



AIR SCIENCES INC.

DENVER • PORTLAND

**Baseline
Meteorological and
Air Quality Data
Report
Resolution Copper
Mining Project
October 1 - December 31,
2014**

PREPARED FOR:
RESOLUTION COPPER
A MEMBER OF RIO TINTO
GROUP

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1.0 INTRODUCTION

This report summarizes the meteorological, nitrogen dioxide (NO₂), sulfur dioxide (SO₂), ozone (O₃), and particulate matter (PM) data collected at the Resolution Copper Project near Superior, Arizona for the fourth quarter, October 1 – December 31, 2014. Monitoring was performed in accordance with the *Resolution Copper Mining Monitoring Plan, November 2011* (approved by the Pinal County Air Quality Control District [PCAQCD] on November 15, 2011).

Resolution Copper Mining LLC (RCML) has implemented a meteorological and air quality monitoring program to support several efforts during the pre-feasibility and other mine development phases: environmental assessments, impact analyses, and documents required by the National Environmental Policy Act (NEPA); meteorological and air quality data to be processed and used as input for AERMOD (American Meteorological Society/Environmental Protection Agency Regulatory Model) dispersion modeling; and air quality baseline data and AERMOD analyses to be used to support RCML's application to the PCAQCD for air permit(s).

1.1 Location

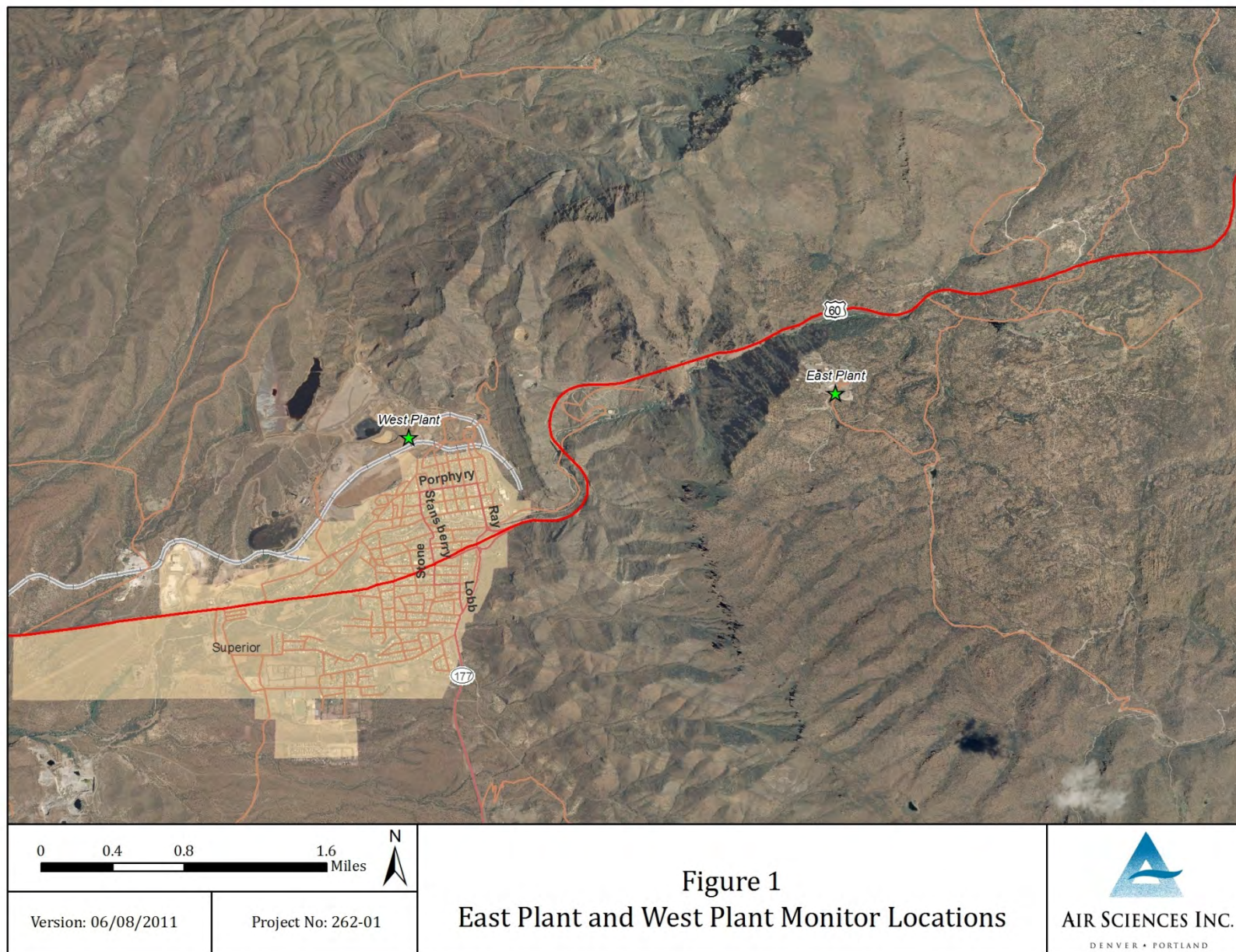
The Resolution Copper Project is located near Superior, Arizona. Currently there are two meteorological and air quality stations. The East Plant station is located at the main project site, east of Superior. The West Plant station is located at RCML's facilities directly north of Superior, Arizona. The topography ranges from hilly to mountainous.

