-1.8	37	16.71
16-12-feb	3:05:08	598	-2.1	-3.7	-1.6	37	16.71
16-12-feb	4:05:08	598	-2.0	-4.1	-2.1	37	16.71
16-12-feb	5:05:08	598	-2.4	-4.2	-1.8	37	16.72
16-12-feb	6:05:08	598	-2.5	-4.3	-1.7	37	16.71
16-12-feb	7:05:08	598	-3.3	-4.9	-1.5	37	16.71
16-12-feb	8:05:08	598	2.6	0.0	-2.6	38	16.71
16-12-feb	9:05:08	598	6.9	5.9	-1.1	39	16.71
16-12-feb	10:05:08	598	10.7	10.9	0.3	40	16.71
16-12-feb	11:05:08	598	12.5	13.9	1.4	41	16.71
16-12-feb	12:05:08	598	12.0	13.4	1.4	41	16.71
16-12-feb	13:05:08	597	12.9	14.4	1.5	41	16.70
16-12-feb	14:05:08	597	13.4	15.2	1.8	41	16.70
16-12-feb	15:05:08	597	13.4	15.2	1.8	41	16.70
16-12-feb	16:05:08	597	13.5	14.7	1.3	41	16.71
16-12-feb	17:05:08	597	11.4	12.7	1.2	41	16.71
16-12-feb	18:05:08	597	4.2	4.8	0.6	40	16.71
16-12-feb	19:05:08	597	2.3	1.6	-0.6	40	16.72
16-12-feb	20:05:08	597	1.4	0.2	-1.2	40	16.71
16-12-feb	21:05:08	597	0.8	-0.6	-1.4	40	16.71
16-12-feb	22:05:08	597	0.3	-1.2	-1.4	39	16.71
16-12-feb	23:05:08	597	0.0	-1.7	-1.7	39	16.71

BGI PQ200 Air Sampling System Downloaded 2016 19 feb 10:58:20

Job Details:

Job Name: 16Feb19C.JOB
Version: 5.62
Serial No: 964
Pump Time: 5089:21
Flags:

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

	Max	Min	Avg	Units
BP	593	586	589	mmHg
TA	9.7	-3.1	3.9	°C
Q	---	---	16.71	Lpm

QCV 0.5 %
Max overheat 1.4 °C
occured 18-feb 16:46:10

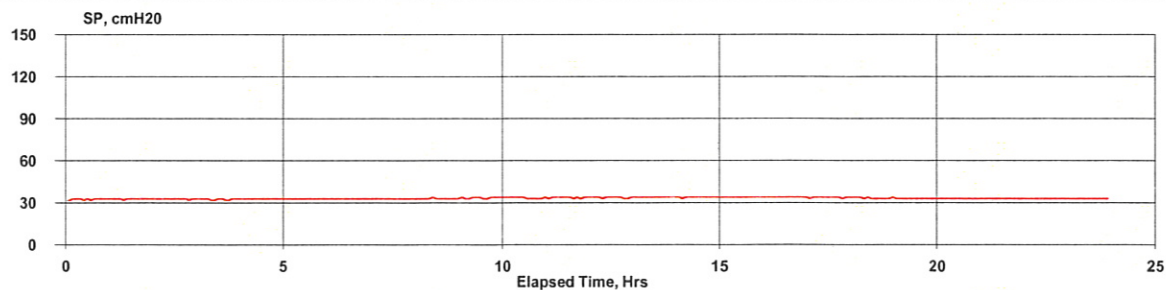
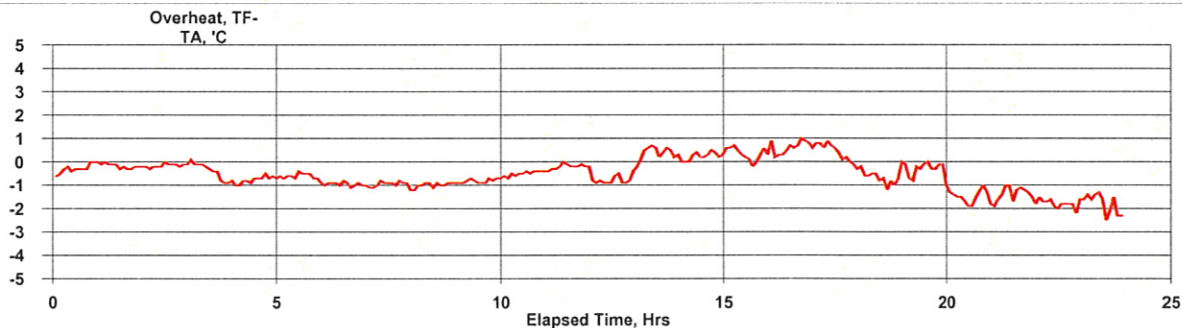
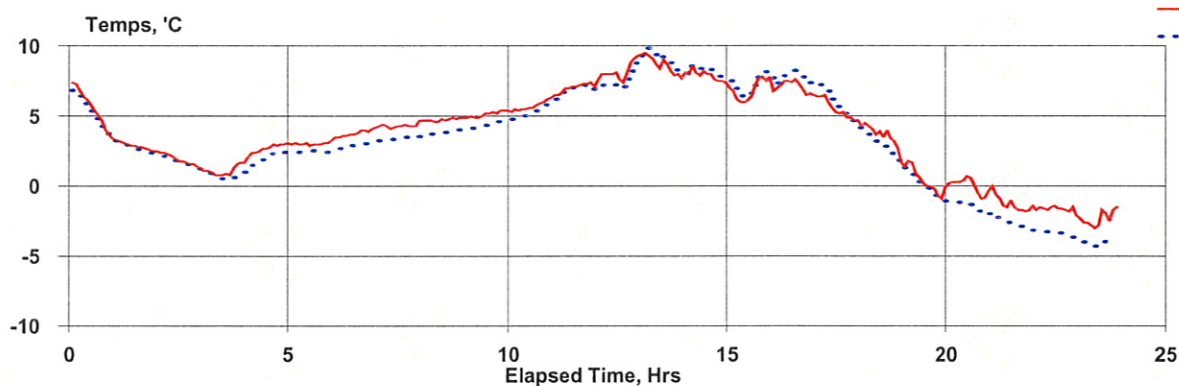
Timer Information:

Date Time
dd-mmm hh:mm:ss
Start: 16-18-feb 0:00:08
Stop: 16-19-feb 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: 24.043 m³
Mass Conc: 0 µg/m³

Notes 1:
Notes 2:



Hourly

16-18-feb	0:05:08	589	5.5	5.3	-0.3	33	16.71
16-18-feb	1:05:08	590	2.9	2.7	-0.2	33	16.71
16-18-feb	2:05:08	590	1.9	1.7	-0.2	33	16.71
16-18-feb	3:05:08	589	1.1	0.7	-0.4	33	16.70
16-18-feb	4:05:08	588	2.7	2.0	-0.8	33	16.71
16-18-feb	5:05:08	588	3.1	2.4	-0.6	33	16.72
16-18-feb	6:05:08	588	3.8	2.9	-1.0	33	16.71
16-18-feb	7:05:08	588	4.3	3.4	-1.0	33	16.72
16-18-feb	8:05:08	588	4.8	3.8	-1.0	33	16.72
16-18-feb	9:05:08	588	5.2	4.3	-0.8	34	16.71
16-18-feb	10:05:08	588	5.7	5.2	-0.5	34	16.69
16-18-feb	11:05:08	587	7.0	6.8	-0.2	34	16.69
16-18-feb	12:05:08	587	8.2	7.4	-0.8	34	16.71
16-18-feb	13:05:08	587	8.7	9.0	0.4	34	16.71
16-18-feb	14:05:08	588	7.9	8.1	0.2	34	16.72
16-18-feb	15:05:08	589	6.9	7.2	0.3	34	16.71
16-18-feb	16:05:08	589	7.1	7.7	0.6	34	16.71
16-18-feb	17:05:08	590	5.5	5.9	0.4	34	16.71
16-18-feb	18:05:08	591	3.6	3.0	-0.6	33	16.71
16-18-feb	19:05:08	592	0.4	0.1	-0.3	33	16.72
16-18-feb	20:05:08	592	0.0	-1.5	-1.5	33	16.71
16-18-feb	21:05:08	592	-1.3	-2.7	-1.4	33	16.71
16-18-feb	22:05:08	593	-1.6	-3.4	-1.8	33	16.71
16-18-feb	23:05:08	593	-2.3	-4.1	-1.8	33	16.72

BGI PQ200 Air Sampling System Downloaded 2016 25 feb 14:26:58

Job Details:

Job Name: 16Feb25C.JOB
 Version: 5.62
 Serial No: 964
 Pump Time: 5113:21
 Flags:

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

	Max	Min	Avg	Units
BP	597	594	595	mmHg
TA	11.1	-8.2	0.6	°C
Q	---	---	16.71	Lpm

QCV 0.57 %
 Max overheat 2.5 °C
 occurred 24-feb 11:25:09

Timer Information:

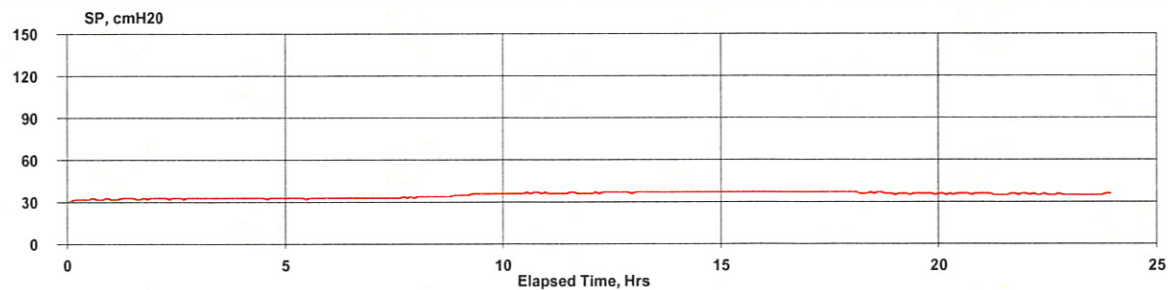
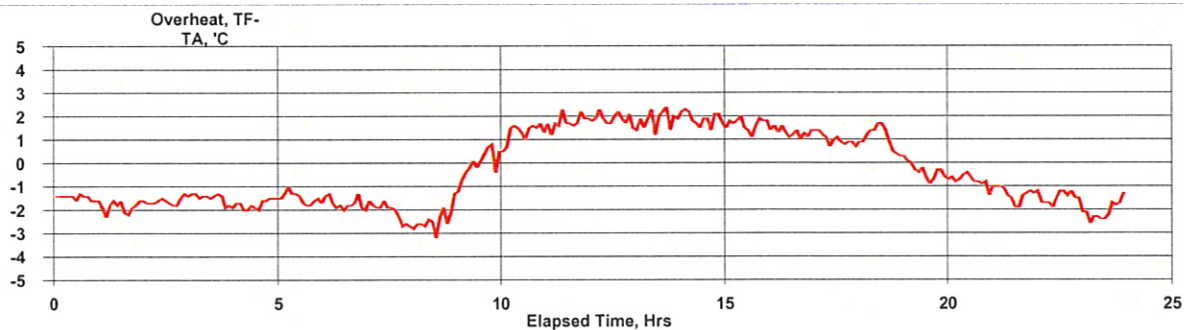
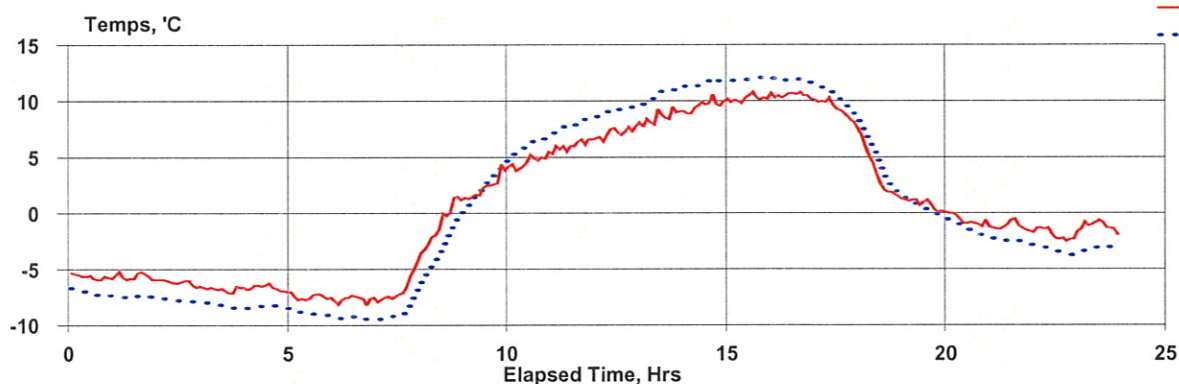
Date Time
 dd-mmm hh:mm:ss
 Start: 16-24-feb 0:00:08
 Stop: 16-25-feb 0:00:05
 ET: 24:00:00

Mass Concentration Data:

Filter ID: 6
 Final Wt: mg
 Initial Wt: mg
 Delta Wt: 0.000 mg
 Total Vol: 24.043 m³
 Mass Conc: 0 µg/m³

Notes 1:

Notes 2:



Hourly

16-24-feb	0:04:43	596	-5.6	-7.1	-1.5	32	16.71
16-24-feb	1:04:43	596	-5.6	-7.5	-1.9	33	16.71
16-24-feb	2:04:43	596	-6.2	-7.8	-1.6	33	16.71
16-24-feb	3:04:43	596	-6.7	-8.3	-1.5	33	16.71
16-24-feb	4:04:43	596	-6.6	-8.4	-1.7	33	16.71
16-24-feb	5:04:43	596	-7.4	-8.9	-1.5	33	16.71
16-24-feb	6:04:43	596	-7.6	-9.4	-1.7	33	16.71
16-24-feb	7:04:43	596	-6.8	-8.9	-2.1	33	16.71
16-24-feb	8:04:43	597	-0.9	-3.3	-2.4	34	16.71
16-24-feb	9:04:43	597	2.4	2.3	0.0	36	16.71
16-24-feb	10:04:43	596	4.6	5.9	1.3	36	16.71
16-24-feb	11:04:43	596	6.1	7.8	1.8	36	16.71
16-24-feb	12:04:43	596	7.2	9.1	1.9	37	16.71
16-24-feb	13:04:43	595	8.6	10.4	1.8	37	16.70
16-24-feb	14:04:43	595	9.6	11.5	1.9	37	16.70
16-24-feb	15:04:43	594	10.2	11.9	1.7	37	16.71
16-24-feb	16:04:43	594	10.5	11.8	1.3	37	16.72
16-24-feb	17:04:43	594	9.4	10.4	1.0	37	16.71
16-24-feb	18:04:43	595	3.8	4.8	1.1	36	16.70
16-24-feb	19:04:43	595	0.9	0.5	-0.3	36	16.71
16-24-feb	20:04:43	595	-0.6	-1.3	-0.8	36	16.71
16-24-feb	21:04:43	595	-1.2	-2.5	-1.3	36	16.71
16-24-feb	22:04:43	595	-1.9	-3.4	-1.5	35	16.71
16-24-feb	23:04:43	595	-1.2	-3.2	-2.1	35	16.71

BGI PQ200 Air Sampling System Downloaded 2016 03 mar 09:24:07

Job Details:

Job Name: 16Mar03C.JOB
Version: 5.62
Serial No: 964
Pump Time: 5137:20
Flags:

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

	Max	Min	Avg	Units
BP	596	593	594	mmHg
TA	17	-1.7	6.4	°C
Q	---	---	16.71	Lpm

QCV 0.54 %
Max overheat 2.5 °C
occured 02-mar 14:53:03

Timer Information:

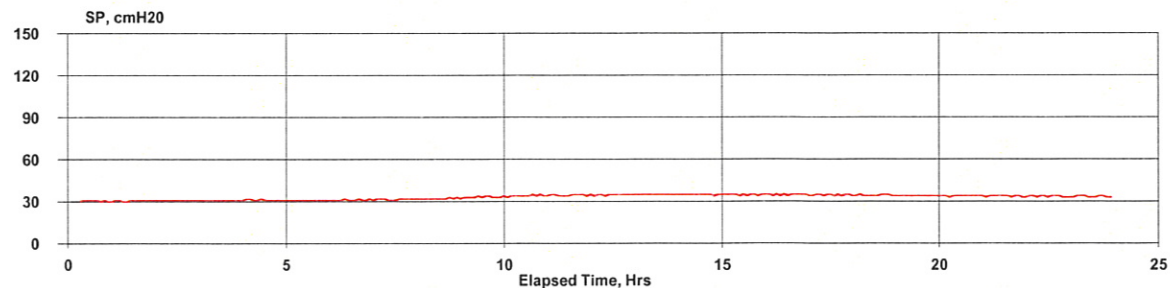
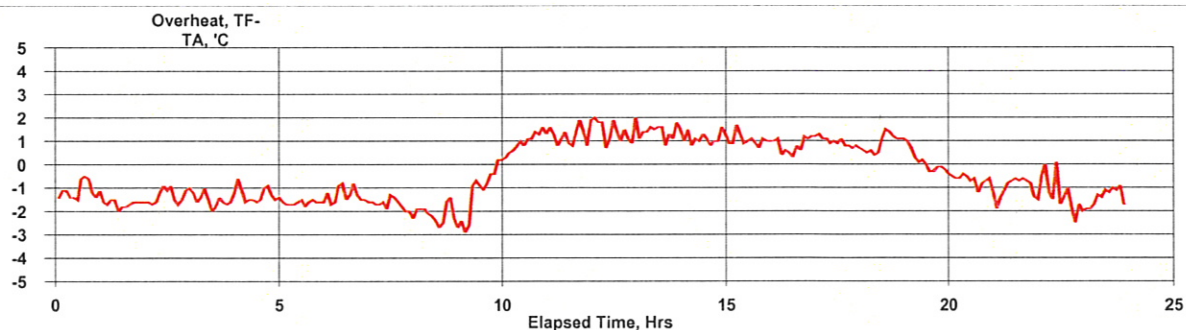
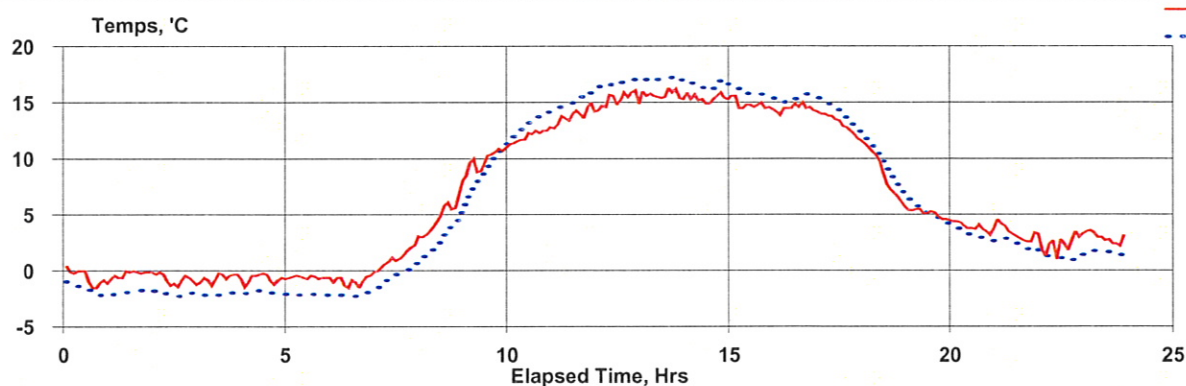
Date Time
dd-mmm hh:mm:ss
Start: 16-01-mar 0:00:08
Stop: 16-02-mar 0:00:04
ET: 23:59

Mass Concentration Data:

Filter ID: 13
Final Wt: mg
Initial Wt: mg
Delta Wt: 0.000 mg
Total Vol: 24.042 m³
Mass Conc: 0 µg/m³

Notes 1:

Notes 2:



Hourly

16-01-mar	0:05:08	595	-0.6	-1.7	-1.1	31	16.71
16-01-mar	1:05:08	595	-0.3	-1.9	-1.7	31	16.71
16-01-mar	2:05:08	595	-0.8	-2.1	-1.3	31	16.71
16-01-mar	3:05:08	594	-0.6	-2.1	-1.5	31	16.70
16-01-mar	4:05:08	595	-0.7	-2.0	-1.3	31	16.71
16-01-mar	5:05:08	595	-0.6	-2.2	-1.6	31	16.71
16-01-mar	6:05:08	595	-0.9	-2.2	-1.3	31	16.71
16-01-mar	7:05:08	596	1.3	-0.4	-1.7	32	16.70
16-01-mar	8:05:08	596	5.1	2.9	-2.1	32	16.70
16-01-mar	9:05:08	596	10.0	8.9	-1.1	33	16.71
16-01-mar	10:05:08	596	12.1	13.1	1.0	34	16.71
16-01-mar	11:05:08	596	13.9	15.1	1.3	35	16.71
16-01-mar	12:05:08	595	15.3	16.7	1.4	35	16.71
16-01-mar	13:05:08	595	15.7	17.1	1.4	35	16.71
16-01-mar	14:05:08	594	15.4	16.5	1.1	35	16.71
16-01-mar	15:05:08	594	14.8	15.9	1.0	35	16.71
16-01-mar	16:05:08	594	14.5	15.3	0.8	35	16.71
16-01-mar	17:05:08	594	13.0	14.0	0.9	35	16.71
16-01-mar	18:05:08	595	8.5	9.4	0.9	34	16.71
16-01-mar	19:05:08	595	5.1	5.2	0.1	34	16.71
16-01-mar	20:05:08	595	3.9	3.2	-0.7	34	16.71
16-01-mar	21:05:08	594	3.4	2.3	-1.0	34	16.71
16-01-mar	22:05:08	594	2.4	1.1	-1.3	34	16.71
16-01-mar	23:05:08	594	2.9	1.5	-1.4	33	16.71

BGI PQ200 Air Sampling System

Downloaded 2016 10 mar 11:51:22

Job Details:

Job Name: 16Mar10C.JOB
Version: 5.62
Serial No: 964
Pump Time: 5161:19
Flags:

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

	Max	Min	Avg	Units
BP	586	583	584	mmHg
TA	6.9	-9	-1.1	°C
Q	---	---	16.71	Lpm

QCV 0.56 %
Max overheat 4.9 °C
occured 07-mar 12:08:04

Timer Information:

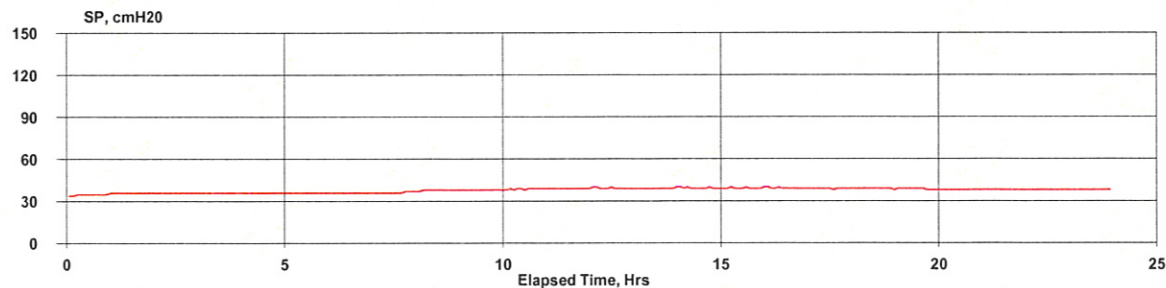
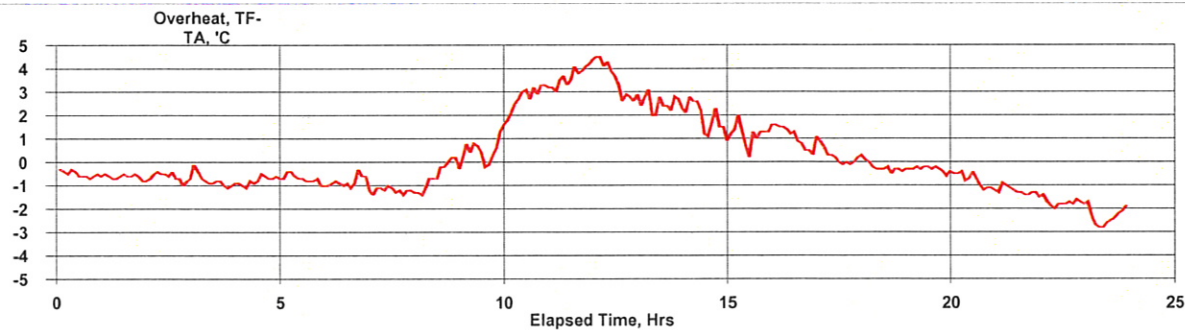
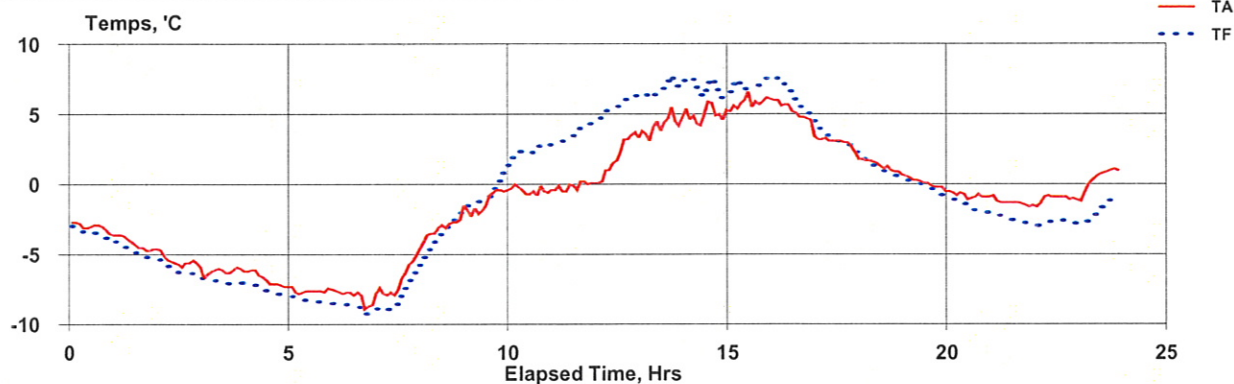
Date	Time
dd-mmm	hh:mm:ss
Start: 16-07-mar	0:00:08
Stop: 16-08-mar	0:00:05
ET: 23:59	

Mass Concentration Data:

Filter ID:	JBR-8	
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

16-07-mar	0:05:08	585	-3.0	-3.6	-0.5	35	16.71
16-07-mar	1:05:08	585	-4.2	-4.9	-0.6	36	16.71
16-07-mar	2:05:08	585	-5.5	-6.1	-0.6	36	16.70
16-07-mar	3:05:08	585	-6.2	-7.0	-0.8	36	16.70
16-07-mar	4:05:08	585	-6.8	-7.6	-0.8	36	16.71
16-07-mar	5:05:08	586	-7.6	-8.3	-0.7	36	16.71
16-07-mar	6:05:08	585	-8.0	-8.8	-0.9	36	16.71
16-07-mar	7:05:08	585	-6.7	-7.9	-1.2	36	16.71
16-07-mar	8:05:08	586	-3.0	-3.5	-0.5	38	16.71
16-07-mar	9:05:08	586	-1.2	-0.6	0.6	38	16.71
16-07-mar	10:05:08	586	-0.4	2.4	2.8	39	16.71
16-07-mar	11:05:08	586	-0.1	3.6	3.7	39	16.70
16-07-mar	12:05:08	585	2.1	5.6	3.5	39	16.71
16-07-mar	13:05:08	585	4.3	6.7	2.5	39	16.71
16-07-mar	14:05:08	584	5.0	6.9	1.9	39	16.72
16-07-mar	15:05:08	584	5.8	7.0	1.2	39	16.71
16-07-mar	16:05:08	584	5.1	6.2	1.1	39	16.72
16-07-mar	17:05:08	584	2.9	3.1	0.2	39	16.71
16-07-mar	18:05:08	584	1.3	1.0	-0.3	39	16.71
16-07-mar	19:05:08	584	0.1	-0.2	-0.3	39	16.71
16-07-mar	20:05:08	585	-0.8	-1.6	-0.8	38	16.72
16-07-mar	21:05:08	585	-1.3	-2.6	-1.3	38	16.70
16-07-mar	22:05:08	585	-1.0	-2.8	-1.8	38	16.71
16-07-mar	23:05:08	585	0.4	-2.0	-2.4	38	16.71

BGI PQ200 Air Sampling System

Downloaded 2016 14 mar 15:12:09

Job Details:

Job Name: 16Mar14C.JOB
Version: 5.62
Serial No: 964
Pump Time: 5185:18
Flags:

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

	Max	Min	Avg	Units
BP	592	589	590	mmHg
TA	10.7	-4.2	3	°C
Q	---	---	16.71	Lpm

QCV 0.57 %
Max overheat 2.7 °C
occured 13-mar 14:38:40

Timer Information:

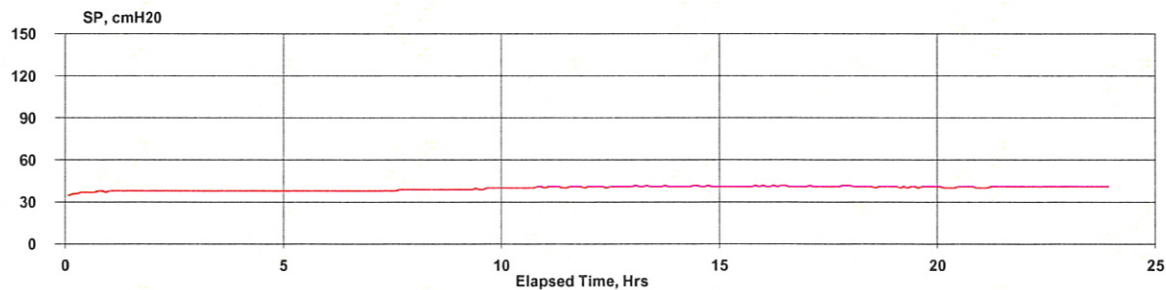
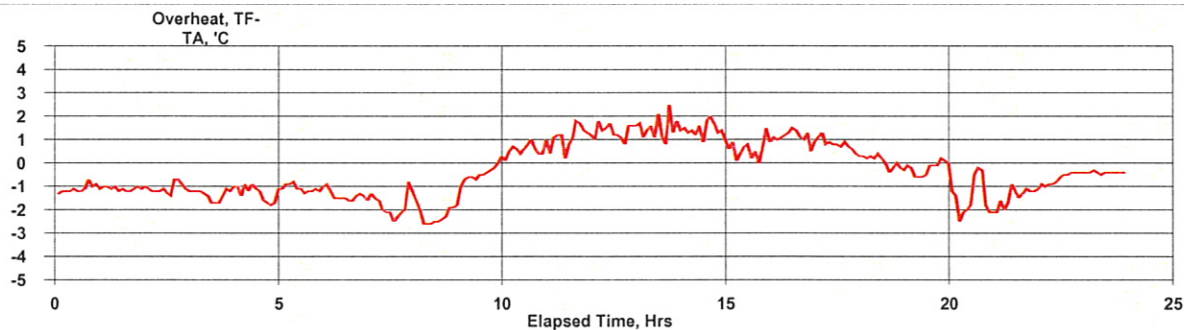
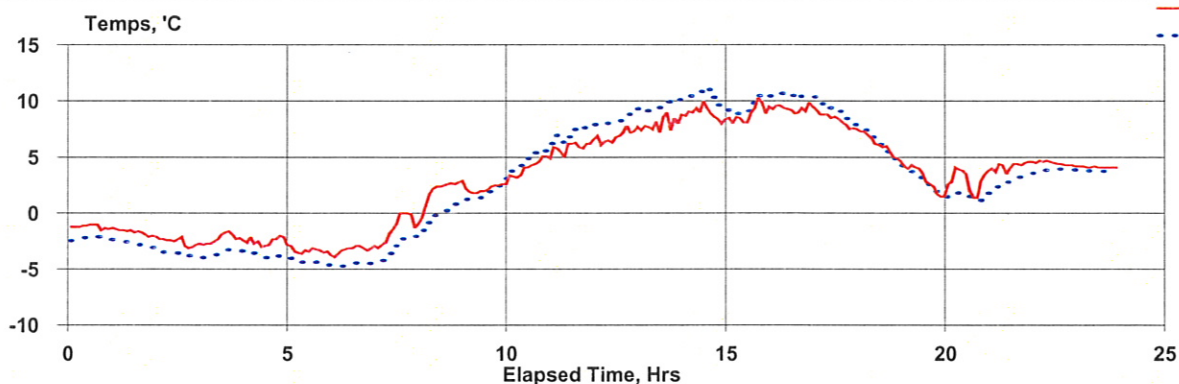
Date	Time
dd-mmm	hh:mm:ss
Start: 16-13-mar	0:00:08
Stop: 16-14-mar	0:00:05
ET: 23:59	

Mass Concentration Data:

Filter ID:	16
Final Wt:	mg
Initial Wt:	mg
Delta Wt:	0.000 mg
Total Vol:	24.043 m ³
Mass Conc:	0 µg/m ³

Notes 1:

Notes 2:



Hourly

16-13-mar	0:05:08	592	-1.2	-2.3	-1.1	37	16.72
16-13-mar	1:05:08	591	-1.7	-2.8	-1.1	38	16.71
16-13-mar	2:05:08	591	-2.6	-3.7	-1.1	38	16.71
16-13-mar	3:05:08	591	-2.3	-3.6	-1.3	38	16.71
16-13-mar	4:05:08	591	-2.5	-3.8	-1.3	38	16.71
16-13-mar	5:05:08	591	-3.4	-4.4	-1.1	38	16.71
16-13-mar	6:05:08	591	-3.2	-4.6	-1.4	38	16.71
16-13-mar	7:05:08	591	-1.2	-3.0	-1.8	38	16.71
16-13-mar	8:05:08	591	2.1	-0.1	-2.2	39	16.71
16-13-mar	9:05:08	592	2.2	1.8	-0.4	40	16.71
16-13-mar	10:05:08	592	4.2	4.8	0.6	40	16.71
16-13-mar	11:05:08	592	6.0	7.1	1.1	41	16.72
16-13-mar	12:05:08	591	6.9	8.3	1.4	41	16.71
16-13-mar	13:05:08	590	8.0	9.5	1.5	41	16.72
16-13-mar	14:05:08	590	8.9	10.3	1.4	41	16.70
16-13-mar	15:05:08	590	8.9	9.5	0.6	41	16.71
16-13-mar	16:05:08	589	9.4	10.5	1.1	41	16.71
16-13-mar	17:05:08	589	8.3	9.1	0.8	41	16.71
16-13-mar	18:05:08	589	6.1	6.1	0.0	41	16.71
16-13-mar	19:05:08	590	3.1	2.8	-0.2	41	16.71
16-13-mar	20:05:08	590	3.0	1.5	-1.5	41	16.71
16-13-mar	21:05:08	590	4.2	2.8	-1.4	41	16.71
16-13-mar	22:05:08	590	4.5	3.8	-0.6	41	16.71
16-13-mar	23:05:08	590	4.1	3.7	-0.4	41	16.71

BGI PQ200 Air Sampling System Downloaded 2016 22 mar 14:48:51

Job Details:

Job Name: 16Mar22C.JOB
Version: 5.62
Serial No: 964
Pump Time: 5209:17
Flags:

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

	Max	Min	Avg	Units
BP	595	590	593	mmHg
TA	18.1	-2	7.4	°C
Q	---	---	16.71	Lpm

QCV 0.56 %
Max overheat 4.5 °C
occured 22-mar 12:59:51

Timer Information:

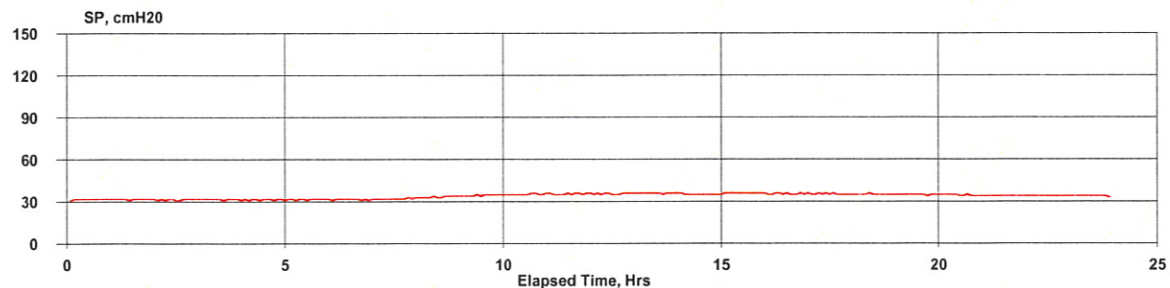
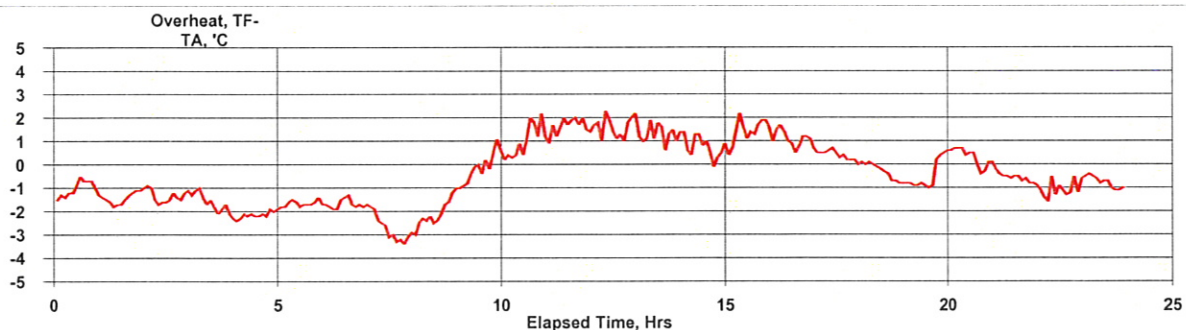
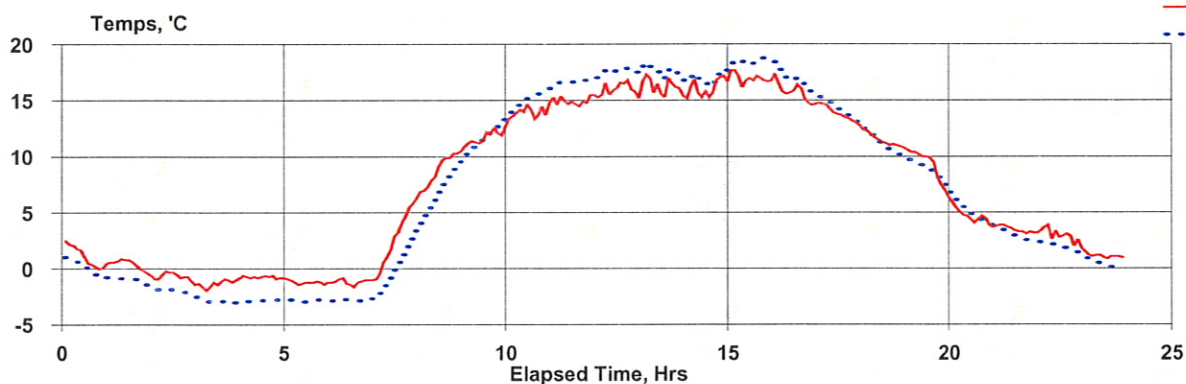
Date Time
dd-mmm hh:mm:ss
Start: 16-19-mar 0:00:08
Stop: 16-20-mar 0:00:05
ET: 23:59

Mass Concentration Data:

Filter ID: 21
Final Wt: mg
Initial Wt: mg
Delta Wt: 0.000 mg
Total Vol: 24.043 m³
Mass Conc: 0 µg/m³

Notes 1:

Notes 2:



Hourly

16-19-mar	0:05:08	593	1.1	0.1	-1.0	32	16.73
16-19-mar	1:05:08	593	0.3	-1.1	-1.4	32	16.71
16-19-mar	2:05:08	593	-0.7	-2.0	-1.4	32	16.71
16-19-mar	3:05:08	593	-1.3	-2.9	-1.7	32	16.72
16-19-mar	4:05:08	593	-0.7	-2.9	-2.1	32	16.71
16-19-mar	5:05:08	593	-1.2	-2.9	-1.7	32	16.71
16-19-mar	6:05:08	594	-1.1	-2.8	-1.7	32	16.71
16-19-mar	7:05:08	594	2.9	0.1	-2.8	32	16.71
16-19-mar	8:05:08	594	8.9	6.8	-2.1	34	16.71
16-19-mar	9:05:08	594	11.7	11.6	-0.1	35	16.71
16-19-mar	10:05:08	594	14.0	15.0	1.0	35	16.71
16-19-mar	11:05:08	594	15.0	16.6	1.6	36	16.70
16-19-mar	12:05:08	594	16.0	17.6	1.6	36	16.71
16-19-mar	13:05:08	593	16.3	17.6	1.3	36	16.70
16-19-mar	14:05:08	593	16.2	16.9	0.7	35	16.71
16-19-mar	15:05:08	593	17.0	18.4	1.4	36	16.73
16-19-mar	16:05:08	593	15.7	16.8	1.1	35	16.71
16-19-mar	17:05:08	593	13.8	14.2	0.4	35	16.71
16-19-mar	18:05:08	593	11.4	11.1	-0.3	35	16.71
16-19-mar	19:05:08	593	9.2	8.7	-0.4	35	16.71
16-19-mar	20:05:08	594	4.7	5.0	0.3	35	16.71
16-19-mar	21:05:08	594	3.5	2.9	-0.6	34	16.71
16-19-mar	22:05:08	594	2.9	1.9	-1.1	34	16.71
16-19-mar	23:05:08	594	1.1	0.4	-0.8	34	16.71

BGI PQ200 Air Sampling System Downloaded 2016 28 mar 15:35:49

Job Details:

Job Name: 16Mar28C.JOB
Version: 5.62
Serial No: 964
Pump Time: 5233:16
Flags:

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

	Max	Min	Avg	Units
BP	590	586	587	mmHg
TA	13.3	-4.3	4.4	°C
Q	---	---	16.7	Lpm

QCV 0.58 %
Max overheat 2.9 °C
occured 25-mar 11:06:40

Timer Information:

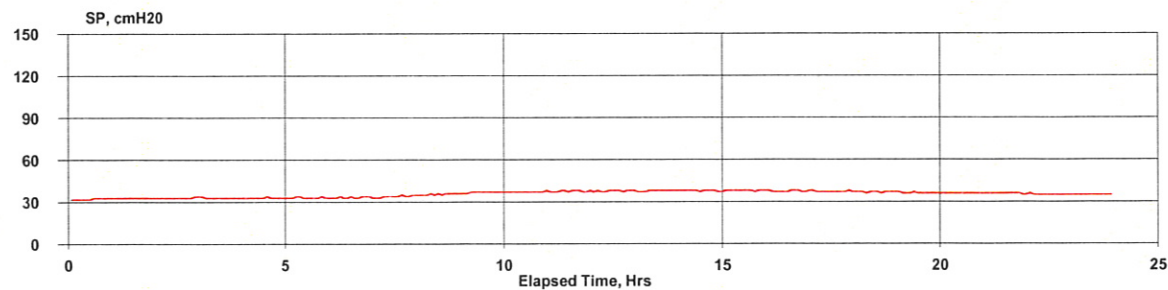
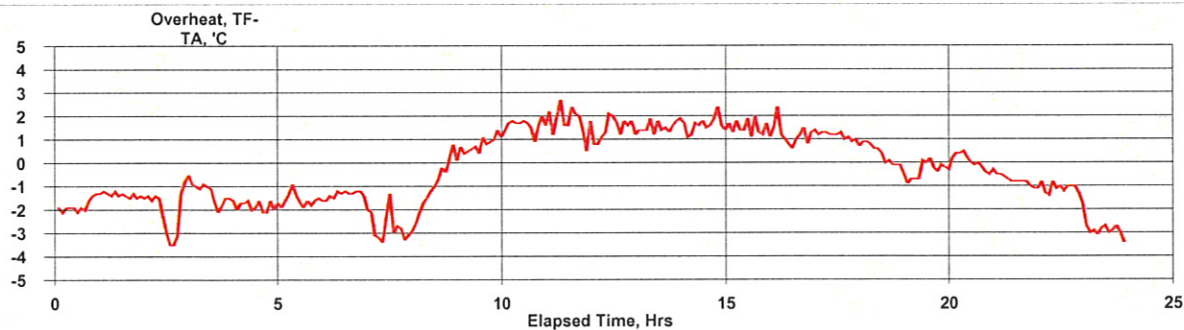
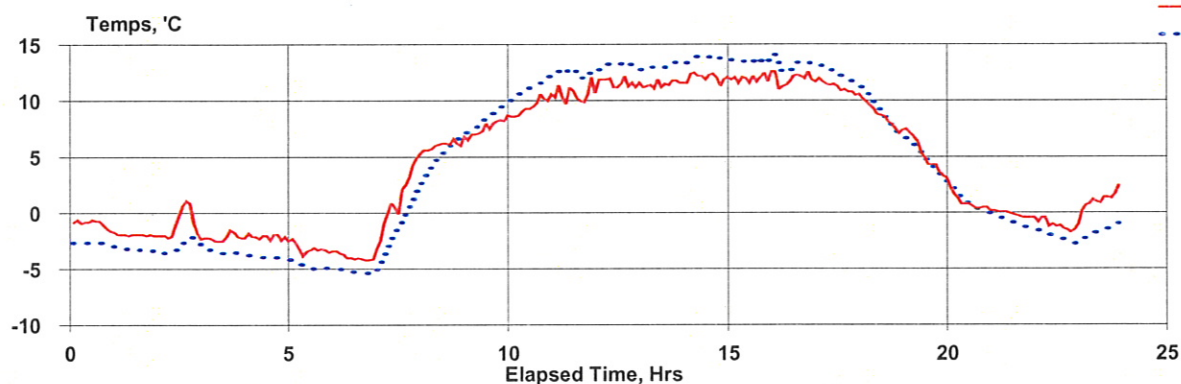
Date Time
dd-mmm hh:mm:ss
Start: 16-25-mar 0:00:08
Stop: 16-26-mar 0:00:05
ET: 23:59

Mass Concentration Data:

Filter ID: 26
Final Wt: mg
Initial Wt: mg
Delta Wt: 0.000 mg
Total Vol: 24.042 m³
Mass Conc: 0 µg/m³

Notes 1:

Notes 2:



Hourly

16-25-mar	0:05:08	590	-1.0	-2.8	-1.8	33	16.71
16-25-mar	1:05:08	590	-1.9	-3.3	-1.4	33	16.71
16-25-mar	2:05:08	589	-1.0	-3.0	-2.0	33	16.71
16-25-mar	3:05:08	589	-2.2	-3.5	-1.3	33	16.71
16-25-mar	4:05:08	589	-2.1	-4.0	-1.8	33	16.71
16-25-mar	5:05:08	589	-3.2	-4.8	-1.6	33	16.71
16-25-mar	6:05:08	589	-3.9	-5.3	-1.4	33	16.72
16-25-mar	7:05:08	589	1.7	-1.1	-2.8	34	16.71
16-25-mar	8:05:08	589	6.1	5.2	-0.9	36	16.70
16-25-mar	9:05:08	589	7.7	8.5	0.8	37	16.71
16-25-mar	10:05:08	589	9.5	11.1	1.6	37	16.71
16-25-mar	11:05:08	589	10.6	12.4	1.8	38	16.72
16-25-mar	12:05:08	588	11.6	13.1	1.5	38	16.71
16-25-mar	13:05:08	588	11.5	13.0	1.6	38	16.71
16-25-mar	14:05:08	587	12.1	13.7	1.6	38	16.70
16-25-mar	15:05:08	587	12.0	13.5	1.5	38	16.70
16-25-mar	16:05:08	587	11.9	13.1	1.2	37	16.72
16-25-mar	17:05:08	586	11.2	12.3	1.1	37	16.71
16-25-mar	18:05:08	587	8.6	8.9	0.3	37	16.71
16-25-mar	19:05:08	586	5.1	4.8	-0.3	36	16.71
16-25-mar	20:05:08	586	0.9	0.9	0.0	36	16.71
16-25-mar	21:05:08	586	-0.1	-0.9	-0.8	36	16.71
16-25-mar	22:05:08	586	-1.1	-2.2	-1.1	35	16.72
16-25-mar	23:05:08	586	1.2	-1.7	-2.9	35	16.72

Compliance Monitor 2366D

PM₁₀ Sampler Summary

January 1, 2016 - March 31, 2016

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)	Concentration (µg/m3)	Sample Period (hr:min)	Sample Volume (m3)	Std Volume (m3)	Mass (mg)			Flag	Comments
		LTP	STP				Tare	Gross	Net		
02/18/16	P2928309	Invalid - AN	Invalid - AN				350.514	350.653	0.139	SP	First run
02/24/16	P2928410	10.5	12.4	24:00	24.0	20.4	355.385	355.639	0.254		
03/01/16	P2928307	7.1	8.6	23:59	24.0	20.0	371.788	371.961	0.173		
03/07/16	P2928779	2.5	3.0	23:59	24.0	20.2	385.067	385.129	0.062		
03/13/16	P2928784	6.4	7.7	23:59	24.0	20.1	385.620	385.776	0.156		
03/19/16	P2928789	3.7	4.5	23:59	24.0	19.9	399.436	399.527	0.091		
03/25/16	P2928995	5.8	7.0	23:59	24.0	19.9	378.387	378.528	0.141		
03/31/16	P2929000	2.0	2.4	23:59	24.0	20.2	393.996	394.046	0.050		
# Valid		Recovery	Average	St. Dev.	Max	Min					
7		88%	6.5	3.5	12.4	2.4					

BGI PQ200 Air Sampling System Downloaded 2016 19 feb 11:26:42

Job Details:

Job Name: 16Feb19D.JOB
Version: 5.62
Serial No: 2366
Pump Time: 111:19
Flags:

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

	Max	Min	Avg	Units
BP	591	584	587	mmHg
TA	9.7	-2.8	4.2	°C
Q	---	---	16.71	Lpm

QCV 0.53 %
Max overheat 1.1 °C
occured 18-feb 16:40:31

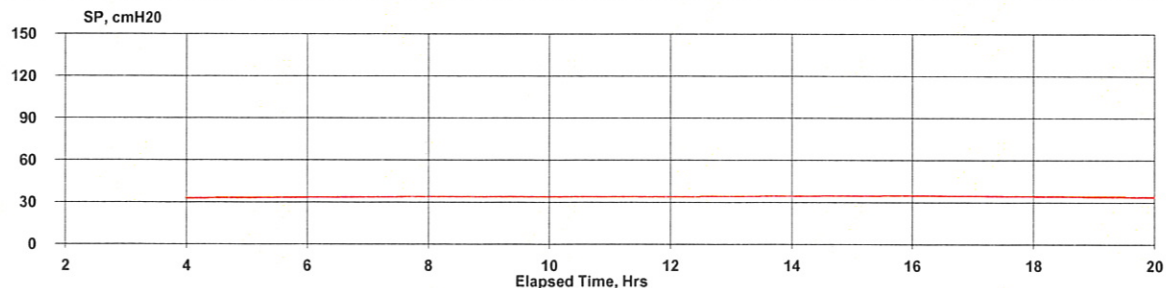
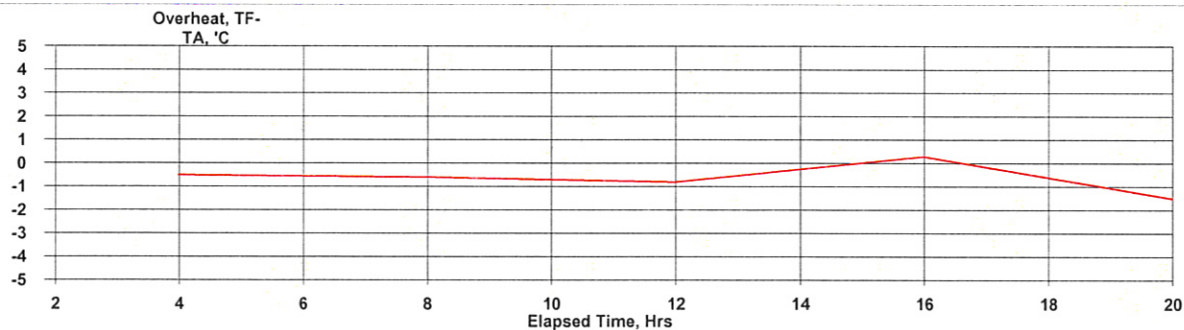
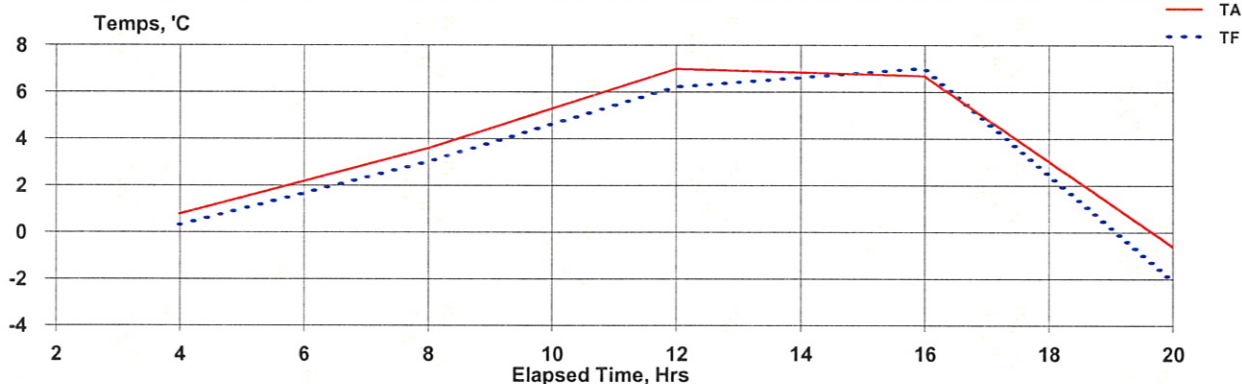
Timer Information:

Date Time
dd-mmm hh:mm:ss
Start: 16-18-feb 0:00:08
Stop: 16-19-feb 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: 24.041 m³
Mass Conc: 0 µg/m³

Notes 1:
Notes 2:



Hourly

16-18-feb	4:15:08	587	0.8	0.3	-0.5	33	16.72
16-18-feb	8:30:08	586	3.6	3.0	-0.6	34	16.70
16-18-feb	12:45:08	585	7.0	6.2	-0.8	34	16.72
16-18-feb	17:00:08	588	6.7	7.0	0.3	35	16.67
16-18-feb	21:15:08	590	-0.6	-2.1	-1.5	34	16.75

BGI PQ200 Air Sampling System Downloaded 2016 25 feb 14:55:48

Job Details:

Job Name: 16Feb25D.JOB
Version: 5.62
Serial No: 2366
Pump Time: 135:19
Flags:

Job Code:

Site Name:

Station Code:

Operators:

User1: yyyyyyyyyyyyyyyyyyyyyyyyyyy

User2: yyyyyyyyyyyyyyyyyyyyyyy

	Max	Min	Avg	Units
BP	595	592	593	mmHg
TA	12.4	-7.8	1	°C
Q	---	---	16.71	Lpm

Timer Information:

Date Time
dd-mmm hh:mm:ss
Start: 16-24-feb 0:00:08
Stop: 16-25-feb 0:00:05
ET: 24:00:00

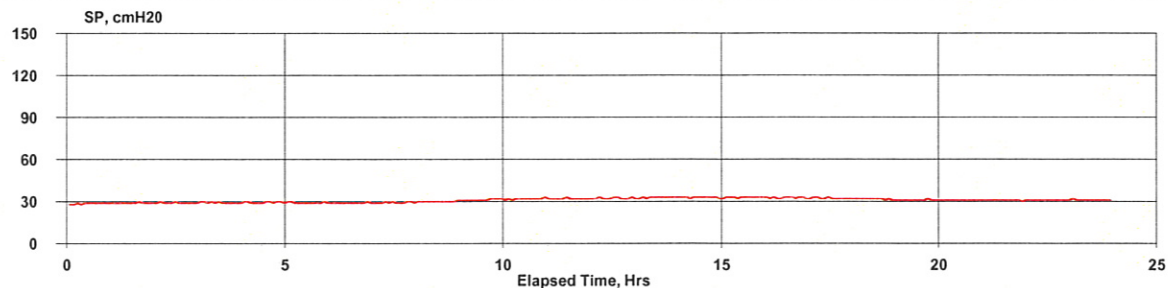
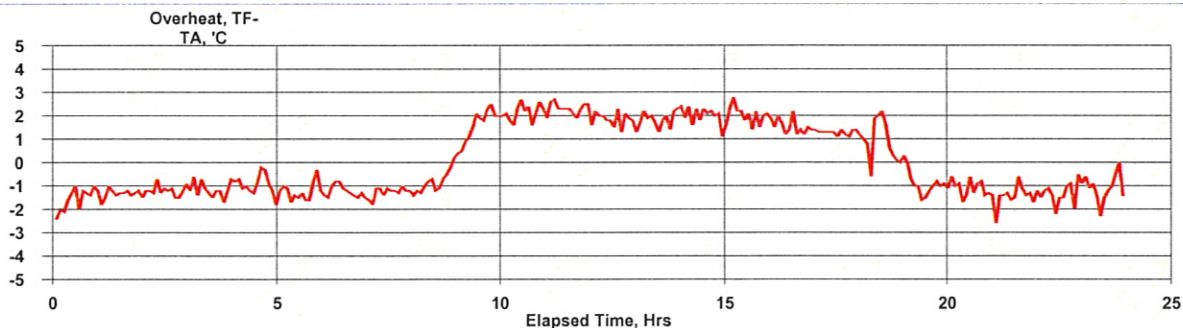
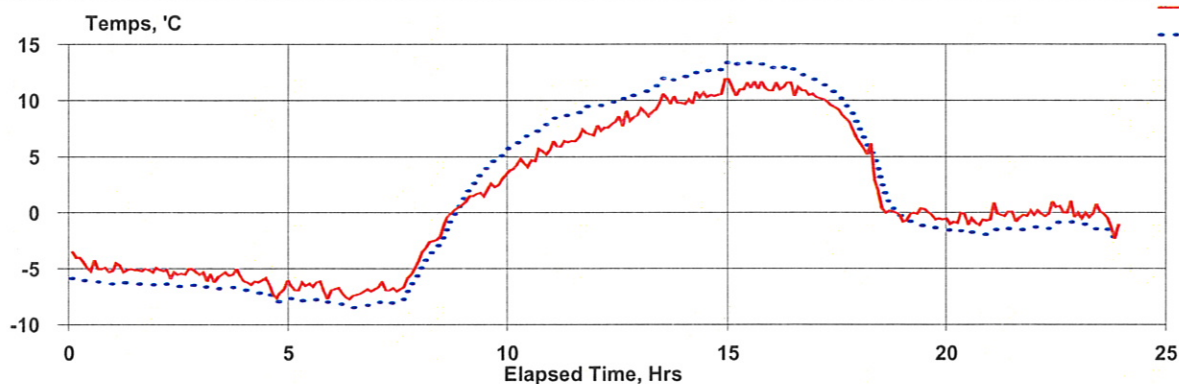
Mass Concentration Data:

Filter ID: 8
Final Wt: mg
Initial Wt: mg
Delta Wt: 0.000 mg
Total Vol: 24.039 m³
Mass Conc: 0 µg/m³

QCV 0.52 %
Max overheat 3.1 °C
occured 24-feb 12:00:29

Notes 1:

Notes 2:



Hourly

16-24-feb	0:04:47	594	-4.6	-6.2	-1.5	29	16.72
16-24-feb	1:04:47	594	-5.0	-6.4	-1.3	29	16.72
16-24-feb	2:04:47	595	-5.3	-6.5	-1.2	29	16.71
16-24-feb	3:04:47	594	-5.6	-6.8	-1.2	29	16.72
16-24-feb	4:04:47	594	-6.5	-7.4	-0.9	30	16.71
16-24-feb	5:04:47	594	-6.7	-7.9	-1.2	29	16.71
16-24-feb	6:04:47	594	-7.1	-8.4	-1.2	29	16.71
16-24-feb	7:04:47	595	-6.2	-7.4	-1.3	29	16.72
16-24-feb	8:04:47	595	-1.3	-2.2	-0.8	30	16.72
16-24-feb	9:04:47	595	2.1	3.7	1.6	31	16.72
16-24-feb	10:04:47	594	4.7	6.9	2.1	32	16.73
16-24-feb	11:04:47	594	6.6	8.9	2.3	32	16.73
16-24-feb	12:04:47	594	8.1	10.0	1.9	32	16.72
16-24-feb	13:04:47	593	9.6	11.4	1.8	33	16.72
16-24-feb	14:04:47	593	10.5	12.5	2.0	33	16.71
16-24-feb	15:04:47	592	11.2	13.2	2.0	33	16.72
16-24-feb	16:04:47	592	11.0	12.6	1.6	33	16.72
16-24-feb	17:04:47	592	9.0	10.3	1.3	32	16.71
16-24-feb	18:04:47	593	2.4	3.3	0.9	32	16.72
16-24-feb	19:04:47	593	-0.2	-1.1	-0.9	31	16.72
16-24-feb	20:04:47	594	-0.7	-1.8	-1.1	31	16.71
16-24-feb	21:04:47	594	-0.1	-1.6	-1.4	31	16.71
16-24-feb	22:04:47	594	0.2	-1.1	-1.3	31	16.70
16-24-feb	23:04:47	594	-0.5	-1.5	-1.1	31	16.71

BGI PQ200 Air Sampling System Downloaded 2016 03 mar 09:35:50

Job Details:

Job Name: 16Mar03D.JOB
Version: 5.62
Serial No: 2366
Pump Time: 159:18
Flags:

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

	Max	Min	Avg	Units
BP	594	591	592	mmHg
TA	17.5	-2	6.6	°C
Q	---	---	16.71	Lpm

QCV 0.53 %
Max overheat 2.9 °C
occured 01-mar 12:35:57

Timer Information:

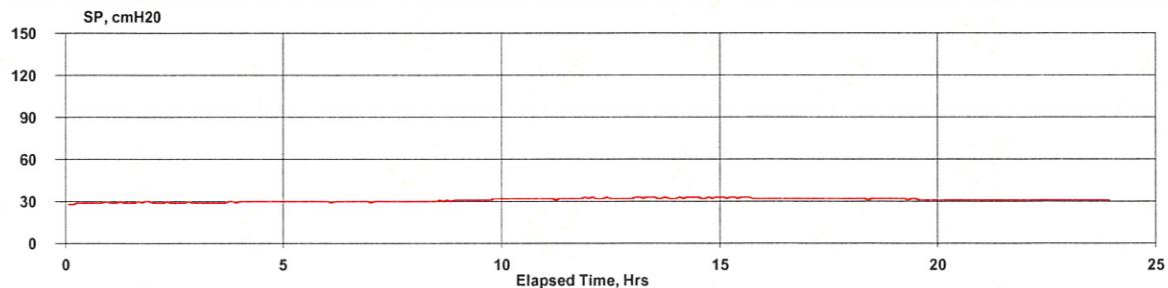
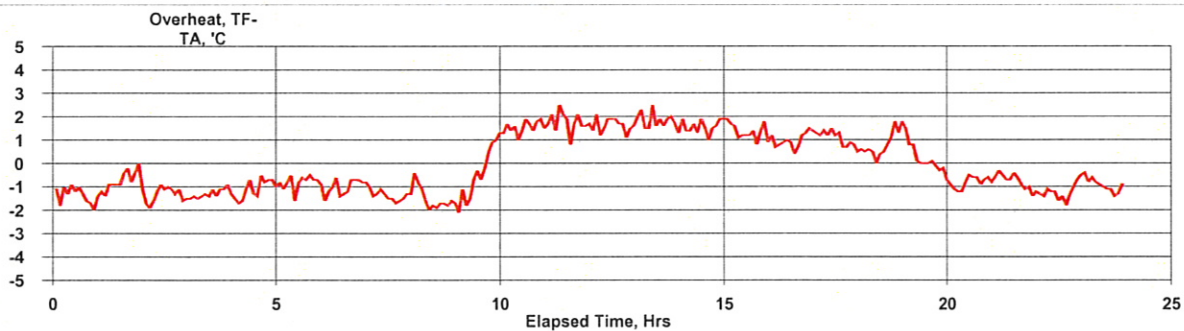
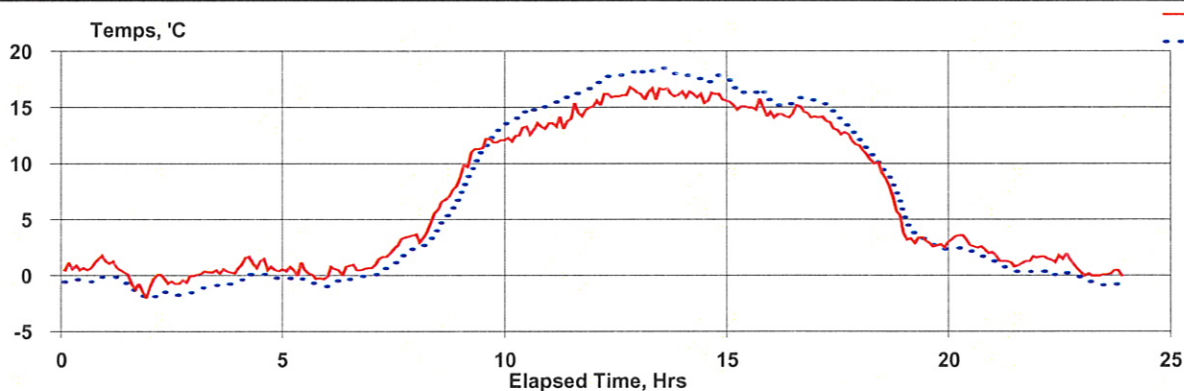
Date Time
dd-mm hh:mm:ss
Start: 16-01-mar 0:00:08
Stop: 16-02-mar 0:00:05
ET: 23:59