The monitoring station locations are shown in Figure 1 and listed by coordinates in Table 1.

Table 1. Monitoring Station Locations

Station	Location	Latitude (Deg)	Longitude (Deg)	Elevation (ft)	Method of Determination
West Plant	01S12E35NWSE	33.2994	-111.1021	2,949	GPS
East Plant	01S13E32SWNW	33.3030	-111.0676	4,199	GPS

Figure 1. Resolution Monitoring Stations Locations



1.2 Monitoring Program Description

1.2.1 Meteorological Data

Meteorological sensors and air quality instrumentation at the East Plant and West Plant stations are mounted on 10-meter, open-lattice towers or housed in climate-controlled insulated shelters, and are listed by height, from ground level, in Table 2.

Table 2. Sensors and Heights

		Height (m)	West Plant	East Plant
AERMOD Meteorological Data	Horizontal wind speed (meters per second [m/s])	10	✓	✓
	Horizontal wind direction (degrees [°])	10	✓	✓
	Horizontal wind direction standard deviation (sigma theta)	10	✓	✓
	Air temperature (degrees Celsius [°C])	2	✓	✓
	Vertical temperature difference (ΔT , Delta T, [°C])	2,10	✓	✓
	Relative humidity (percent [%])	2	✓	✓
	Solar radiation (watts per square meter [W/m ²])	2	✓	✓
	Barometric pressure (millimeters of mercury [mmHg])	1	✓	✓
	Precipitation (inches [in])	Ground	✓	✓
Ambient Air Data	FEM* Particulate matter less than 10 microns (PM ₁₀)	2,3	✓	✓
	FEM* Particulate matter less than 2.5 microns (PM _{2.5})	2,3	✓	✓
	Sulfur dioxide (SO ₂)	3		✓
	Ozone (O ₃)	3		✓
	Nitrogen dioxide (NO ₂)	3		✓

*Federal Equivalent Method

The meteorological data are recorded by digital data acquisition systems equipped with broadband modems for data transfer. The meteorological parameters are sampled on-site at one-second intervals and are digitally processed into 15-minute averages. The 15-minute averages are transmitted to Air Sciences Inc. (Air Sciences) for quality assurance checks and are used as input for the calculation of one-hour averages.

Appendix A lists hourly meteorological data from October 1 through December 31, 2014.

Meteorological parameters are collected in support of air quality data. All meteorological sensors are audited and data undergo quality control procedures according to the guidelines outlined in the Quality Assurance Project Plan.

1.2.2 NO₂ Data

NO₂ is measured at the East Plant using the Teledyne T200 Chemiluminescence NO₂ Analyzer, which holds an Environmental Protection Agency (EPA) equivalency designation as a Reference Method (RFNA-1194-099). This instrument is designed to measure oxides of nitrogen (NO_x) (with nitrogen

dioxide, NO₂, as an indicator) at trace levels in ambient air. The instrument is operated continuously to collect hourly NO, NO₂, and NO_x concentrations. Data are transferred via FTP script every hour to the Air Sciences server and made available to authorized persons via a data web-portal. Appendix C lists hourly NO₂ data for the East Plant from October 1 through December 31, 2014.

Level 1 zero and span calibrations and Level 2 zero and span verifications are conducted by the site operator every two weeks or as needed. Second-party audits, adjustments, and general maintenance on the NO₂ monitor are performed according to the guidelines outlined in the Quality Assurance Project Plan.

1.2.3 SO₂ Data

SO₂ is measured at the East Plant using the Teledyne T100 UV Fluorescence SO₂ Analyzer, which holds an EPA designation as an Automated Equivalent Method (EQSA-0495-100). The instrument is operated continuously to collect hourly SO₂ concentrations. Data are transferred via FTP script every hour to the Air Sciences server and made available to authorized persons via a data web-portal. Appendix C lists hourly SO₂ data for the East Plant from October 1 through December 31, 2014.

Level 1 zero and span calibrations and Level 2 zero and span verifications are conducted by the site operator every two weeks or as needed. Second-party audits, adjustments, and general maintenance on the SO₂ monitor are performed according to the guidelines outlined in the Quality Assurance Project Plan.

1.2.4 O₃ Data

O₃ is measured at the East Plant using the Teledyne T400 UV Absorption O₃ Analyzer, which holds an EPA designation as an Automated Equivalent Method (EQOA-0992-087). The instrument is operated continuously to collect hourly O₃ concentrations. Data are transferred via FTP script every hour to the Air Sciences server and made available to authorized persons via a data web-portal. Appendix C lists hourly and rolling 8-hour average O₃ data for the East Plant from October 1 through December 31, 2014.

Level 1 zero and span calibrations and Level 2 zero and span verifications are conducted by the site operator every two weeks or as needed. Second-party audits, adjustments, and general maintenance on the O₃ monitor are performed according to the guidelines outlined in the Quality Assurance Project Plan.

1.2.5 PM Data

PM₁₀ and PM_{2.5} are measured at both the East Plant and West Plant using Met One Instruments' Beta Attenuation Monitors (BAM). At each site, one BAM is configured as a PM_{2.5} Federal Equivalent Method (FEM), which holds the EPA designation (EQPM-0308-170), and the other BAM is configured as a PM₁₀ FEM, which holds the EPA designation (EQPM-0798-122). The instruments are operated continuously to collect hourly PM_{2.5} and PM₁₀ concentrations. Data are transferred via FTP script every hour to the Air Sciences server and made available to authorized persons via a data web-portal. Appendix B lists hourly PM_{2.5} and PM₁₀ data from October 1 through December 31, 2014.

The accuracy of the monitor is assessed through monthly audits of the flow rate by using a certified flow transfer standard.

Second-party audits, adjustments, and general maintenance on the PM monitors are performed according to the guidelines outlined in the Quality Assurance Project Plan.

2.0 DATA RECOVERY RATES

Data recovery rates for all parameters are presented in Table 3. Meteorological data recoveries are calculated by dividing the amount of valid hourly averages by the available hourly periods in the quarter. Air quality and particulate data recoveries are calculated by dividing the amount of valid 24-hour averages (for PM₁₀, PM_{2.5}), valid 24-hour maximum value (for SO₂, NO₂), or valid daily rolling 8-hour maximum (O₃) values by the number of days in the quarter. Particulate and air quality 24-hour averages or maximums are valid if greater than 75 percent of the hourly readings are valid for that day (at least 18 out of 24 hours).

**Table 3. Data Recovery Rates, East Plant and West Plant
October 1 – December 31, 2014
(percent)**

Parameter*	East Plant		West Plant		Minimum Required Recovery Rate
	Recorded Observations	Recovery Rate	Recorded Observations	Recovery Rate	
Meteorological					
Wind speed (10 m)	2,208	100	2,208	100	90
Wind direction (10 m)	2,208	100	2,208	100	90
Temperature (2 m)	2,208	100	2,208	100	90
Delta temperature	2,208	100	2,208	100	90
Relative humidity	2,208	100	2,208	100	90
Barometric pressure	2,208	100	2,208	100	90
Precipitation	2,208	100	2,208	100	90
Solar radiation	2,208	100	2,208	100	90
NO ₂	92	100	--	--	75
O ₃	89	96.7	--	--	75
SO ₂	92	100	--	--	75
PM ₁₀	92	100	80	87.0	75
PM _{2.5}	89	96.7	62	67.4	75

*Meteorological parameters are observed hourly (2,208 hours in this period).

NO₂, O₃, SO₂ and PM parameters are observed every 24 hours (92 days in this period).

2.1 Data Loss

2.1.1 Meteorological Data Loss

2.1.1.1 East Plant

No meteorological data were invalidated at the East Plant station for this quarter.

2.1.1.2 West Plant

No meteorological data were invalidated at the West Plant station for this quarter.

2.1.2 NO₂ Data Loss

No NO₂ 24-hour maximum data were invalidated for this quarter. Maintenance, and a calibration performed by Air Sciences on November 5, 2014 resulted in four invalid hours of data.

Additional invalid hourly NO₂ data were due to Level 1 and Level 2 zero/span checks.

2.1.3 SO₂ Data Loss

No SO₂ 24-hour maximum data were invalidated for this quarter. Maintenance, and a calibration performed by Air Sciences on November 5, 2014 resulted in four invalid hours of data.

Additional invalid hourly SO₂ data were due to Level 1 and Level 2 zero/span checks.