Mass Concentration Data:

Filter ID: 14
Final Wt: mg
Initial Wt: mg
Delta Wt: 0.000 mg
Total Vol: 24.035 m³
Mass Conc: 0 µg/m³

Notes 1:

Notes 2:



Hourly

16-01-mar	0:05:08	593	0.9	-0.4	-1.4	29	16.71
16-01-mar	1:05:08	593	-0.3	-1.0	-0.8	29	16.71
16-01-mar	2:05:08	593	-0.3	-1.7	-1.3	29	16.70
16-01-mar	3:05:08	593	0.4	-0.9	-1.3	29	16.71
16-01-mar	4:05:08	593	1.0	-0.1	-1.1	30	16.71
16-01-mar	5:05:08	593	0.2	-0.6	-0.8	30	16.72
16-01-mar	6:05:08	593	0.6	-0.4	-1.0	30	16.71
16-01-mar	7:05:08	594	2.5	1.2	-1.4	30	16.71
16-01-mar	8:05:08	594	6.0	4.5	-1.5	30	16.71
16-01-mar	9:05:08	594	11.4	11.0	-0.4	31	16.72
16-01-mar	10:05:08	594	12.9	14.5	1.6	32	16.72
16-01-mar	11:05:08	593	14.3	16.0	1.8	32	16.70
16-01-mar	12:05:08	593	16.1	17.7	1.6	32	16.70
16-01-mar	13:05:08	592	16.3	18.1	1.8	33	16.71
16-01-mar	14:05:08	592	16.0	17.6	1.6	33	16.70
16-01-mar	15:05:08	592	15.0	16.4	1.4	33	16.71
16-01-mar	16:05:08	592	14.5	15.5	1.0	32	16.70
16-01-mar	17:05:08	592	12.9	14.0	1.1	32	16.71
16-01-mar	18:05:08	592	8.4	9.2	0.8	32	16.71
16-01-mar	19:05:08	593	3.0	3.2	0.2	31	16.71
16-01-mar	20:05:08	593	2.8	2.0	-0.8	31	16.71
16-01-mar	21:05:08	592	1.3	0.5	-0.8	31	16.71
16-01-mar	22:05:08	593	1.3	0.1	-1.2	31	16.71
16-01-mar	23:05:08	592	0.1	-0.8	-0.9	31	16.72

BGI PQ200 Air Sampling System Downloaded 2016 10 mar 12:41:18

Job Details:

Job Name: 16Mar10D.JOB
Version: 5.62
Serial No: 2366
Pump Time: 183:17
Flags:

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

	Max	Min	Avg	Units
BP	584	581	583	mmHg
TA	7.3	-12.1	-1.3	°C
Q	---	---	16.71	Lpm

QCV 0.57 %
Max overheat 3.7 °C
occured 07-mar 10:27:26

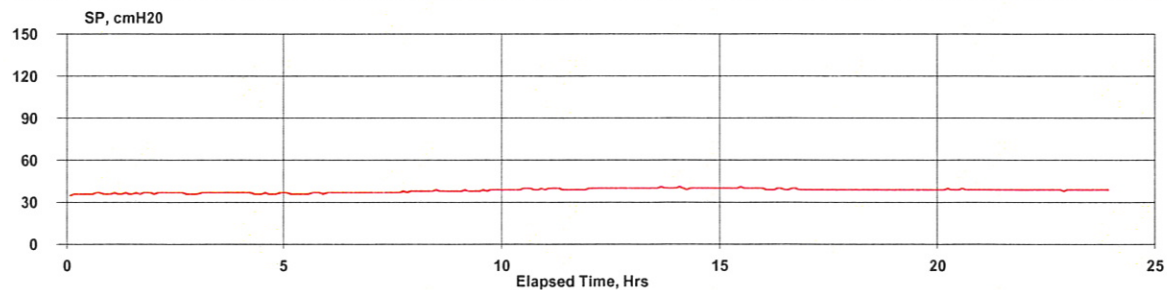
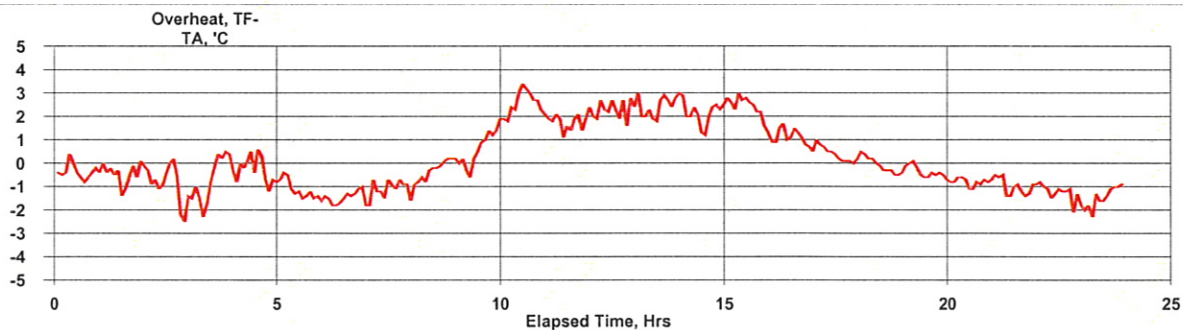
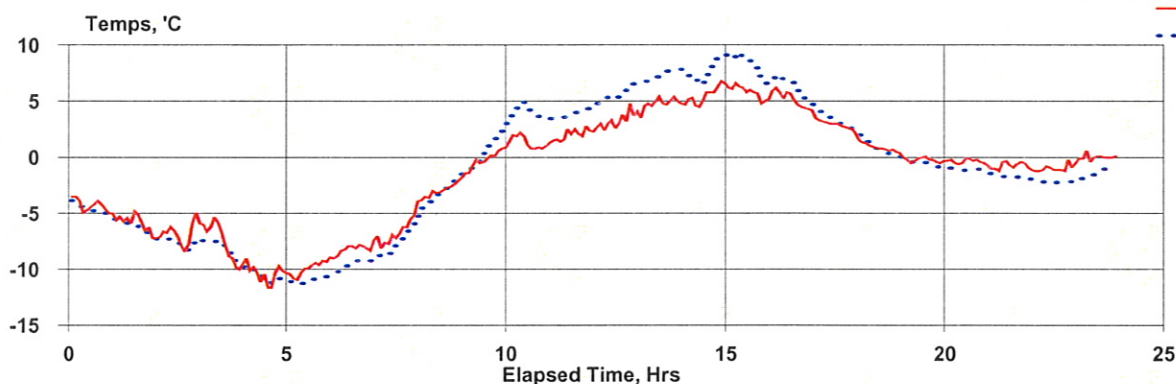
Timer Information:

Date Time
dd-mmm hh:mm:ss
Start: 16-07-mar 0:00:08
Stop: 16-08-mar 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: 24.04 m³
Mass Conc: 0 µg/m³

Notes 1:
Notes 2:



Hourly

16-07-mar	0:05:08	584	-4.3	-4.7	-0.4	36	16.71
16-07-mar	1:05:08	584	-5.9	-6.3	-0.4	37	16.71
16-07-mar	2:05:08	584	-6.7	-7.6	-0.9	37	16.71
16-07-mar	3:05:08	584	-7.6	-8.3	-0.6	37	16.71
16-07-mar	4:05:08	584	-10.4	-10.6	-0.3	37	16.72
16-07-mar	5:05:08	584	-9.8	-11.0	-1.2	36	16.72
16-07-mar	6:05:08	584	-8.1	-9.6	-1.5	37	16.71
16-07-mar	7:05:08	584	-6.5	-7.6	-1.1	37	16.71
16-07-mar	8:05:08	584	-2.9	-3.2	-0.3	38	16.72
16-07-mar	9:05:08	584	-0.2	0.5	0.7	39	16.71
16-07-mar	10:05:08	584	1.3	3.9	2.6	39	16.72
16-07-mar	11:05:08	584	2.1	3.9	1.8	39	16.72
16-07-mar	12:05:08	583	3.3	5.6	2.3	40	16.71
16-07-mar	13:05:08	583	4.8	7.3	2.5	40	16.70
16-07-mar	14:05:08	582	5.5	7.7	2.1	40	16.71
16-07-mar	15:05:08	582	5.8	8.2	2.4	40	16.71
16-07-mar	16:05:08	582	5.2	6.2	1.1	39	16.71
16-07-mar	17:05:08	582	2.9	3.3	0.4	39	16.71
16-07-mar	18:05:08	582	0.9	0.8	-0.1	39	16.73
16-07-mar	19:05:08	583	-0.2	-0.6	-0.4	39	16.73
16-07-mar	20:05:08	583	-0.4	-1.2	-0.8	39	16.71
16-07-mar	21:05:08	583	-0.8	-1.8	-1.0	39	16.71
16-07-mar	22:05:08	583	-0.9	-2.2	-1.3	39	16.71
16-07-mar	23:05:08	584	0.0	-1.4	-1.5	39	16.70

BGI PQ200 Air Sampling System Downloaded 2016 14 mar 15:22:15

Job Details:

Job Name: 16Mar14D.JOB
Version: 5.62
Serial No: 2366
Pump Time: 207:16
Flags:

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

	Max	Min	Avg	Units
BP	590	587	588	mmHg
TA	10	-4.9	2.7	°C
Q	---	---	16.71	Lpm

QCV 0.49 %
Max overheat 2.9 °C
occured 13-mar 13:18:48

Timer Information:

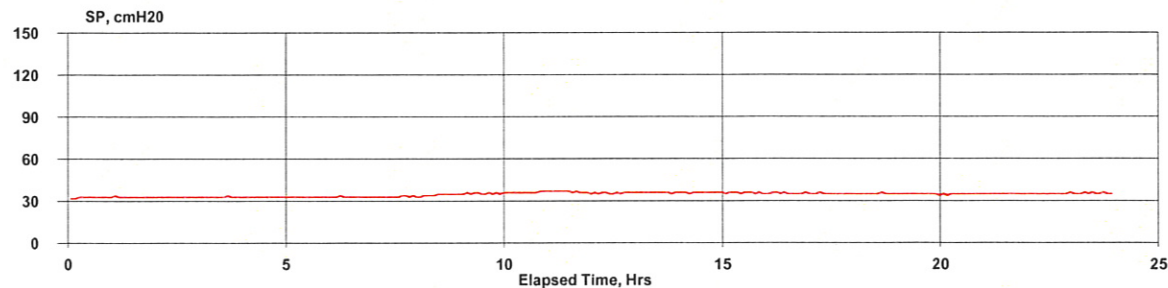
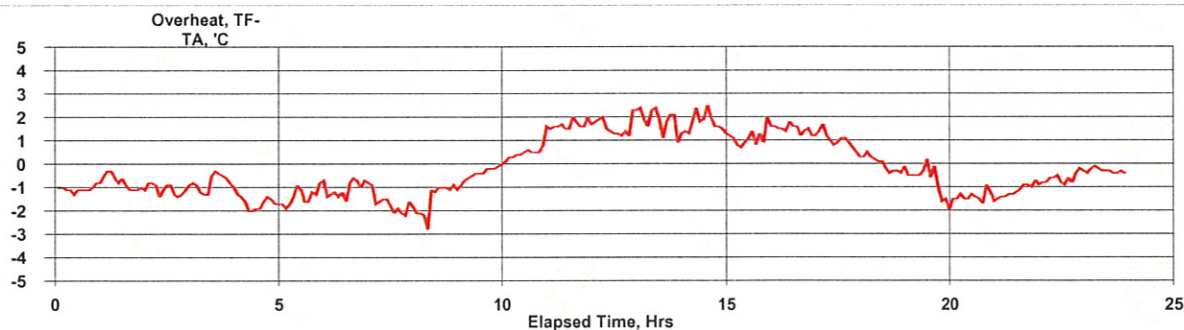
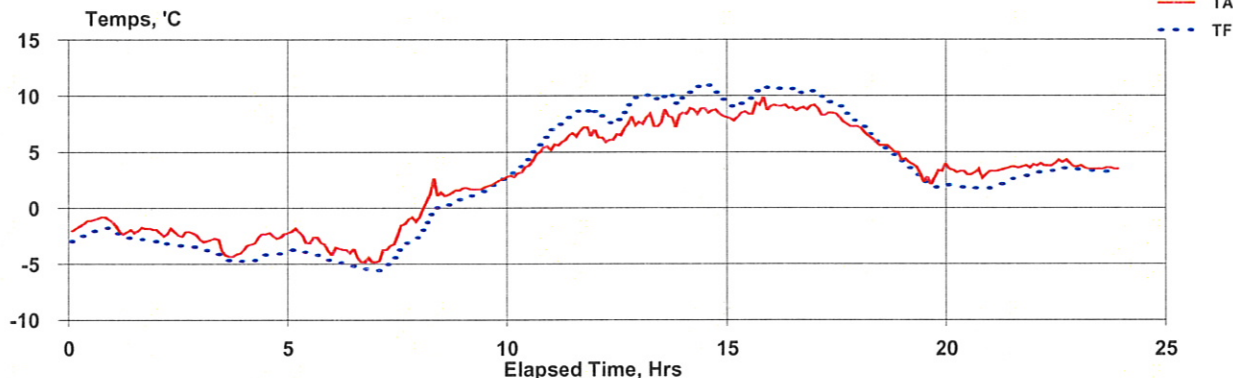
Date Time
dd-mmm hh:mm:ss
Start: 16-13-mar 0:00:08
Stop: 16-14-mar 0:00:04
ET: 23:59

Mass Concentration Data:

Filter ID: 17
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

16-13-mar	0:05:08	590	-1.2	-2.3	-1.0	33	16.72
16-13-mar	1:05:08	590	-1.9	-2.7	-0.8	33	16.72
16-13-mar	2:05:08	589	-2.3	-3.4	-1.1	33	16.72
16-13-mar	3:05:08	590	-3.6	-4.4	-0.8	33	16.72
16-13-mar	4:05:08	589	-2.6	-4.3	-1.7	33	16.71
16-13-mar	5:05:08	589	-2.8	-4.2	-1.3	33	16.71
16-13-mar	6:05:08	589	-4.2	-5.2	-1.1	33	16.71
16-13-mar	7:05:08	590	-2.3	-4.0	-1.7	33	16.72
16-13-mar	8:05:08	590	1.3	-0.2	-1.5	35	16.72
16-13-mar	9:05:08	590	2.1	1.7	-0.4	36	16.72
16-13-mar	10:05:08	590	4.1	4.7	0.5	36	16.71
16-13-mar	11:05:08	589	6.5	8.1	1.7	37	16.73
16-13-mar	12:05:08	589	6.8	8.4	1.6	36	16.72
16-13-mar	13:05:08	588	7.9	9.8	1.8	36	16.73
16-13-mar	14:05:08	588	8.6	10.3	1.8	36	16.72
16-13-mar	15:05:08	588	8.7	9.8	1.2	36	16.72
16-13-mar	16:05:08	587	9.0	10.5	1.5	35	16.72
16-13-mar	17:05:08	587	8.0	9.0	1.0	35	16.69
16-13-mar	18:05:08	587	5.7	5.7	0.0	35	16.74
16-13-mar	19:05:08	588	3.3	2.6	-0.7	35	16.72
16-13-mar	20:05:08	588	3.2	1.8	-1.4	35	16.71
16-13-mar	21:05:08	588	3.6	2.5	-1.1	35	16.71
16-13-mar	22:05:08	588	3.9	3.3	-0.6	35	16.70
16-13-mar	23:05:08	588	3.6	3.3	-0.3	35	16.70

BGI PQ200 Air Sampling System Downloaded 2016 22 mar 15:01:16

Job Details:

Job Name: 16Mar22D.JOB
Version: 5.62
Serial No: 2366
Pump Time: 231:15
Flags:

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

	Max	Min	Avg	Units
BP	593	590	591	mmHg
TA	18.7	-2.2	7	°C
Q	---	---	16.71	Lpm

Timer Information:

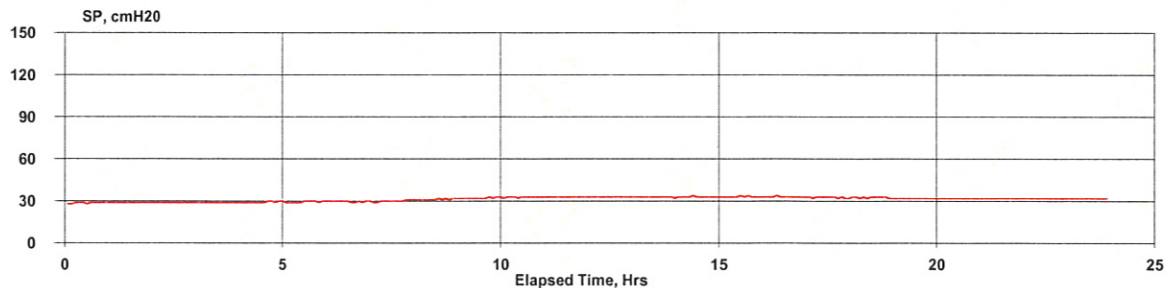
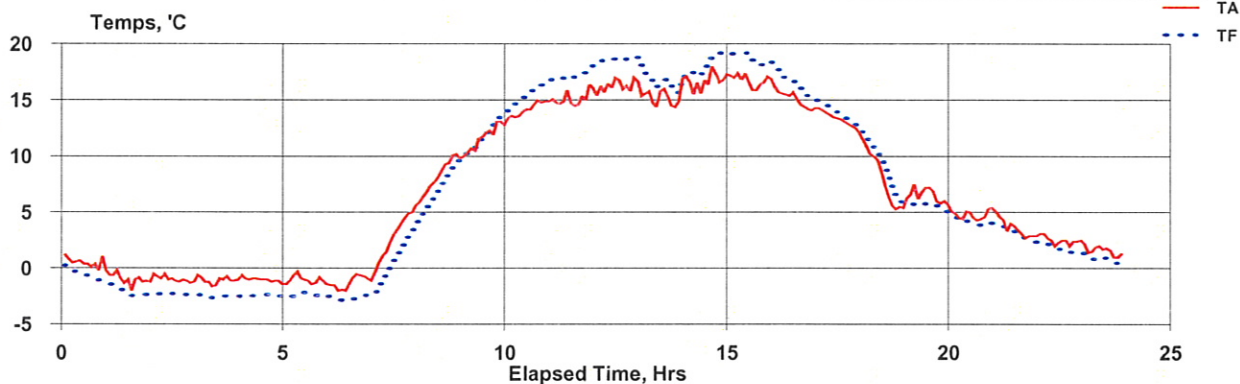
Date Time
dd-mmm hh:mm:ss
Start: 16-19-mar 0:00:08
Stop: 16-20-mar 0:00:05
ET: 23:59

Mass Concentration Data:

Filter ID: 22
Final Wt: mg
Initial Wt: mg
Delta Wt: 0.000 mg
Total Vol: 24.033 m³
Mass Conc: 0 µg/m³

QCV 0.51 %
Max overheat 4.9 °C
occured 22-mar 12:19:50

Notes 1:
Notes 2:



Hourly

16-19-mar	0:05:08	591	0.5	-0.6	-1.1	29	16.70
16-19-mar	1:05:08	591	-1.0	-2.1	-1.2	29	16.71
16-19-mar	2:05:08	591	-1.0	-2.4	-1.4	29	16.70
16-19-mar	3:05:08	591	-1.1	-2.6	-1.5	29	16.72
16-19-mar	4:05:08	591	-1.0	-2.5	-1.5	29	16.71
16-19-mar	5:05:08	592	-1.0	-2.4	-1.4	30	16.73
16-19-mar	6:05:08	592	-1.2	-2.7	-1.5	30	16.72
16-19-mar	7:05:08	592	3.0	0.8	-2.2	30	16.71
16-19-mar	8:05:08	592	8.3	7.1	-1.3	31	16.72
16-19-mar	9:05:08	592	11.7	11.8	0.1	32	16.71
16-19-mar	10:05:08	592	14.2	15.5	1.2	33	16.70
16-19-mar	11:05:08	592	15.2	17.2	2.0	33	16.72
16-19-mar	12:05:08	591	16.3	18.6	2.3	33	16.69
16-19-mar	13:05:08	591	15.3	16.6	1.3	33	16.71
16-19-mar	14:05:08	591	16.7	18.1	1.4	33	16.70
16-19-mar	15:05:08	591	16.8	18.7	1.9	33	16.73
16-19-mar	16:05:08	591	15.1	16.4	1.3	33	16.71
16-19-mar	17:05:08	591	13.3	13.8	0.5	33	16.72
16-19-mar	18:05:08	591	8.1	9.1	1.0	33	16.71
16-19-mar	19:05:08	591	6.5	5.5	-1.0	32	16.70
16-19-mar	20:05:08	592	4.8	4.1	-0.7	32	16.71
16-19-mar	21:05:08	592	3.6	3.1	-0.4	32	16.72
16-19-mar	22:05:08	592	2.5	1.8	-0.7	32	16.72
16-19-mar	23:05:08	592	1.6	0.8	-0.8	32	16.71

BGI PQ200 Air Sampling System Downloaded 2016 28 mar 15:44:14

Job Details:

Job Name: 16Mar28D.JOB
Version: 5.62
Serial No: 2366
Pump Time: 255:14
Flags:

Job Code:

Site Name:
Station Code:
Operators:

User1: yyyyyyyyyyyyyyyyyyyyyyyyyyyyyyy

User2: yyyyyyyyyyyyyyyyyyyyyyyyyyyyyyy

	Max	Min	Avg	Units
BP	588	584	585	mmHg
TA	13.3	-6	3.9	°C
Q	---	---	16.71	Lpm

Timer Information:

Date Time
dd-mmm hh:mm:ss
Start: 16-25-mar 0:00:08
Stop: 16-26-mar 0:00:05
ET: 23:59

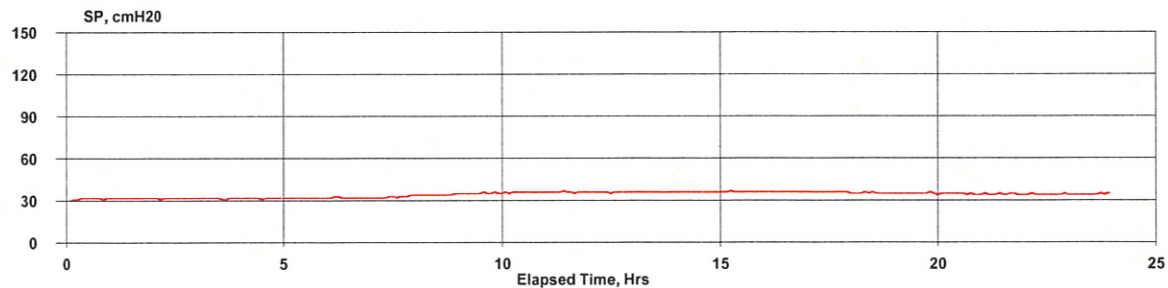
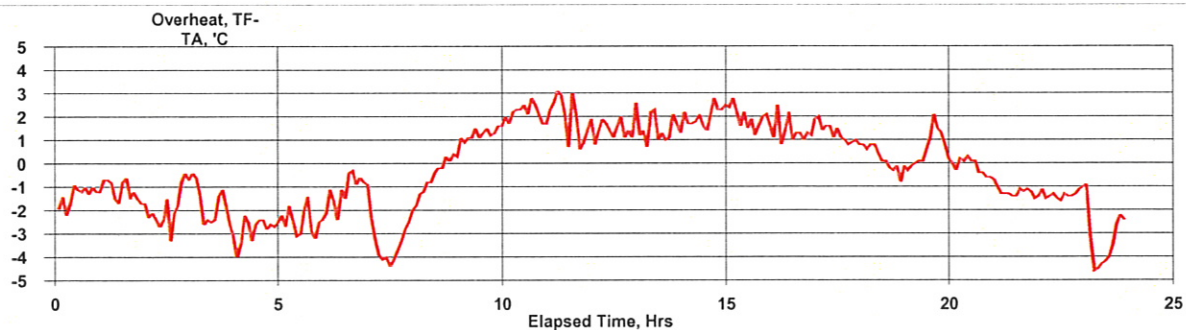
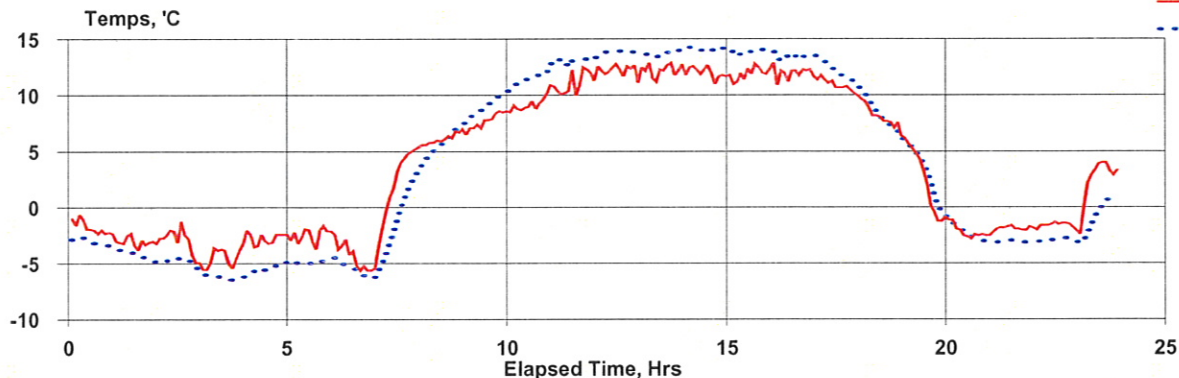
Mass Concentration Data:

Filter ID: 27
Final Wt: mg
Initial Wt: mg
Delta Wt: 0.000 mg
Total Vol: 24.038 m³
Mass Conc: 0 µg/m³

QCV 0.55 %
Max overheat 3.6 °C
occured 25-mar 14:43:58

Notes 1:

Notes 2:



Hourly

16-25-mar	0:05:08	588	-1.8	-3.1	-1.3	32	16.72
16-25-mar	1:05:08	588	-3.1	-4.3	-1.2	32	16.71
16-25-mar	2:05:08	588	-3.0	-4.8	-1.9	32	16.72
16-25-mar	3:05:08	587	-4.4	-6.3	-1.9	32	16.71
16-25-mar	4:05:08	587	-2.7	-5.5	-2.8	32	16.71
16-25-mar	5:05:08	587	-2.5	-4.9	-2.5	32	16.72
16-25-mar	6:05:08	587	-4.4	-5.6	-1.1	32	16.70
16-25-mar	7:05:08	587	2.4	-0.9	-3.4	33	16.72
16-25-mar	8:05:08	587	6.2	5.7	-0.5	34	16.70
16-25-mar	9:05:08	587	7.7	9.0	1.3	35	16.71
16-25-mar	10:05:08	587	9.3	11.4	2.2	36	16.73
16-25-mar	11:05:08	586	11.1	13.1	2.0	36	16.72
16-25-mar	12:05:08	586	12.2	13.8	1.5	36	16.72
16-25-mar	13:05:08	586	12.3	13.7	1.4	36	16.70
16-25-mar	14:05:08	585	12.0	14.1	2.0	36	16.71
16-25-mar	15:05:08	585	11.9	13.9	1.9	36	16.72
16-25-mar	16:05:08	584	12.0	13.4	1.4	36	16.72
16-25-mar	17:05:08	584	10.9	12.1	1.2	36	16.71
16-25-mar	18:05:08	584	8.1	8.2	0.2	35	16.71
16-25-mar	19:05:08	585	2.4	3.0	0.6	35	16.71
16-25-mar	20:05:08	585	-2.2	-2.4	-0.2	35	16.72
16-25-mar	21:05:08	584	-1.9	-3.1	-1.3	34	16.73
16-25-mar	22:05:08	584	-1.6	-2.9	-1.3	34	16.72
16-25-mar	23:05:08	584	2.5	-0.8	-3.3	34	16.72

Collocated Monitor 2398E

PM₁₀ Sampler Summary

January 1, 2016 - March 31, 2016

Network: Alton Coal Development

Site: Coal Hollow

Sampler ID: Coal Hollow-E

Sampler Type: BGI FRM Single

AQS ID:

Date	Filter ID	Concentration (µg/m3)	Concentration (µg/m3)	Sample Period (hr:min)	Sample Volume (m3)	Std Volume (m3)	Mass (mg)			Flag	Comments
		LTP	STP				Tare	Gross	Net		
02/18/16	P2928308	Invalid - AN	Invalid - AN				379.821	379.955	0.134	SP	First run
02/24/16	P2928409	10.7	12.7	24:00	24.0	20.4	367.081	367.340	0.259		
03/01/16	P2928412	5.2	6.2	23:59	24.0	19.9	378.847	378.972	0.125		
03/07/16	P2928780	2.7	3.3	23:59	24.0	20.2	380.582	380.649	0.067		
03/13/16	P2928785	5.0	6.0	23:59	24.0	20.1	378.529	378.651	0.122		
03/19/16	P2928790	3.0	3.6	23:59	24.0	19.9	389.956	390.029	0.073		
03/25/16	P2928996	6.2	7.5	23:59	24.0	19.9	353.867	354.017	0.150		
03/31/16	P2929001	1.8	2.1	23:59	24.0	20.1	380.367	380.411	0.044		
# Valid		Recovery	Average	St. Dev.	Max	Min					
7		88%	5.9	3.5	12.7	2.1					

BGI PQ200 Air Sampling System Downloaded 2016 19 feb 11:30:14

Job Details:

Job Name: 16Feb19E.JOB
Version: 5.62
Serial No: 2398
Pump Time: 94:56
Flags:

Job Code:

Site Name:

Station Code:

Operators:

User1: ~~~~~

User2: ~~~~~

	Max	Min	Avg	Units
BP	591	584	586	mmHg
TA	9.8	-2.6	4.3	°C
Q	---	---	16.7	Lpm

QCV 0.47 %
Max overheat 1.3 °C
occured 18-feb 16:40:30

Timer Information:

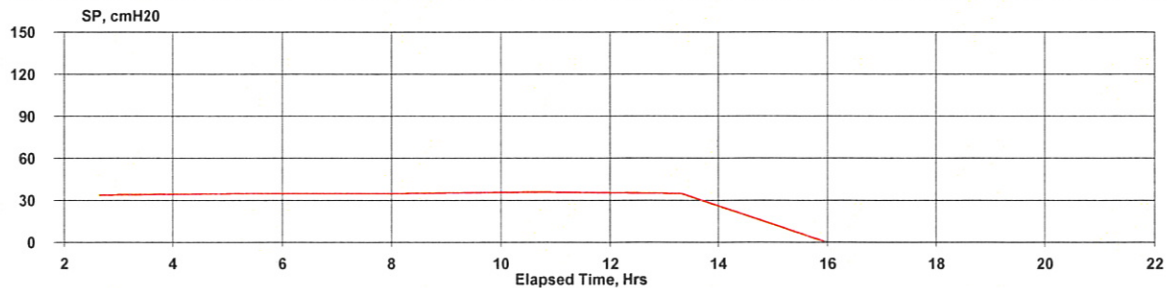
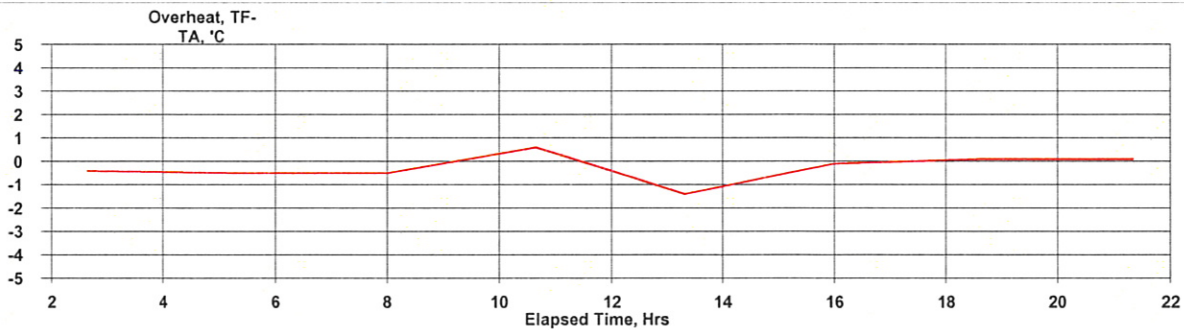
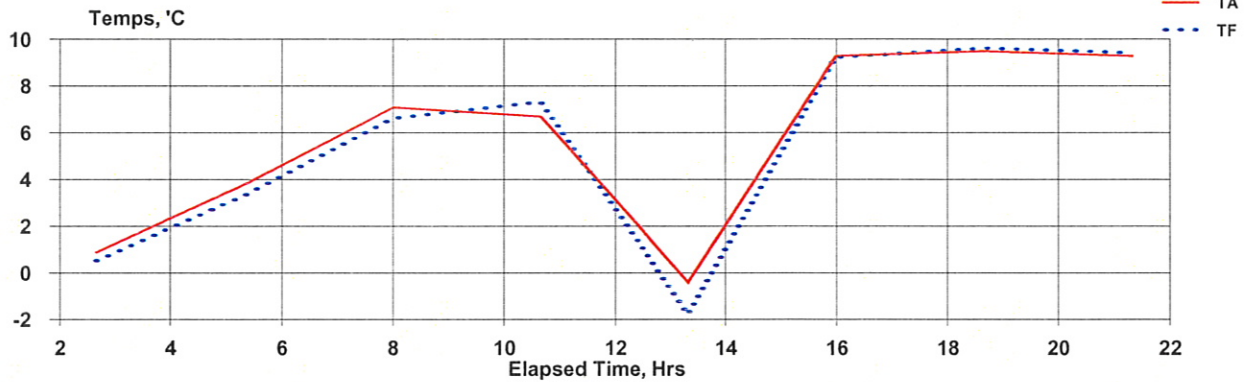
Date	Time
dd-mm	hh:mm:ss
Start: 16-18-feb	0:00:08
Stop: 16-19-feb	0:00:04
ET: 23:59	

Mass Concentration Data:

Filter ID:	19
Final Wt:	mg
Initial Wt:	mg
Delta Wt:	0.000 mg
Total Vol:	24.037 m ³
Mass Conc:	0 µg/m ³

Notes 1:

Notes 2:



Hourly

16-18-feb	4:15:08	587	0.9	0.5	-0.4	34	16.72
16-18-feb	8:30:08	586	3.8	3.3	-0.5	35	16.72
16-18-feb	12:45:08	585	7.1	6.6	-0.5	35	16.67
16-18-feb	17:00:08	588	6.7	7.3	0.6	36	16.70
16-18-feb	21:15:08	591	6.9	6.6	-0.3	9	4.17

BGI PQ200 Air Sampling System Downloaded 2016 19 feb 11:30:14

Job Details:

Job Name: 16Feb19E.JOB
Version: 5.62
Serial No: 2398
Pump Time: 94:56
Flags:

Job Code:

Site Name:

Station Code:

Operators:

User1: yyyyyyyyyyyyyyyyyyyyyyyyyyy

User2: yyyyyyyyyyyyyyyyyyyyyyy

	Max	Min	Avg	Units
BP	591	584	586	mmHg
TA	9.8	-2.6	4.3	°C
Q	---	---	16.7	Lpm

Timer Information:

Date Time
dd-mmm hh:mm:ss
Start: 16-18-feb 0:00:08
Stop: 16-19-feb 0:00:04
ET: 23:59

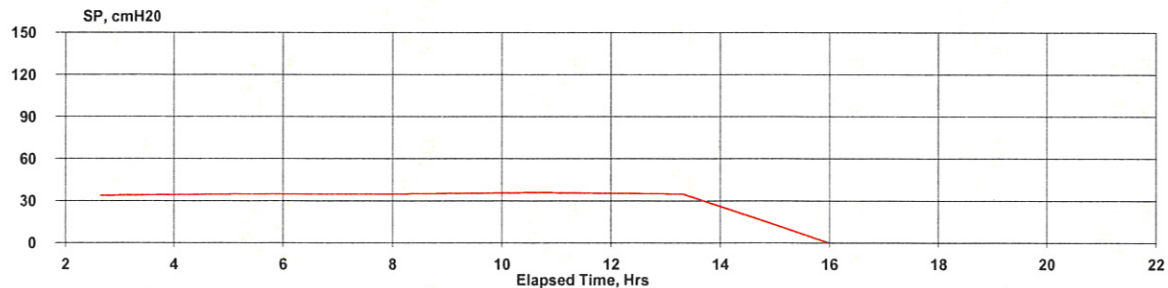
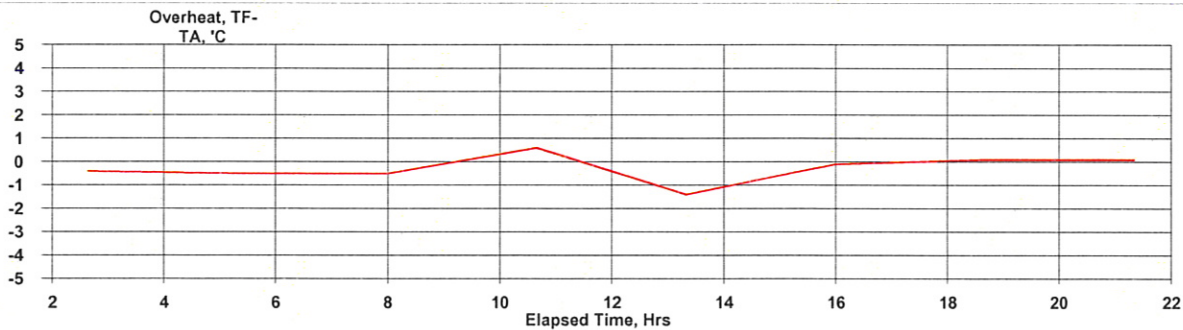
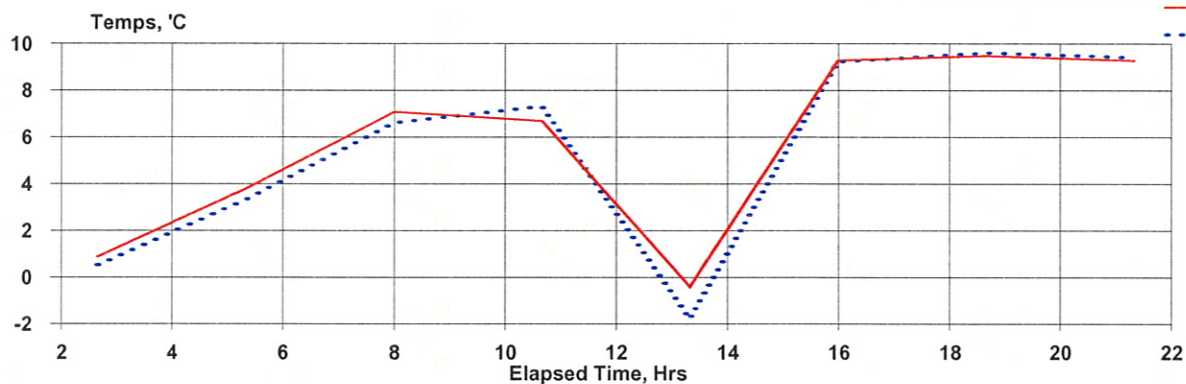
Mass Concentration Data:

Filter ID: 19
Final Wt: mg
Initial Wt: mg
Delta Wt: 0.000 mg
Total Vol: 24.037 m³
Mass Conc: 0 µg/m³

QCV 0.47 %
Max overheat 1.3 °C
occured 18-feb 16:40:30

Notes 1:

Notes 2:



Hourly

16-18-feb	4:15:08	587	0.9	0.5	-0.4	34	16.72
16-18-feb	8:30:08	586	3.8	3.3	-0.5	35	16.72
16-18-feb	12:45:08	585	7.1	6.6	-0.5	35	16.67
16-18-feb	17:00:08	588	6.7	7.3	0.6	36	16.70
16-18-feb	21:15:08	591	6.9	6.6	-0.3	9	4.17

BGI PQ200 Air Sampling System Downloaded 2016 03 mar 09:37:08

Job Details:

Job Name: 16Mar03E.JOB
Version: 5.62
Serial No: 2398
Pump Time: 142:55
Flags:

Job Code:

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

	Max	Min	Avg	Units
BP	594	591	592	mmHg
TA	17.8	-1.8	6.7	°C
Q	---	---	16.7	Lpm

Timer Information:

Date Time
dd-mmm hh:mm:ss
Start: 16-01-mar 0:00:08
Stop: 16-02-mar 0:00:05
ET: 23:59

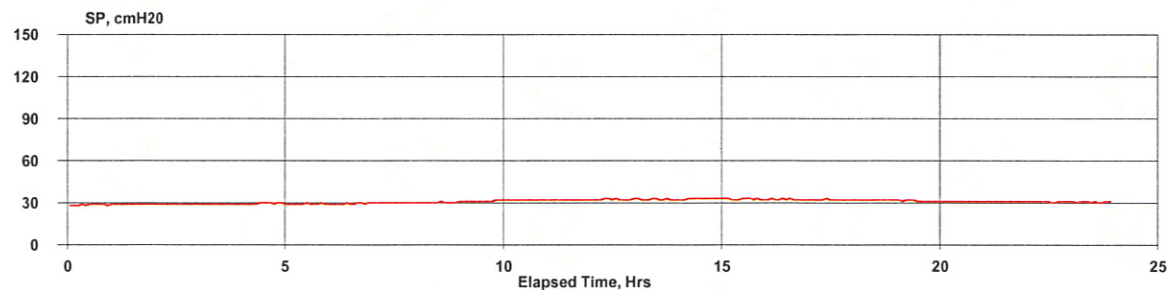
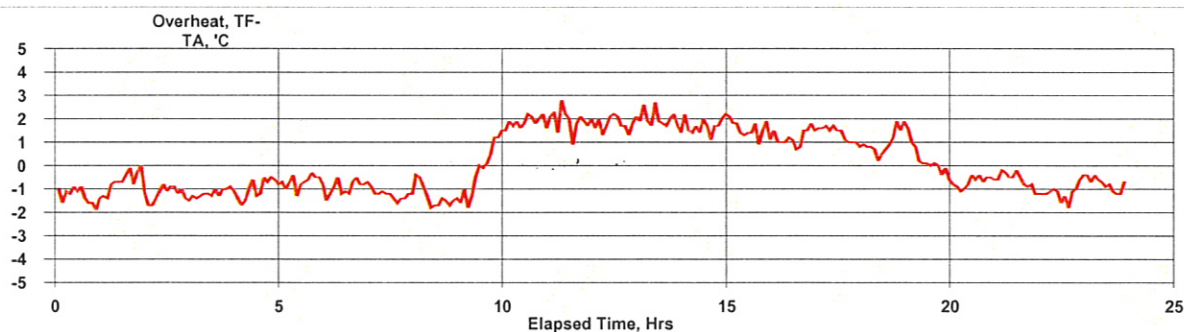
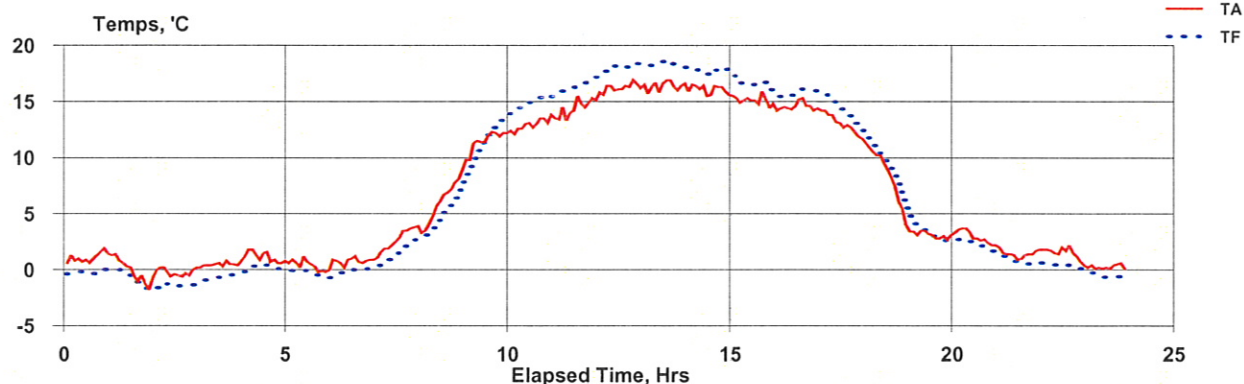
Mass Concentration Data:

Filter ID: 15
Final Wt: mg
Initial Wt: mg
Delta Wt: 0.000 mg
Total Vol: 24.032 m³
Mass Conc: 0 µg/m³

QCV 0.51 %
Max overheat 3.2 °C
occured 01-mar 13:24:06

Notes 1:

Notes 2:



Hourly

16-01-mar	0:05:08	592	1.1	-0.2	-1.3	29	16.71
16-01-mar	1:05:08	593	-0.1	-0.8	-0.7	29	16.71
16-01-mar	2:05:08	592	-0.2	-1.4	-1.2	29	16.71
16-01-mar	3:05:08	592	0.5	-0.7	-1.2	29	16.70
16-01-mar	4:05:08	592	1.1	0.2	-1.0	30	16.71
16-01-mar	5:05:08	593	0.4	-0.3	-0.7	29	16.71
16-01-mar	6:05:08	593	0.8	-0.1	-0.9	29	16.71
16-01-mar	7:05:08	593	2.7	1.5	-1.3	30	16.71
16-01-mar	8:05:08	594	6.1	4.8	-1.3	30	16.71
16-01-mar	9:05:08	594	11.5	11.4	-0.2	31	16.71
16-01-mar	10:05:08	594	13.0	14.8	1.9	32	16.70
16-01-mar	11:05:08	594	14.4	16.4	1.9	32	16.70
16-01-mar	12:05:08	593	16.2	18.0	1.8	32	16.70
16-01-mar	13:05:08	593	16.4	18.4	2.0	32	16.70
16-01-mar	14:05:08	592	16.1	17.8	1.7	33	16.70
16-01-mar	15:05:08	592	15.1	16.7	1.5	33	16.71
16-01-mar	16:05:08	592	14.6	15.8	1.2	32	16.71
16-01-mar	17:05:08	592	13.0	14.4	1.3	32	16.72
16-01-mar	18:05:08	593	8.5	9.5	1.0	32	16.71
16-01-mar	19:05:08	593	3.1	3.4	0.2	31	16.70
16-01-mar	20:05:08	592	3.0	2.3	-0.7	31	16.70
16-01-mar	21:05:08	592	1.4	0.8	-0.6	31	16.70
16-01-mar	22:05:08	592	1.5	0.4	-1.1	31	16.71
16-01-mar	23:05:08	592	0.3	-0.5	-0.8	31	16.71

BGI PQ200 Air Sampling System Downloaded 2016 10 mar 12:43:11

Job Details:

Job Name: 16Mar10E.JOB
Version: 5.62
Serial No: 2398
Pump Time: 166:54
Flags:

Job Code:

Site Name:
Station Code:
Operators:

User1: yyyyyyyyyyyyyyyyyyyyyyyyyyy

User2: yyyyyyyyyyyyyyyyyyyyyyy

	Max	Min	Avg	Units
BP	584	581	582	mmHg
TA	7.3	-11.7	-1.2	°C
Q	---	---	16.7	Lpm

Timer Information:

Date Time
dd-mmm hh:mm:ss
Start: 16-07-mar 0:00:08
Stop: 16-08-mar 0:00:05
ET: 23:59

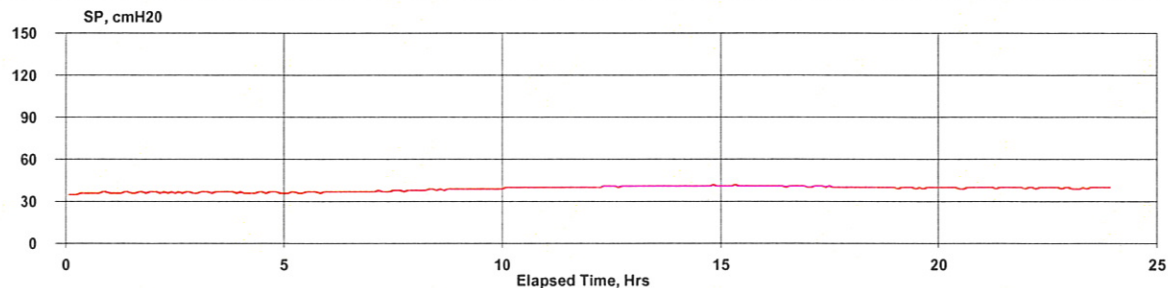
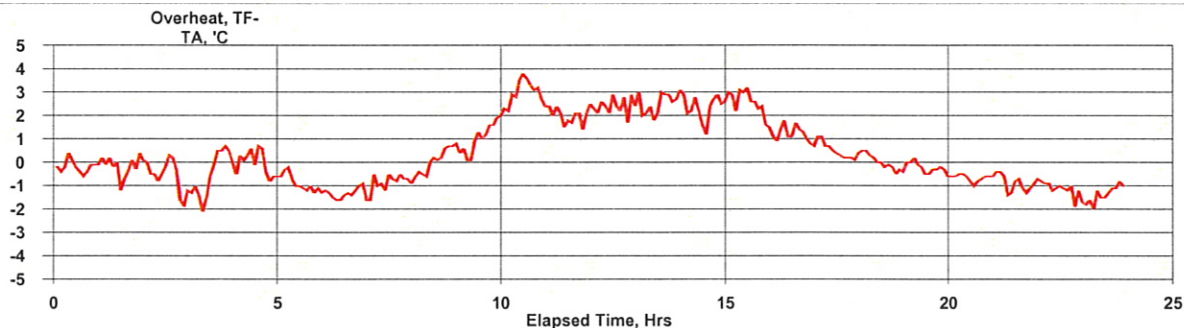
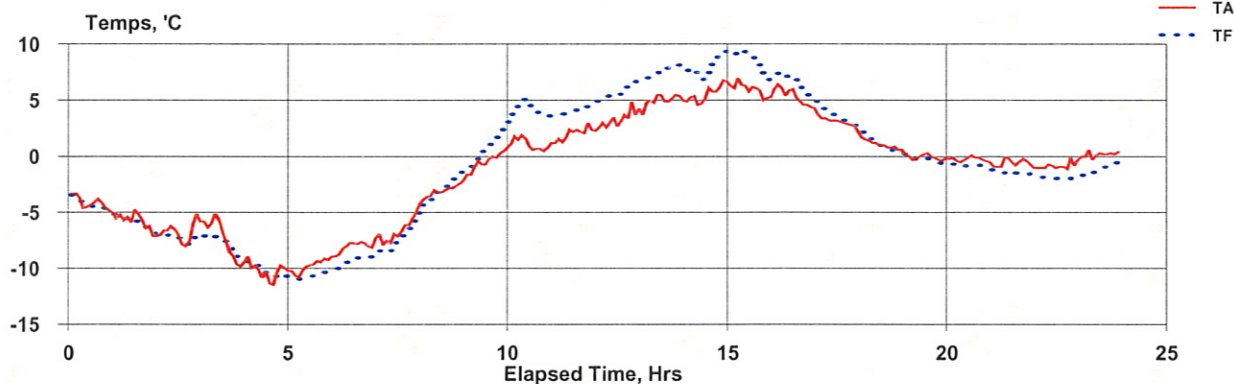
Mass Concentration Data:

Filter ID: 10
Final Wt: mg
Initial Wt: mg
Delta Wt: 0.000 mg
Total Vol: 24.04 m³
Mass Conc: 0 µg/m³

QCV 0.57 %
Max overheat 4.1 °C
occured 07-mar 10:27:28

Notes 1:

Notes 2:



Hourly

16-07-mar	0:05:08	583	-4.2	-4.4	-0.2	36	16.70
16-07-mar	1:05:08	583	-5.8	-6.0	-0.2	37	16.72
16-07-mar	2:05:08	583	-6.7	-7.3	-0.6	37	16.72
16-07-mar	3:05:08	583	-7.4	-7.9	-0.5	37	16.71
16-07-mar	4:05:08	583	-10.2	-10.2	0.0	36	16.71
16-07-mar	5:05:08	583	-9.7	-10.6	-0.9	37	16.72
16-07-mar	6:05:08	583	-8.0	-9.3	-1.3	37	16.71
16-07-mar	7:05:08	583	-6.5	-7.3	-0.8	38	16.71
16-07-mar	8:05:08	583	-3.0	-2.9	0.1	39	16.71
16-07-mar	9:05:08	584	-0.4	0.7	1.1	39	16.71
16-07-mar	10:05:08	584	1.1	4.1	3.0	40	16.70
16-07-mar	11:05:08	584	2.1	4.1	2.0	40	16.71
16-07-mar	12:05:08	583	3.4	5.8	2.4	41	16.71
16-07-mar	13:05:08	583	5.0	7.6	2.6	41	16.70
16-07-mar	14:05:08	582	5.6	8.0	2.3	41	16.71
16-07-mar	15:05:08	582	6.0	8.5	2.5	41	16.71
16-07-mar	16:05:08	582	5.3	6.5	1.2	41	16.71
16-07-mar	17:05:08	582	3.1	3.6	0.5	40	16.71
16-07-mar	18:05:08	582	1.1	1.0	0.0	40	16.71
16-07-mar	19:05:08	582	-0.1	-0.3	-0.2	40	16.70
16-07-mar	20:05:08	582	-0.2	-0.9	-0.7	40	16.70
16-07-mar	21:05:08	583	-0.6	-1.5	-0.9	40	16.70
16-07-mar	22:05:08	583	-0.8	-2.0	-1.2	40	16.71
16-07-mar	23:05:08	583	0.2	-1.2	-1.4	40	16.71

BGI PQ200 Air Sampling System Downloaded 2016 14 mar 15:23:25

Job Details:

Job Name: 16Mar14E.JOB
Version: 5.62
Serial No: 2398
Pump Time: 190:53
Flags:

Job Code:

Site Name:

Station Code:

Operators:

User1: yyyyyyyyyyyyyyyyyyyyyyyyyyy

User2: yyyyyyyyyyyyyyyyyyyyyyy

	Max	Min	Avg	Units
BP	590	587	588	mmHg
TA	10.1	-4.8	2.9	°C
Q	---	---	16.71	Lpm

Timer Information:

Date	Time
dd-mmm	hh:mm:ss
Start: 16-13-mar	0:00:08
Stop: 16-14-mar	0:00:05
ET: 23:59	

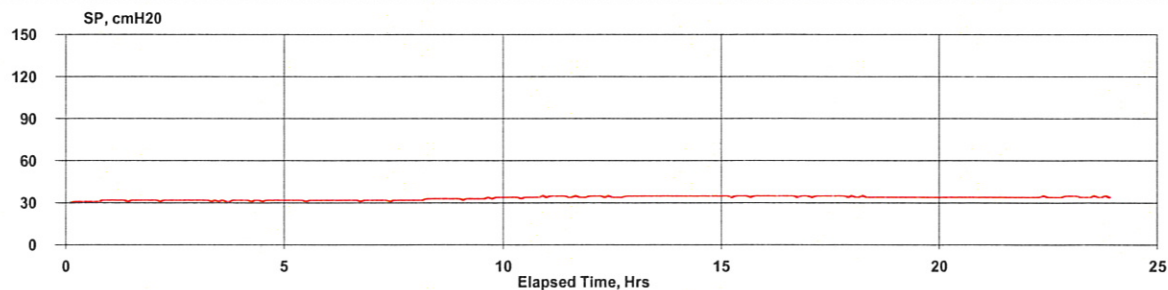
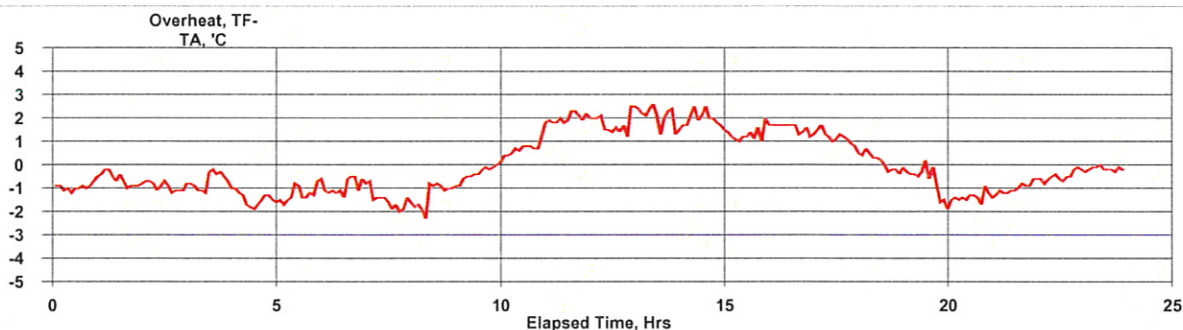
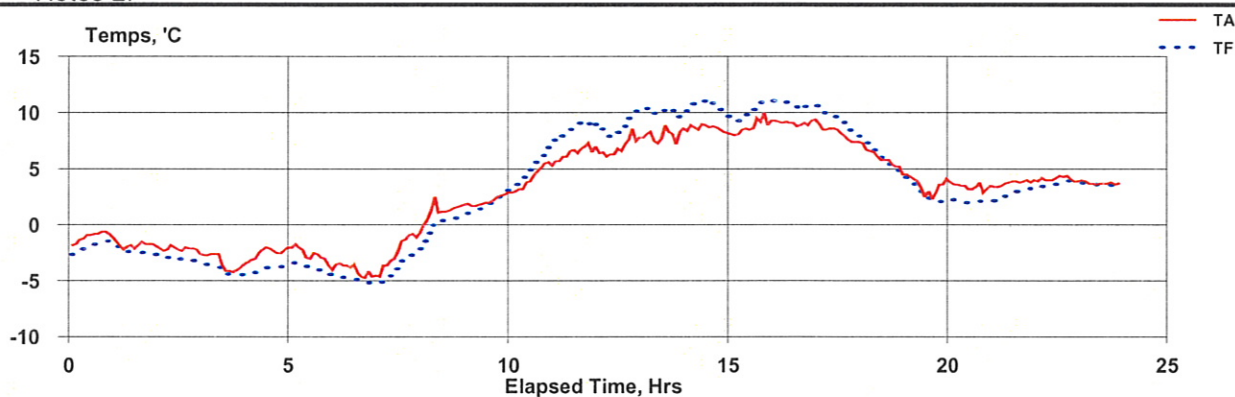
Mass Concentration Data:

Filter ID:	18
Final Wt:	mg
Initial Wt:	mg
Delta Wt:	0.000 mg
Total Vol:	24.036 m ³
Mass Conc:	0 µg/m ³

QCV 0.44 %
Max overheat 3 °C
occured 13-mar 13:18:38

Notes 1:

Notes 2:



Hourly

16-13-mar	0:05:08	589	-1.0	-2.0	-0.9	31	16.70
16-13-mar	1:05:08	589	-1.8	-2.4	-0.6	32	16.72
16-13-mar	2:05:08	589	-2.2	-3.1	-0.9	32	16.72
16-13-mar	3:05:08	589	-3.4	-4.1	-0.7	32	16.72
16-13-mar	4:05:08	589	-2.5	-4.0	-1.5	32	16.71
16-13-mar	5:05:08	589	-2.7	-3.9	-1.2	32	16.70
16-13-mar	6:05:08	589	-4.0	-5.0	-0.9	32	16.71
16-13-mar	7:05:08	589	-2.2	-3.8	-1.5	32	16.71
16-13-mar	8:05:08	589	1.3	0.1	-1.3	33	16.72
16-13-mar	9:05:08	590	2.2	1.8	-0.3	33	16.72
16-13-mar	10:05:08	590	4.2	5.0	0.8	34	16.69
16-13-mar	11:05:08	589	6.5	8.5	2.0	35	16.70
16-13-mar	12:05:08	589	7.0	8.8	1.8	35	16.71
16-13-mar	13:05:08	589	8.0	10.1	2.1	35	16.72
16-13-mar	14:05:08	588	8.6	10.6	2.0	35	16.72
16-13-mar	15:05:08	588	8.8	10.1	1.3	35	16.70
16-13-mar	16:05:08	587	9.1	10.7	1.6	35	16.70
16-13-mar	17:05:08	587	8.1	9.3	1.1	35	16.69
16-13-mar	18:05:08	587	5.9	6.0	0.1	34	16.70
16-13-mar	19:05:08	587	3.5	2.8	-0.7	34	16.71
16-13-mar	20:05:08	588	3.4	2.1	-1.4	34	16.71
16-13-mar	21:05:08	588	3.8	2.8	-1.0	34	16.71
16-13-mar	22:05:08	588	4.1	3.6	-0.5	34	16.71
16-13-mar	23:05:08	588	3.7	3.6	-0.2	34	16.71

BGI PQ200 Air Sampling System Downloaded 2016 22 mar 15:02:32

Job Details:

Job Name: 16Mar22E.JOB
Version: 5.62
Serial No: 2398
Pump Time: 214:52
Flags:

Job Code:

Site Name:

Station Code:

Operators:

User1: yyyyyyyyyyyyyyyyyyyyyyyyyyy

User2: yyyyyyyyyyyyyyyyyyyyyyyyyyy

	Max	Min	Avg	Units
BP	593	589	591	mmHg
TA	18.8	-2.1	7.2	°C
Q	---	---	16.71	Lpm

Timer Information:

Date	Time
dd-mmm	hh:mm:ss
Start: 16-19-mar	0:00:08
Stop: 16-20-mar	0:00:05
ET: 23:59	

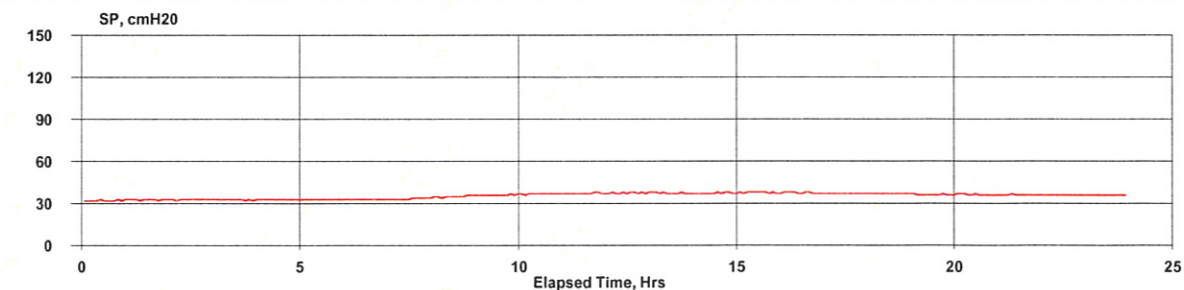
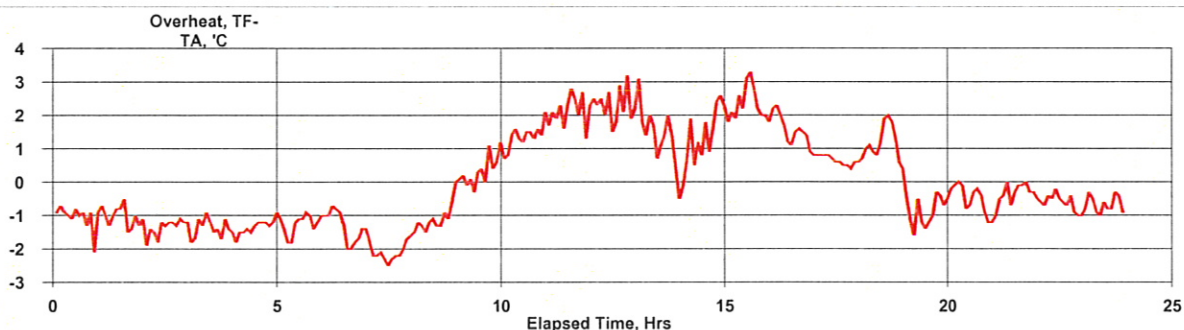
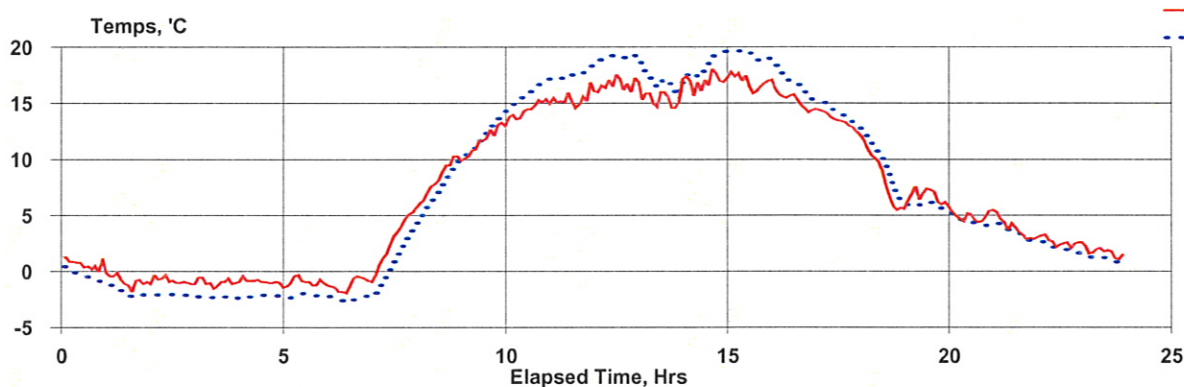
Mass Concentration Data:

Filter ID:	23
Final Wt:	mg
Initial Wt:	mg
Delta Wt:	0.000 mg
Total Vol:	24.041 m ³
Mass Conc:	0 ug/m ³

QCV 0.54 %
Max overheat 5.2 °C
occured 22-mar 12:18:58

Notes 1:

Notes 2:



Hourly

16-19-mar	0:05:08	591	0.6	-0.4	-1.0	32	16.71
16-19-mar	1:05:08	591	-0.9	-1.9	-1.0	33	16.71
16-19-mar	2:05:08	591	-0.8	-2.2	-1.4	33	16.71
16-19-mar	3:05:08	591	-0.9	-2.3	-1.4	33	16.71
16-19-mar	4:05:08	591	-0.9	-2.2	-1.3	33	16.71
16-19-mar	5:05:08	591	-0.9	-2.2	-1.3	33	16.72
16-19-mar	6:05:08	591	-1.1	-2.4	-1.3	33	16.72
16-19-mar	7:05:08	592	3.1	1.0	-2.1	34	16.71
16-19-mar	8:05:08	592	8.5	7.4	-1.1	35	16.71
16-19-mar	9:05:08	592	11.8	12.1	0.3	36	16.71
16-19-mar	10:05:08	592	14.5	15.9	1.4	37	16.72
16-19-mar	11:05:08	592	15.5	17.6	2.1	37	16.71
16-19-mar	12:05:08	592	16.7	19.0	2.3	38	16.71
16-19-mar	13:05:08	591	15.5	16.9	1.4	37	16.70
16-19-mar	14:05:08	591	17.0	18.4	1.4	37	16.71
16-19-mar	15:05:08	591	16.9	19.3	2.3	38	16.70
16-19-mar	16:05:08	591	15.2	16.7	1.5	38	16.70
16-19-mar	17:05:08	591	13.4	14.1	0.6	37	16.71
16-19-mar	18:05:08	591	8.2	9.4	1.1	37	16.71
16-19-mar	19:05:08	591	6.7	5.8	-0.9	36	16.70
16-19-mar	20:05:08	592	4.9	4.4	-0.5	36	16.70
16-19-mar	21:05:08	592	3.8	3.4	-0.4	36	16.72
16-19-mar	22:05:08	592	2.6	2.0	-0.6	36	16.71
16-19-mar	23:05:08	592	1.7	1.1	-0.7	36	16.71

BGI PQ200 Air Sampling System Downloaded 2016 28 mar 15:45:40

Job Details:

Job Name: 16Mar28E.JOB
Version: 5.62
Serial No: 2398
Pump Time: 238:51
Flags:

Job Code:

Site Name:

Station Code:

Operators:

User1: yyyyyyyyyyyyyyyyyyyyyyyyyyy

User2: yyyyyyyyyyyyyyyyyyyyyyyyyyy

	Max	Min	Avg	Units
BP	588	583	585	mmHg
TA	13.7	-5.9	4.1	°C
Q	---	---	16.71	Lpm

QCV 0.58 %
Max overheat 3.6 °C
occured 25-mar 11:07:54

Timer Information:

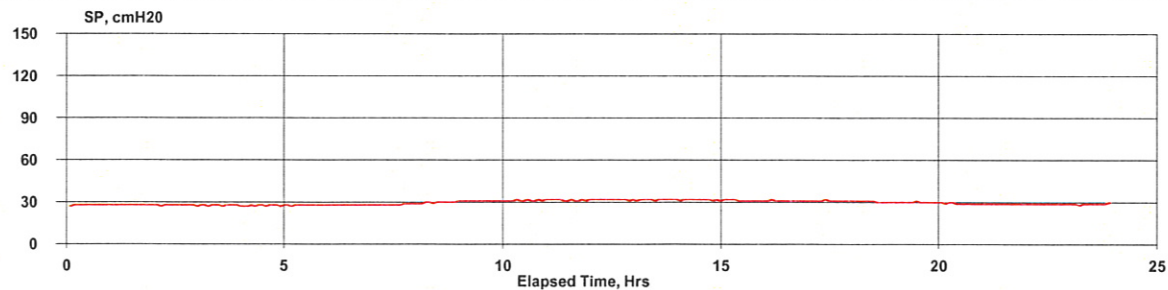
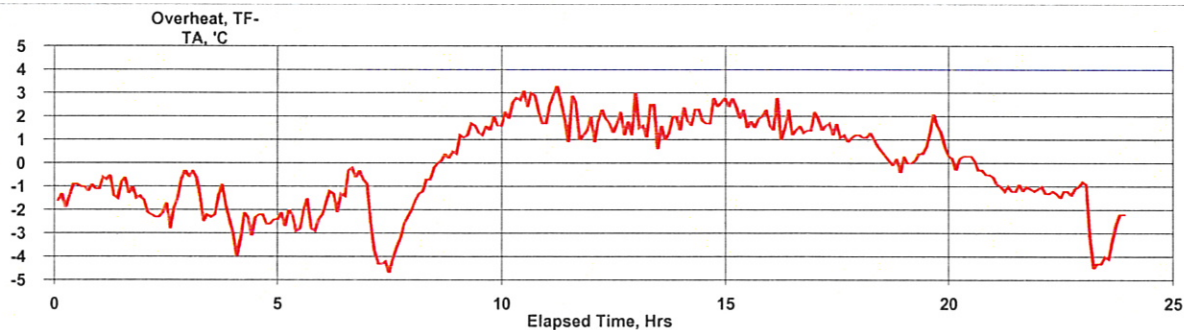
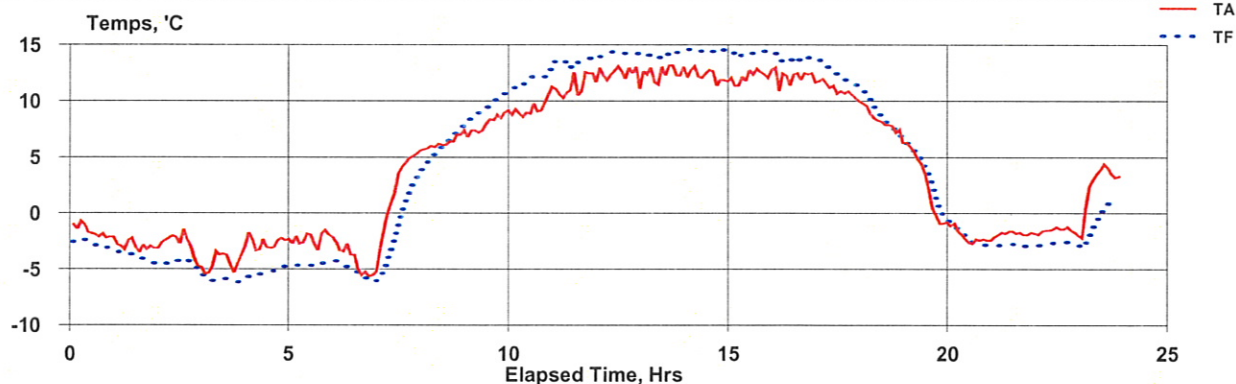
Date Time
dd-mm hh:mm:ss
Start: 16-25-mar 0:00:08
Stop: 16-26-mar 0:00:05
ET: 23:59

Mass Concentration Data:

Filter ID: 28
Final Wt: mg
Initial Wt: mg
Delta Wt: 0.000 mg
Total Vol: 24.039 m³
Mass Conc: 0 µg/m³

Notes 1:

Notes 2:



Hourly

16-25-mar	0:05:08	587	-1.7	-2.8	-1.2	28	16.71
16-25-mar	1:05:08	587	-2.9	-4.0	-1.1	28	16.72
16-25-mar	2:05:08	587	-2.8	-4.6	-1.7	28	16.71
16-25-mar	3:05:08	587	-4.2	-6.0	-1.8	28	16.71
16-25-mar	4:05:08	586	-2.6	-5.2	-2.6	28	16.71
16-25-mar	5:05:08	586	-2.3	-4.6	-2.4	28	16.71
16-25-mar	6:05:08	587	-4.3	-5.3	-1.0	28	16.73
16-25-mar	7:05:08	587	2.6	-0.9	-3.5	28	16.71
16-25-mar	8:05:08	587	6.3	6.0	-0.3	30	16.71
16-25-mar	9:05:08	587	8.0	9.5	1.5	31	16.73
16-25-mar	10:05:08	587	9.5	11.9	2.4	31	16.71
16-25-mar	11:05:08	587	11.4	13.5	2.1	32	16.72
16-25-mar	12:05:08	586	12.5	14.2	1.8	32	16.71
16-25-mar	13:05:08	586	12.6	14.2	1.6	32	16.70
16-25-mar	14:05:08	586	12.3	14.5	2.2	32	16.72
16-25-mar	15:05:08	585	12.2	14.3	2.0	31	16.71
16-25-mar	16:05:08	585	12.2	13.8	1.6	31	16.72
16-25-mar	17:05:08	584	11.0	12.4	1.4	31	16.71
16-25-mar	18:05:08	585	8.2	8.7	0.5	31	16.71
16-25-mar	19:05:08	584	2.5	3.3	0.7	30	16.72
16-25-mar	20:05:08	584	-2.1	-2.2	-0.1	29	16.72
16-25-mar	21:05:08	584	-1.8	-2.9	-1.1	29	16.71
16-25-mar	22:05:08	584	-1.5	-2.7	-1.2	29	16.73
16-25-mar	23:05:08	584	2.7	-0.6	-3.2	29	16.71

APPENDIX C

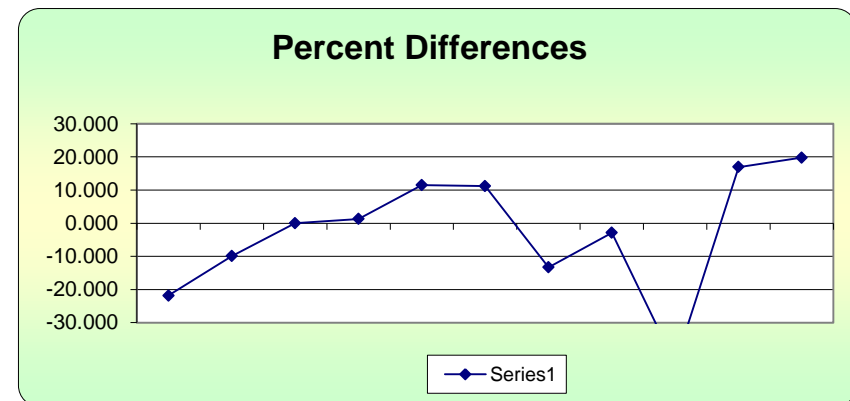
Precision and Single-Point Flow Rate Checks

Alton Coal Development, LLC - Coal Hollow Mine
Precision Estimate (From Collocated Samples)

Monitors 963B & 964C		Pollutant type:		CV _{ub} (%)					
Meas Val (Y)	Audit Val (X)	d (Eqn 10)	25th Percentile	d ²	d	d ²			
10.6	13.2	-21.849	-11.631	477.367	21.849	477.367		5.5	17.7
6.7	7.4	-9.929	75th Percentile	98.587	9.929	98.587		5.5	17.9
6.4	6.4	0.000	11.355	0.000	0.000	0.000			
7.9	7.8	1.274		1.623	1.274	1.623			
9.2	8.2	11.494		132.118	11.494	132.118			
11.3	10.1	11.215		125.775	11.215	125.775			
3.5	4	-13.333		177.778	13.333	177.778			
6.9	7.1	-2.857		8.163265	2.857	8.163			
3.9	6	-42.424		1799.816	42.424	1799.816			
12.8	10.8	16.949		287.2738	16.949	287.274			
5	4.1	19.780		391.257	19.780	391.257			

n	Σ d	Σ d ²
11	151.105	3499.758
n-1	Σd	Σd ²
10	-29.680	3499.758

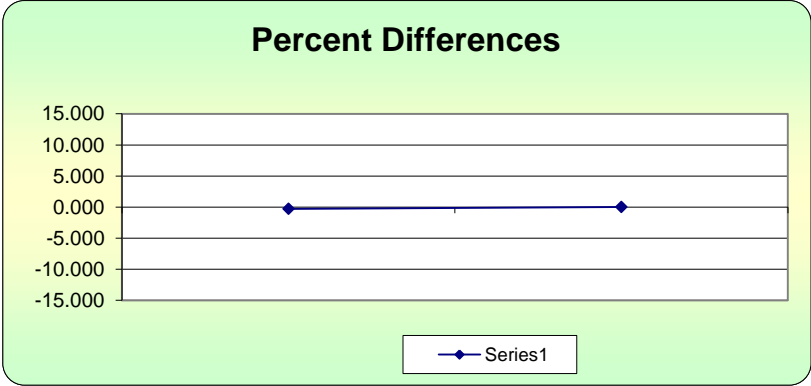
CV (%) (Eqn 11)
18.75



Alton Coal Development, LLC - Coal Hollow Mine

One-Point Flow Rate Bias Estimate

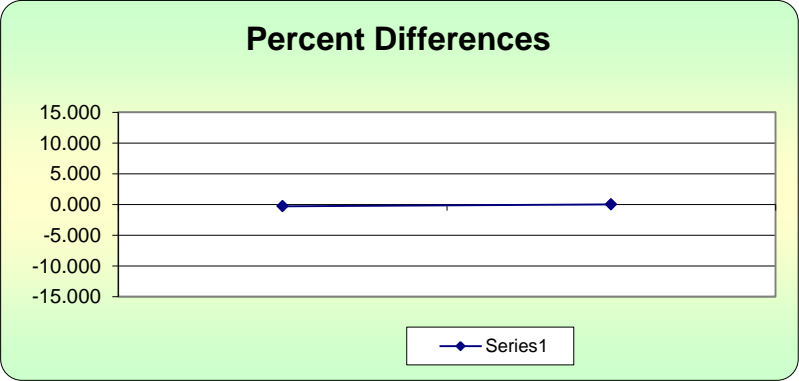
Site ID: Monitor 962A		Pollutant type:			Bias (%)		
Meas Val (Y)	Audit Val (X)	d (Eqn. 1)	25th Percentile	d ²	d	d ²	
16.7	16.78	-0.477	-0.432	0.227	0.477	0.227	
16.7	16.75	-0.299	75th Percentile	0.089	0.299	0.089	
			-0.343				
		n	Σ d	"AB" (Eqn 4)			
		2	0.775	0.388			
		n-1	Σ d ²	"AS" (Eqn 5)			
		1	0.316	0.126			
		Bias (%) (Eqn 3)		Both Signs Positive			
		0.95		FALSE			
		Signed Bias (%)		Both Signs Negative			
		-0.95		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	-0.432	0.227	0.477	0.227	
16.7	16.75	-0.299	75th Percentile	0.089	0.299	0.089	
			-0.343				
		n	Σ d	"AB" (Eqn 4)			
		2	0.775	0.388			
		n-1	Σ d ²	"AS" (Eqn 5)			
		1	0.316	0.126			
		Bias (%) (Eqn 3)		Both Signs Positive			
		0.95		FALSE			
		Signed Bias (%)		Both Signs Negative			
		-0.95		TRUE			



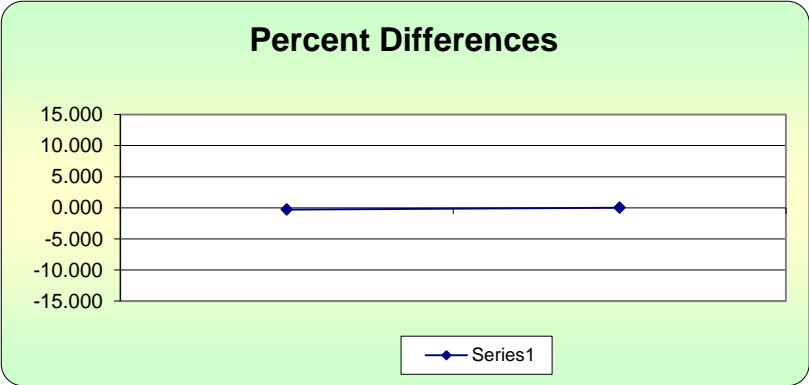
Alton Coal Development, LLC - Coal Hollow Mine

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	16.78	-0.477	-0.432	0.227	0.477	0.227
16.7	16.75	-0.299	75th Percentile	0.089	0.299	0.089
			-0.343			

n	Σ d	"AB" (Eqn 4)
2	0.775	0.388
n-1	Σ d ²	"AS" (Eqn 5)
1	0.316	0.126

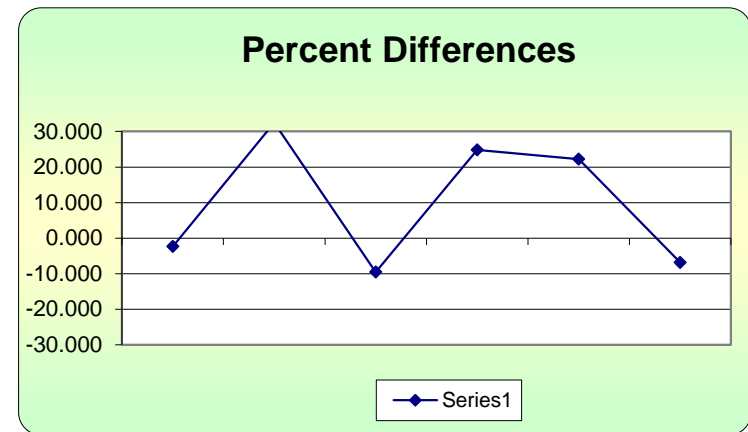
Bias (%) (Eqn 3)	Both Signs Positive
0.95	FALSE
Signed Bias (%)	Both Signs Negative
-0.95	TRUE



Alton Coal Development, LLC - Coal Hollow Mine - NPL
Precision Estimate (From Collocated Samples)

Monitors 963B & 964C		Pollutant type:		CV _{ub} (%)					
Meas Val (Y)	Audit Val (X)	d (Eqn 10)	25th Percentile	d ²	d	d ²			
12.4	12.7	-2.390	-5.770	5.714	2.390	5.714			5.5 17.7
8.6	6.2	32.432	75th Percentile	1051.863	32.432	1051.863	n	Σ d	Σ d ²
3	3.3	-9.524	24.169	90.703	9.524	90.703	6	98.283	2305.579
7.7	6	24.818		615.909	24.818	615.909	n-1	Σd	Σd ²
4.5	3.6	22.222		493.827	22.222	493.827	5	60.661	2305.579
7	7.5	-6.897		47.562	6.897	47.562			

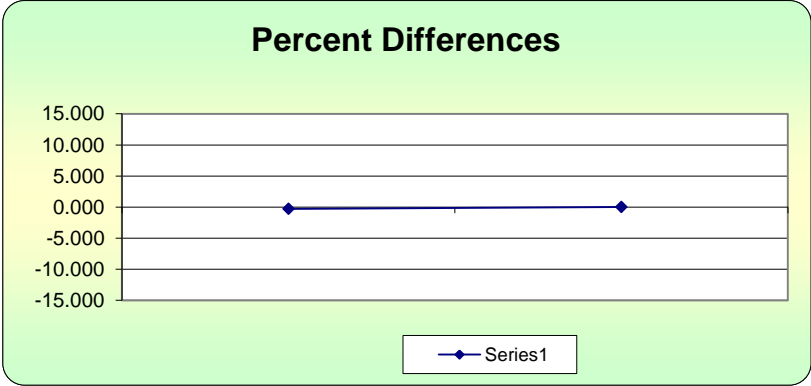
CV (%) (Eqn 11)
22.92



Alton Coal Development, LLC - Coal Hollow Mine

One-Point Flow Rate Bias Estimate

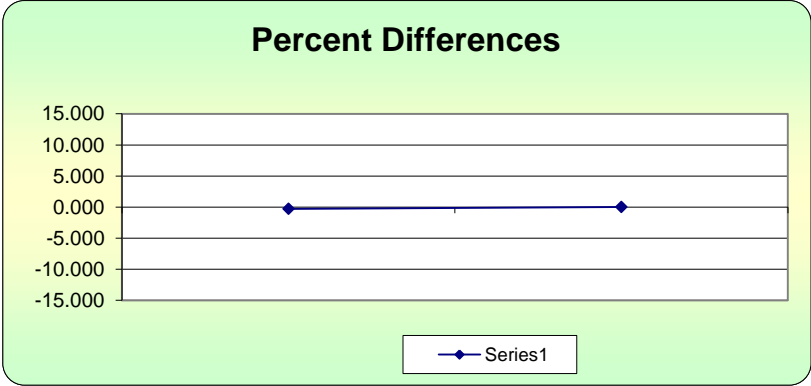
Site ID: Monitor 2366D		Pollutant type:		Bias (%)			
Meas Val (Y)	Audit Val (X)	d (Eqn. 1)	25th Percentile	d ²	d	d ²	
16.72	16.03	4.304	1.031	18.528	4.304	18.528	
16.7	16.71	-0.060	75th Percentile	0.004	0.060	0.004	
			3.213				
		n	Σ d	"AB" (Eqn 4)			
		2	4.364	2.182			
		n-1	Σ d ²	"AS" (Eqn 5)			
		1	18.532	3.001			
		Bias (%) (Eqn 3)		Both Signs Positive			
		15.58		TRUE			
		Signed Bias (%)		Both Signs Negative			
		+15.58		FALSE			