2.1.4 O₃ Data Loss

O₃ rolling 8-hour maximum data were invalidated for November 5, 2014, due to maintenance, and a calibration performed by Air Sciences. O₃ rolling 8-hour maximum data were also invalidated for November 20, 2014, and December 19, 2014, due to Level 1 zero/span checks.

Additional invalid hourly O₃ data were due to Level 1 and Level 2 zero/span checks.

2.1.5 PM Data Loss

2.1.5.1 East Plant

No 24-hour average PM₁₀ data were invalidated for this quarter. Three hours of PM₁₀ data were invalidated on October 20, 2014, due to maintenance and a calibration performed by Air Sciences.

Hourly and 24-hour average PM_{2.5} data were invalidated from October 1 to October 3, 2014, due to a pump failure. Two hours of PM_{2.5} data were invalidated on October 20, 2014, as a result of maintenance and calibration performed by Air Sciences.

Additional invalid hourly PM data at the East Plant were due to monthly flow verifications, regularly scheduled maintenance, power outages, and internal instrument errors.

2.1.5.2 West Plant

Hourly and 24-hour average PM₁₀ data were invalidated on November 1, 2014 due to a power outage. Hourly and 24-hour average PM₁₀ data were also invalidated from November 21, to December 1, 2014, as a result of the instrument being left in maintenance mode after a site check. Four hours of PM₁₀ data were invalidated on October 20, 2014, as a result of maintenance and calibration performed by Air Sciences.

Hourly and 24-hour average PM_{2.5} data were invalidated on October 14 and 15, 2014, October 21 and 22, 2014, and November 15 to November 17, 2014 due to tape break errors. Hourly and 24-hour average PM_{2.5} data were also invalidated from December 9 to December 30, 2014 as a result of a pump failure. Three hours of PM_{2.5} data were invalidated on October 20, 2014, due to maintenance and a calibration performed by Air Sciences. The recovery rate for PM_{2.5} data at the West Plant was below the required recovery rate of 75%.

Additional invalid hourly PM data at the West Plant were due to monthly flow verifications, regularly scheduled maintenance, power outages, and internal instrument errors.

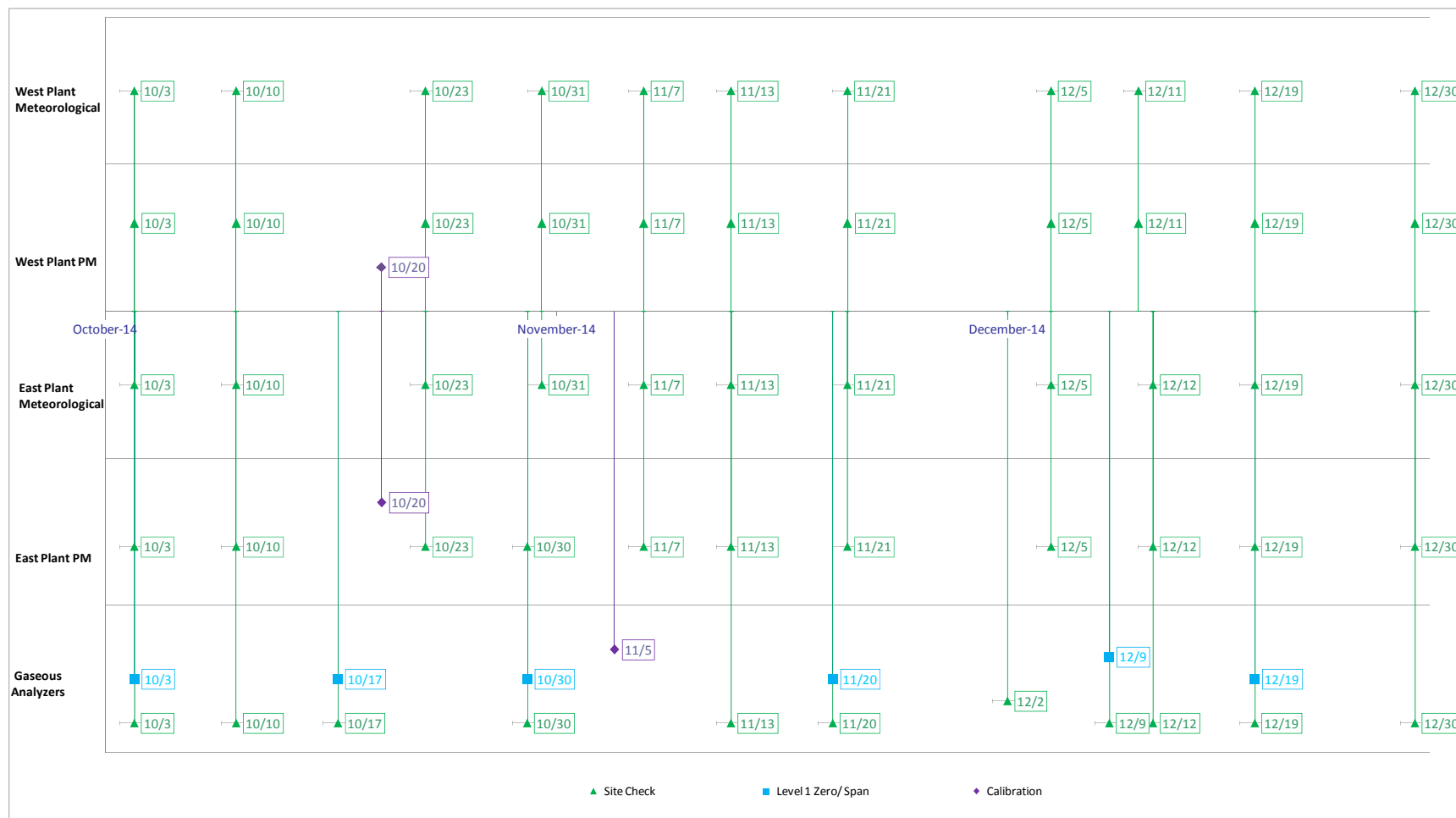
2.2 Quality Control

Quality assurance, equipment calibration, and audit procedures are conducted in accordance with the following documents:

- Quality Assurance Handbook for Air Pollution Measurement Systems, Volume II: Ambient Air Quality Monitoring Program (EPA-454/B-13-003, May 2013)
- Quality Assurance Handbook for Air Pollution Measurement Systems, Volume IV: Meteorological Measurements (EPA-454/B-08-002, March 2008)
- Transfer Standards for the Calibration of Ambient Air Monitoring Analyzers for Ozone (EPA-454/B-13-004, October 2013)
- Code of Federal Regulations (40 CFR Parts 50 and 58)
- Ambient Monitoring Guidelines for Prevention of Significant Deterioration (PSD) (EPA-450/4-87-007, May 1987)
- Meteorological Monitoring Guidance for Regulatory Modeling Applications (EPA-454/R-99-005, February 2000)

Audits and/or calibrations of meteorological instrumentation are required every six months. The most recent audit of the meteorological stations occurred between July 29, and July 31, 2014. Audits and/or calibrations of the ambient air quality monitors and analyzers are required every three months. At the East and West Plant, Air Sciences performed a calibrations of the particulate monitors on October 20, 2014, and a calibration of the air quality analyzers on November 5, 2014. Site checks on the meteorological sensors, particulate instruments, and gas analyzers continue to be conducted on a weekly basis. Copies of the audit/calibration report, flow verifications, and site check forms can be found in Appendices D-I.

Figure 2. Dates of Site Checks, Audits, and Calibrations
October 1- December 31, 2014



3.0 METEOROLOGICAL DATA SUMMARY AND DISCUSSION

3.1 Meteorological Data Summary

Meteorological data from the fourth quarter have been compiled and summarized in graphical and tabular form. Meteorological summary sheets (Figure 3 and Figure 4) are comprised of the following:

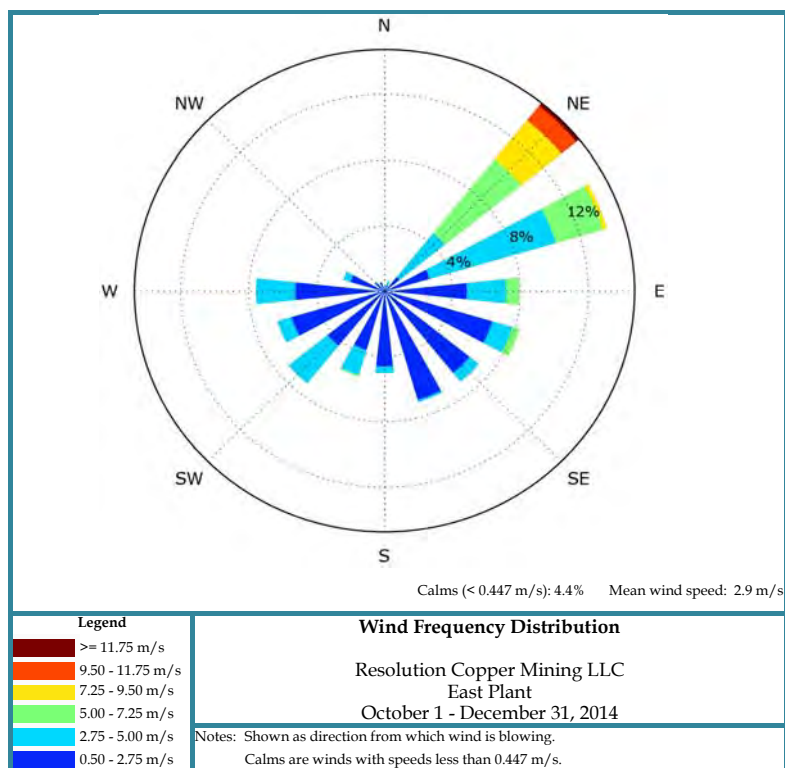
Wind Rose – Graphically depicts the percentage of winds that come from each of the 16 directions for the reported period. Wind speeds are divided into six subcategories ranging from less than 0.5 m/s (the measurement threshold of the instrument) to greater than 11.75 m/ s.