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	15.93	4.834	1.524	23.364	4.834	23.364	
16.7	16.63	0.421	75th Percentile	0.177	0.421	0.177	
			3.730				
		n	Σ d	"AB" (Eqn 4)			
		2	5.255	2.627			
		n-1	Σ d ²	"AS" (Eqn 5)			
		1	23.541	3.120			
		Bias (%) (Eqn 3)		Both Signs Positive			
		16.56		TRUE			
		Signed Bias (%)		Both Signs Negative			
		+16.56		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
01-04-16	1112	01-04-16	1110	18	5	M-M	01-07-16	JKSR
01-08-16	1145	01-08-16	1142	5	8	M-M	01-12-16	JKSR
01-14-16	1250	01-14-16	1246	8	11	M-M	01-19-16	JKSR
01-20-16	1150	01-20-16	1146	11	12	M-M	01-25-16	KAI
01-28-16	1238	01-28-16	1234	12	4	M-M	01-31-16	JKSR
02-03-16	0929	02-03-16	0925	4	7	M-M	02-06-16	JKSR
02-08-16	1032	02-08-16	1028	7	16	M-M	02-12-16	JKSR
02-15-16	0957	02-15-16	0953	16	9	M-M	02-18-16	JKSR
02-15-16	0958	02-15-16	0954	16	10	M-M	02-18-16	JKSR
02-19-16	1024	02-19-16	1019	10	4	M-M	02-24-16	JKSR
02-25-16	1355	02-25-16	1355	4	5BR/1	M-M	03-01-16	JKSR
03-03-16	0908	03-03-16	0908	5BR 11	5BR 1	M-M	03-07-16	JKSR
03-10-16	1137	03-10-16	1137	5BR 1	11	M-M	03-23-16	JKSR
03-14-16	1558	03-14-16	1458	11	19	M-M	03-19-16	JKSR
03-22-16	1521	03-22-16	1420	19	24	M-M	03-25-16	JKSR
03-28-16	1625	03-28-16	1526	24	29	M-M	03-31-16	JKSR
04-02-16	11:58	04-02-16	10:57	29	34	M-M	04-06-16	Kal
04-07-16	1522	04-07-16	1421	24	4	M-M	04-12-16	JKSR
04-13-16	1432	04-13-16	1431	4	13	M-M	04-18-16	JKSR

For screen

Blank

Reset clock

E code

Table II - Monthly Leak Test

Date	Time	Initial SP Value	Final SP Value	Pass/Fail	Initials	Maintenance
02-28-16	12:00	97	97	Pass	KN	clean venturi, down tube etc
04-02-16	12:02	101	100	Pass	KN	

Table III - Monthly Flow Rate Verification

[illegible]

Compliance Monitor 963B

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
01-04-16	1326	01-04-16	1325	19	6	M-M	01-07-16	JKSR
01-08-16	1217	01-08-16	1216	6	9	M-M	01-13-16	JKSR
01-14-16	1303	01-14-16	1301	9	12	M-M	01-19-16	JKSR
01-20-16	1210	01-20-16	1208	12	13	M-M	01-25-16	KN
01-28-16	1253	01-28-16	1251	13	5	M-M	01-31-16	JKSR
02-03-16	0948	02-03-16	0950	5	13	M-M	02-06-16	JKSR
02-08-16	1051	02-08-16	1048	13	17	M-M	02-12-16	JKSR
02-15-16	1014	02-15-16	1011	17	11	M-M	02-18-16	JKSR
02-19-16	1102	02-19-16	1058	11	5	M-M	02-24-16	JKSR
02-25-16	1424	02-25-16	1424	5	SBR12	M-M	03-01-16	JKSR
03-03-16	0923	03-03-16	0923	JBR12	JBR7	M-M	03-07-16	JKSR
03-10-16	1150	03-10-16	1150	JBR7	12	M-M	03-13-16	JKSR
03-14-16	1611	03-14-16	1511	12	20	M-M	03-19-16	JKSR
03-22-16	1548	03-22-16	1448	20	25	M-M	03-25-16	JKSR
03-28-16	1634	03-28-16	1534	25	30	M-M	03-31-16	JKSR
04-02-16	1222	04-02-16	1122	30	25	M-M	04-06-16	KN
04-07-16	1534	04-07-16	1433	25	5	M-M	04-12-16	JKSR
04-13-16	1444	04-13-16	1343	5	14	M-M	04-18-16	JKSR

Reset clock

Table II - Monthly Leak Test

Date	Time	Initial SP Value	Final SP Value	Pass/Fail	Initials	Maintenance
02/28/16	1316	97	97	Pass	KN	Clean Venturi & drain tube
04/02/16	1223	105	112	Pass	KN	

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
02/28/16	1220	16.70	586	588	0.5	1.2	14.00	16.67	0.06	KN
04/02/16	1244	16.70	595	596	11.5°C	12.4°C	13.82	16.82	0.07	KN

Co-located Monitor 964C

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
01-04-16	1329	01-04-16	1326	20	7	M-M	01-07-16	JKSR
01-08-16	1219	01-08-16	1216	7	10	M-M	01-13-16	JKSR
01-14-16	1306	01-14-16	1302	10	14	M-M	01-19-16	JKSR
01-20-16	1216	01-20-16	1212	14	14	M-M	01-25-16	KN
01-28-16	1255	01-28-16	1251	IM2BGT9	6	M-M	01-31-16	JKSR
02-03-16	0958	02-03-16	0948	6	15	M-M	02-06-16	JKSR
02-08-16	1052	02-08-16	1047	15	18	M-M	02-12-16	JKSR
02-15-16	1015	02-15-16	1010	18	12	M-M	02-18-16	JKSR
02-19-16	1103	02-19-16	1058	12	6	M-M	02-24-16	JKSR
02-25-16	1426	02-25-16	1426	6	13	M-M	03-01-16	JKSR
03-03-16	0924	03-03-16	0924	13	5BR8	M-M	03-07-16	JKSR
03-10-16	1151	03-10-16	1151	5BR8	16	M-M	03-13-16	JKSR
03-14-16	1613	03-14-16	1512	16	21	M-M	03-19-16	JKSR
03-22-16	1550	03-22-16	1449	21	26	M-M	03-25-16	JKSR
03-28-16	1636	03-28-16	1535	26	31	M-M	03-31-16	JKSR
04-02-16	12:39	04-02-16	11:38	31	36	M-M	04-02-16	KN
04-07-16	1535	04-07-16	1433	36	6	M-M	04-12-16	JKSR
04-13-16	1445	04-13-16	1344	6	15	M-M	04-18-16	JKSR

still Running

Reset clock

Table II - Monthly Leak Test

Date	Time	Initial SP Value	Final SP Value	Pass/Fail	Initials	Maintenance
02-28-16	12:23	96	96	Pass	KN	Clean venturi & down hole
04-02-16	12:49	102	102	Pass	KN	

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
02-28-16	12:27	16.70	586	588	0.5	1.0	13.72	16.78	-0.48	KN
04-02-16	12:52	16.70	597	596	12.4°C	12.5°C	13.69	16.75	-0.30	KN

2366 D

2366 D

2366 D

2366 D

2366 D

2366 D

2366 D

2366 D
~~2367 D~~

Background Monitor 2398 E

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
02-19-16	1130	02-19-16	1130		7	M-M	02-24-16	JKSR
02-25-16	1457	02-25-16	1457	7	15	M-M	03-01-16	JKSR
03-03-16	0937	03-03-16	—	15	10	M-M	03-07-16	JKSR
03-10-16	1243	03-10-16		10	18	M-M	03-13-16	JKSR
03-14-16	1624	03-14-16	1523	18	23	M-M	03-19-16	JKSR
03-22-16	1604	03-22-16	1502	23	28	M-M	03-25-16	JKSR
03-28-16	1648	03-28-16	1646	28	33	M-M	03-31-16	JKSR
04-02-16	1331	04-02-16	1230	33	38	M-M	04-03-16	KN
04-07-16	1546	04-07-16	1444	38	8	M-M	04-12-16	JKSR
04-13-16	1502	04-13-16	1400	8	40	M-M	04-18-16	JKSR

Display not working
Display off (not working)
Display not working
No Display

Table II - Monthly Leak Test

Date	Time	Initial SP Value	Final SP Value	Pass/Fail	Initials	Maintenance
2/16/2016	11:38	98	97	Pass	KN	Set up and preformed checks
04/02/16	1332	98	96	Pass	KN	

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
2/16/2016	11:40	16.7	592	593	7.6	8.4	15.93	13.16	4.8	KN
04/02/16	1339	16.7	594	595	14.7	14.2	13.51	16.63	6.4	KN

2398E

APPENDIX E

Independent PM₁₀ Sampler Performance Audit Report

**AUDIT REPORT
FOR
ALTON COAL DEVELOPMENT, LLC
COAL HOLLOW MINE
ALTON, UTAH
FIRST QUARTER 2016**

Prepared for

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

Prepared by



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

Site Audited: February 22, 2016

A decorative graphic in the bottom left corner consisting of three stylized mountain peaks in shades of green and blue.

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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 February 22, 2016. 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	PM ₁₀	BGI PQ200S	Yes
	PM ₁₀ (collocated)	BGI PQ200S	Yes
Background #1	PM ₁₀	BGI PQ200S	Yes
Background #2	PM ₁₀	BGI PQ200S	Yes
	PM ₁₀ (collocated)	BGI PQ200S	Yes

Table 1-3

Summary of Meteorological Audit Results

Parameter	Sensor	Within Accuracy Goal
Wind Speed	Met-One 34B	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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Air Resource Specialists, Inc.
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Fort Collins, Colorado 80525
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Fax: 970-484-3423
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 A. *Quality Assurance Requirements for SLAMS, SPMs, and 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*
- EPA *Transfer Standards for Calibration of Air Monitoring Analyzers for Ozone*

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	$\leq \pm 4\%$
	Design criteria flow to audit flow	$\leq \pm 5\%$
	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	4/17/2016

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.

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

Table 2-4

Meteorological Audit Equipment

References	Manufacturer	Model Number	Serial Number	Expiration Date
Wind Speed	R.M. Young	18811	CA03912	1/18/2017

3.0 AUDIT RESULTS

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

Performance Audit Results

- There were no performance audit failures during this visit. Although the two newest FRM samplers passed the performance audit, the flows on both instruments were found around 5% low.

APPENDIX A

AUDIT DATA FORMS



WIND SPEED SENSOR AUDIT

ABBR.	n/a	CLIENT	Alton	FIELD SPECIALIST	M. Farinacci	DATE	2/22/2016
SITE NAME		Alton Coal					
Network type		Alton Coal- Coal Hollow					

	MANUFACTURER	MODEL	SERIAL NUMBER	EXPIRATION DATE
Wind Speed Reference	RM Young	18811	CA 03912	1/18/2017
Wind Speed Torque Gauge				

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
--------------	-----

		Wind Speed			
Motor Speed (rpm)	Target 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	5.550	-0.06		PASS
300	8.270	8.270	0.00		PASS
600	16.260				
1800	48.220				

Starting Threshold	TORQUE
Torque <= 0.2 g-cm	

Heater sleeve functional?	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input checked="" type="checkbox"/> N/A
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NOTES:	
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FRM AUDIT (PM₁₀)

ABBR.	n/a	CLIENT	Alton	AUDITOR	M. Farinacci	DATE	2/22/2016
SITE NAME		Alton Coal					
Network type		Alton Coal- Coal Hollow					

	MANUFACTURER	MODEL	SERIAL NUMBER	EXPIRATION DATE
PM Flow Standard #1	Mesa Labs	deltaCal	141170	4/17/2016
PM Temperature Standard #1	Mesa Labs	deltaCal	141170	4/17/2016
PM Barometric Pressure Standard #1	Mesa Labs	deltaCal	141170	4/17/2016

MANUFACTURER	BGI
MODEL	PQ200
SERIAL NUMBER	962A

Date and Time correct?
<input checked="" 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	
1 cm	PASS	

FLOW VERIFICATION					
	Reference	Instrument	Actual Diff	Design Diff	
Total Flow	17.16	16.70	-2.7%	2.8%	PASS

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

AMBIENT TEMPERATURE SENSOR (°C)			
Reference	Instrument	Difference	
5.0	5.2	0.2	PASS

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

FILTER TEMPERATURE SENSOR (°C)			
Reference	Instrument	Difference	
7.1	6.5	-0.6	PASS

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

PRESSURE SENSOR (mmHg)			
Reference	Instrument	Difference	
583.5	582.0	-1.5	PASS

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

NOTES:	
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FRM AUDIT (PM₁₀)

ABBR.	n/a	CLIENT	Alton	AUDITOR	M. Farinacci	DATE	2/22/2016
SITE NAME		Alton Coal					
Network type		Alton Coal- Coal Hollow					

	MANUFACTURER	MODEL	SERIAL NUMBER	EXPIRATION DATE
PM Flow Standard #1	Mesa Labs	deltaCal	141170	4/17/2016
PM Temperature Standard #1	Mesa Labs	deltaCal	141170	4/17/2016
PM Barometric Pressure Standard #1	Mesa Labs	deltaCal	141170	4/17/2016

MANUFACTURER	BGI
MODEL	PQ200
SERIAL NUMBER	963 B

Date and Time correct?
<input checked="" 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	
2 cm	PASS	

FLOW VERIFICATION					
	Reference	Instrument	Actual Diff	Design Diff	
Total Flow	16.86	16.70	-0.9%	1.0%	PASS

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

AMBIENT TEMPERATURE SENSOR (°C)			
Reference	Instrument	Difference	
7.4	7.3	-0.1	PASS

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

FILTER TEMPERATURE SENSOR (°C)			
Reference	Instrument	Difference	
6.3	6.6	0.3	PASS

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

PRESSURE SENSOR (mmHg)			
Reference	Instrument	Difference	
589.0	591.0	2.0	PASS

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

NOTES:	
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FRM AUDIT (PM₁₀)

ABBR.	n/a	CLIENT	Alton	AUDITOR	M. Farinacci	DATE	2/22/2016
SITE NAME		Alton Coal					
Network type		Alton Coal- Coal Hollow					

	MANUFACTURER	MODEL	SERIAL NUMBER	EXPIRATION DATE
PM Flow Standard #1	Mesa Labs	deltaCal	141170	4/17/2016
PM Temperature Standard #1	Mesa Labs	deltaCal	141170	4/17/2016
PM Barometric Pressure Standard #1	Mesa Labs	deltaCal	141170	4/17/2016

MANUFACTURER	BGI
MODEL	PQ200
SERIAL NUMBER	964 C

Date and Time correct?
<input checked="" 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	
0 cm	PASS	

FLOW VERIFICATION					
	Reference	Instrument	Actual Diff	Design Diff	
Total Flow	16.97	16.72	-1.5%	1.6%	PASS

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

AMBIENT TEMPERATURE SENSOR (°C)			
Reference	Instrument	Difference	
5.9	5.2	-0.7	PASS

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

FILTER TEMPERATURE SENSOR (°C)			
Reference	Instrument	Difference	
6.1	6.9	0.8	PASS

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

PRESSURE SENSOR (mmHg)			
Reference	Instrument	Difference	
589.0	589.0	0.0	PASS

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

NOTES:	
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FRM AUDIT (PM₁₀)

ABBR.	n/a	CLIENT	Alton	AUDITOR	M. Farinacci	DATE	2/22/2016
SITE NAME		Alton Coal					
Network type		Alton Coal- Coal Hollow					

	MANUFACTURER	MODEL	SERIAL NUMBER	EXPIRATION DATE
PM Flow Standard #1	Mesa Labs	deltaCal	141170	4/17/2016
PM Temperature Standard #1	Mesa Labs	deltaCal	141170	4/17/2016
PM Barometric Pressure Standard #1	Mesa Labs	deltaCal	141170	4/17/2016

MANUFACTURER	BGI
MODEL	PQ200
SERIAL NUMBER	2366 D

Date and Time correct?
<input checked="" 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	
2 cm	PASS	

FLOW VERIFICATION					
	Reference	Instrument	Actual Diff	Design Diff	
Total Flow	15.89	16.72	5.2%	-4.9%	PASS

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

AMBIENT TEMPERATURE SENSOR (°C)			
Reference	Instrument	Difference	
6.5	7.2	0.7	PASS

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

FILTER TEMPERATURE SENSOR (°C)			
Reference	Instrument	Difference	
6.8	6.8	0.0	PASS

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

PRESSURE SENSOR (mmHg)			
Reference	Instrument	Difference	
588.5	589.0	0.5	PASS

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

NOTES:	
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FRM AUDIT (PM₁₀)

ABBR.	n/a	CLIENT	Alton	AUDITOR	M. Farinacci	DATE	2/22/2016
SITE NAME		Alton Coal					
Network type		Alton Coal- Coal Hollow					

	MANUFACTURER	MODEL	SERIAL NUMBER	EXPIRATION DATE
PM Flow Standard #1	Mesa Labs	deltaCal	141170	4/17/2016
PM Temperature Standard #1	Mesa Labs	deltaCal	141170	4/17/2016
PM Barometric Pressure Standard #1	Mesa Labs	deltaCal	141170	4/17/2016

MANUFACTURER	BGI
MODEL	PQ200
SERIAL NUMBER	2398 E

Date and Time correct?
<input checked="" 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	
3 cm	PASS	

FLOW VERIFICATION					
	Reference	Instrument	Actual Diff	Design Diff	
Total Flow	15.90	16.70	5.0%	-4.8%	PASS

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

AMBIENT TEMPERATURE SENSOR (°C)			
Reference	Instrument	Difference	
6.0	6.7	0.7	PASS

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

FILTER TEMPERATURE SENSOR (°C)			
Reference	Instrument	Difference	
7.1	7.7	0.6	PASS

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

PRESSURE SENSOR (mmHg)			
Reference	Instrument	Difference	
588.0	589.0	1.0	PASS

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

NOTES:	
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SITE INFORMATION

ABBR.	n/a	CLIENT	Alton	AUDITOR	M. Farinacci	DATE	2/22/2016
SITE NAME		Alton Coal					
NETWORK TYPE		Alton Coal- Coal Hollow					

		Deg	Min	Sec		Decimal
LATITUDE	North	34	24	22.1	--CALCULATE-->	34.4061
LONGITUDE	West	112	27	15.5		112.4543

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:



CALIBRATION AND VERIFICATION STANDARDS

ABBR.	n/a	CLIENT	Alton	AUDITOR	M. Farinacci	DATE	2/22/2016
SITE NAME		Alton Coal					
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				
AT/RH Sensor Reference				
Barometric Pressure Reference				
Wind Speed Reference (high rpm)	RM Young	18811	CA 03912	1/18/2017
Wind Speed Reference (low rpm)	RM Young	18811	CA 03912	1/18/2017
Wind Speed Torque Gauge				
Wind Direction Alignment Reference				
Wind Direction Linearity Reference				
Wind Direction Torque Gauge				
Solar Radiation Reference				
Multiplier		W/m2 / mV		
UV Radiation Reference				
Multiplier		W/m2 / mV		
Precipitation Reference				
Volume		mL		

PM Flow Standard #1	Mesa Labs	deltaCal	141170	4/17/2016
PM Flow Standard #2				
PM Flow Standard #3				
PM Flow Standard #4				

PM Temperature Standard #1	Mesa Labs	deltaCal	141170	4/17/2016
PM Temperature Standard #2				
PM Temperature Standard #3				
PM Temperature Standard #4				

PM Barometric Pressure Standard #1	Mesa Labs	deltaCal	141170	4/17/2016
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



CALIBRATION PROCEDURE
18802/18811 ANEMOMETER DRIVE

DWG: CP18802(C)

REV: C101107

PAGE: 3 of 4

BY: TJT

DATE: 10/11/07

CHK: JC

W.C. GAS-12

CERTIFICATE OF CALIBRATION AND TESTING

MODEL: **18811** (Comprised of Models 18820A Control Unit & 18831A Motor Assembly)
SERIAL NUMBER: CA3912

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	27106D Output Frequency Hz (1)	Calculated Rpm (1)	Indicated Rpm (2)
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 frequency output of RM Young Model 27106D standard anemometer attached to motor shaft 27106D produces 10 pulses per revolution of the anemometer shaft
(2) Indicated on the Control Unit LCD display

* Indicates out of tolerance

<input type="checkbox"/> New Unit	<input checked="" type="checkbox"/> Service / Repair Unit	<input type="checkbox"/> As Found
	<input checked="" type="checkbox"/> No Calibration Adjustments Required	<input type="checkbox"/> As Left

Traceable frequency meter used in calibration Model: 34405A SN: 53020093

Date of inspection 1/18/2016
Inspection Interval One Year

Tested By

RP



CERTIFICATE OF CALIBRATION - NIST TRACEABILITY

(Refer to instruction manual for further details of calibration)

deltaCal Serial Number: 141170

DATE: 17-Apr-2015

Calibration Operator: P.Pitty

Critical Venturi Flow Meter: Max Uncertainty = 0.346%

Serial Number: 1A CEESI NVLAP NIST Data File 07BGI-0001

Serial Number: 2A CEESI NVLAP NIST Data File 07BGI-0003

Serial Number: 5C COX Nist Data File CCAL33222 - 5 C

Serial Number: 4A CEESI NVLAP NIST Data File 07BGI-0002

Serial Number: 3A CEESI NVLAP NIST Data File 07BGI-0004

Room Temperature: Uncertainty=0.071%

Room Temperature: 23.8 °C

Brand: Accu-Safe Serial Number: 254881

NIST Traceability No. 516837

deltaCal:

Ambient Temperature (set): 23.8 °C

Aux (filter) Temperature (set): 23.8 °C

Barometric Pressure and Absolute Pressure

Vaisala Model PTB330(50-1100) Digital Accuracy: 0.03371%
S/N DH0850001

NIST Traceable (Princo Primary Standard Model 453 S/N W12537) Certificate No. P-7485

deltaCal:

Barometric pressure (set): 750 mm of Hg

Results of Venturi Calibration

Flow Rate (Q) vs. Pressure Drop (ΔP).

Where: Q=Lpm, ΔP = Cm of H₂O

Q= 3.80837 ΔP ^ 0.52497

Overall Uncertainty: 0.35%

Date Placed In Service 5/4/15

(To be filled in by operator upon receipt)

Recommended Recalibration Date 5/4/16

(12 months from date placed in service)

To Check a deltaCal**1.5-19.5****VER 3.41P****17-Apr-15** P.PittyBP= **750** 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		
# 5	140.7	23.8	4.58	4.61	0.68
	292.8	23.8	9.77	9.72	-0.50
	394.0	23.8	13.22	13.2	-0.16
	491.8	23.8	16.56	16.57	0.09
	573.3	23.8	19.34	19.43	0.47
Average %					0.12