Wind Frequency Table –The Wind Frequency Table shows the percentage of occurrence of winds for each of the 16 directions that occur in each of the six Wind Speed Class Intervals.

Meteorology Charts – Graphically summarize recorded hourly meteorological parameters by month. Chart types include stock-ticker charts (with high, low, and average hourly values for each month) and bar charts.

Figure 3: East Plant Meteorological Data Summary

Meteorological Data: October 1 - December 31, 2014



Direction	Speed Class Intervals (m/s) (percent of occurrence)						All	Mean Speed
	0.5 < 1.5	1.5 < 3	3 < 5	5 < 7	7 < 10	>= 10		
N	0.2	0.0	0.1	0.0	0.0	0.0	0.4	2.1
NNE	0.1	0.3	0.2	0.0	0.0	0.0	0.7	2.6
NE	0.5	0.7	3.4	5.1	4.2	0.9	14.7	6.2
ENE	0.7	2.7	7.1	2.8	0.4	0.0	13.6	3.9
E	1.6	3.6	1.9	0.7	0.0	0.0	7.9	2.7
ESE	2.4	4.4	1.0	0.5	0.0	0.0	8.3	2.2
SE	3.6	3.0	0.5	0.0	0.0	0.0	7.1	1.6
SSE	5.4	1.5	0.1	0.0	0.0	0.0	7.1	1.2
S	3.2	1.5	0.3	0.0	0.0	0.0	5.0	1.4
SSW	1.7	2.4	1.3	0.1	0.0	0.0	5.5	2.2
SW	1.3	4.0	1.9	0.0	0.0	0.0	7.2	2.4
WSW	1.6	4.6	0.4	0.0	0.0	0.0	6.6	2.0
W	1.3	4.9	1.4	0.0	0.0	0.0	7.6	2.3
WNW	1.0	1.3	0.3	0.0	0.0	0.0	2.5	1.9
NW	0.5	0.2	0.1	0.0	0.0	0.0	0.8	1.7
NNW	0.4	0.2	0.0	0.0	0.0	0.0	0.6	1.3
All	25.5	35.4	20.2	9.1	4.6	0.9	95.6	2.9

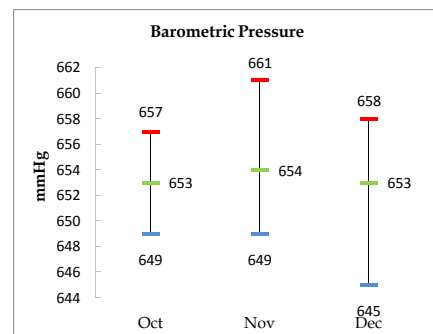
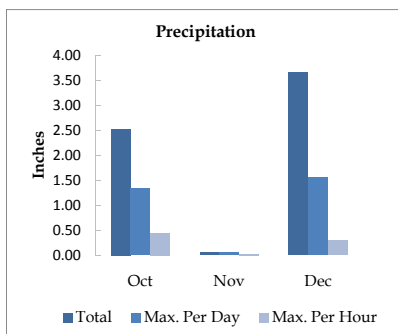
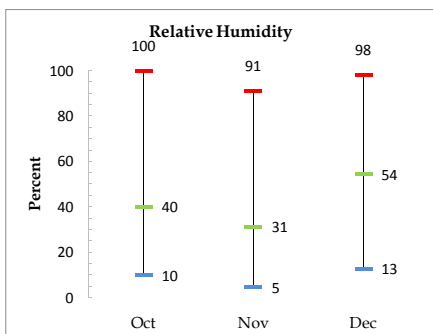
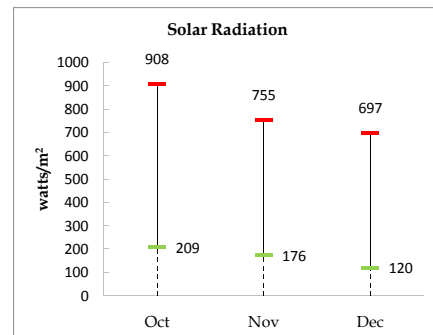
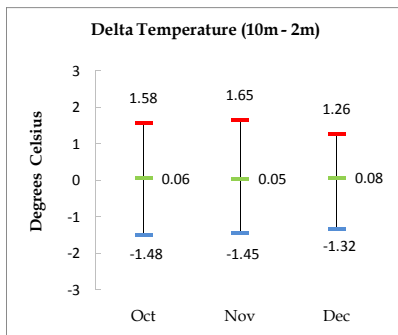
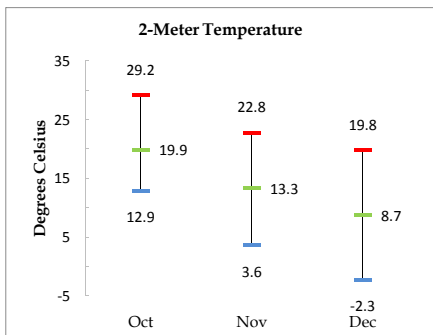
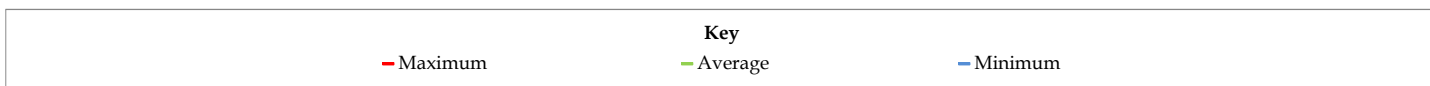
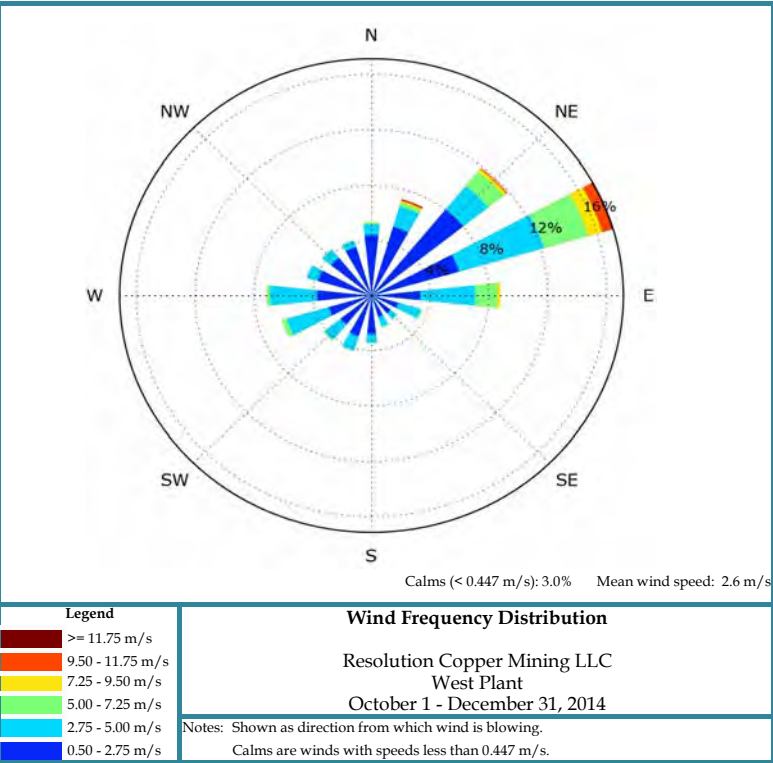
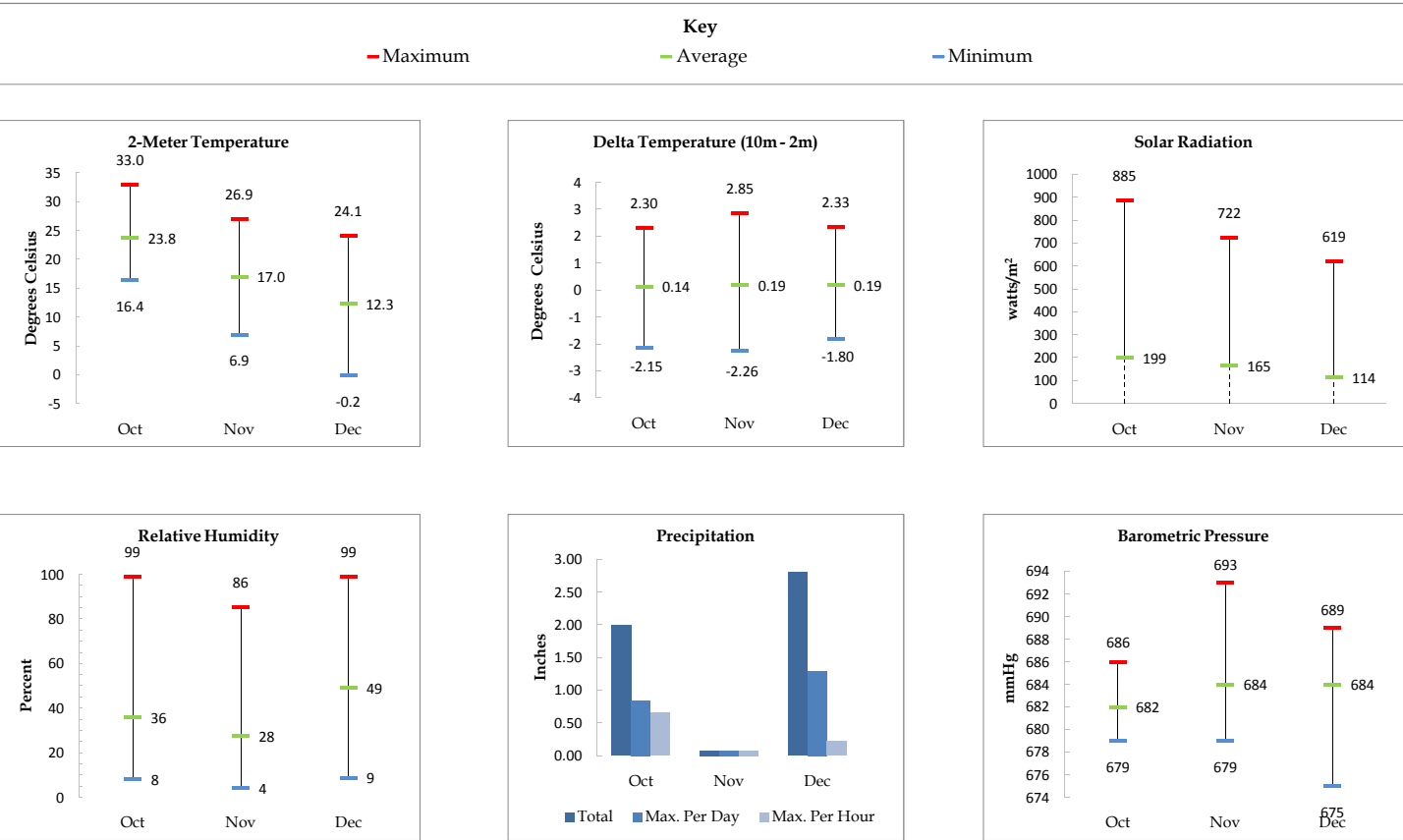


Figure 4: West Plant Meteorological Data Summary

Meteorological Data: October 1 - December 31, 2014



Direction	Speed Class Intervals (m/s) (percent of occurrence)						All	Mean Speed
	0.5 <1.5	1.5 <3	3 <5	5 <7	7 <10	>=10		
N	3.3	1.2	0.6	0.1	0.0	0.0	5.3	1.7
NNE	3.8	1.7	1.2	0.2	0.2	0.1	7.3	2.2
NE	4.3	4.1	1.8	1.3	0.3	0.1	11.9	2.6
ENE	2.8	4.0	5.4	3.0	1.3	0.6	17.1	4.0
E	1.1	2.8	3.1	1.5	0.2	0.0	8.7	3.4
ESE	0.7	1.5	1.2	0.1	0.0	0.0	3.6	2.6
SE	0.8	1.1	0.3	0.0	0.0	0.0	2.2	2.0
SSE	0.7	1.1	0.5	0.1	0.0	0.0	2.4	2.3
S	1.4	1.7	0.4	0.0	0.0	0.0	3.4	1.9
SSW	1.1	2.1	1.0	0.0	0.0	0.0	4.2	2.2
SW	0.9	2.2	1.1	0.1	0.0	0.0	4.2	2.4
WSW	1.0	2.6	2.4	0.3	0.0	0.0	6.3	2.8
W	1.2	3.2	2.5	0.2	0.0	0.0	7.1	2.7
WNW	2.0	2.0	0.5	0.0	0.0	0.0	4.6	1.7
NW	2.5	1.2	0.6	0.0	0.0	0.0	4.3	1.6
NNW	2.7	1.0	0.4	0.0	0.0	0.0	4.2	1.5
All	30.3	33.8	23.1	7.0	1.9	0.8	97.0	2.6



3.2 Meteorological Data Discussion

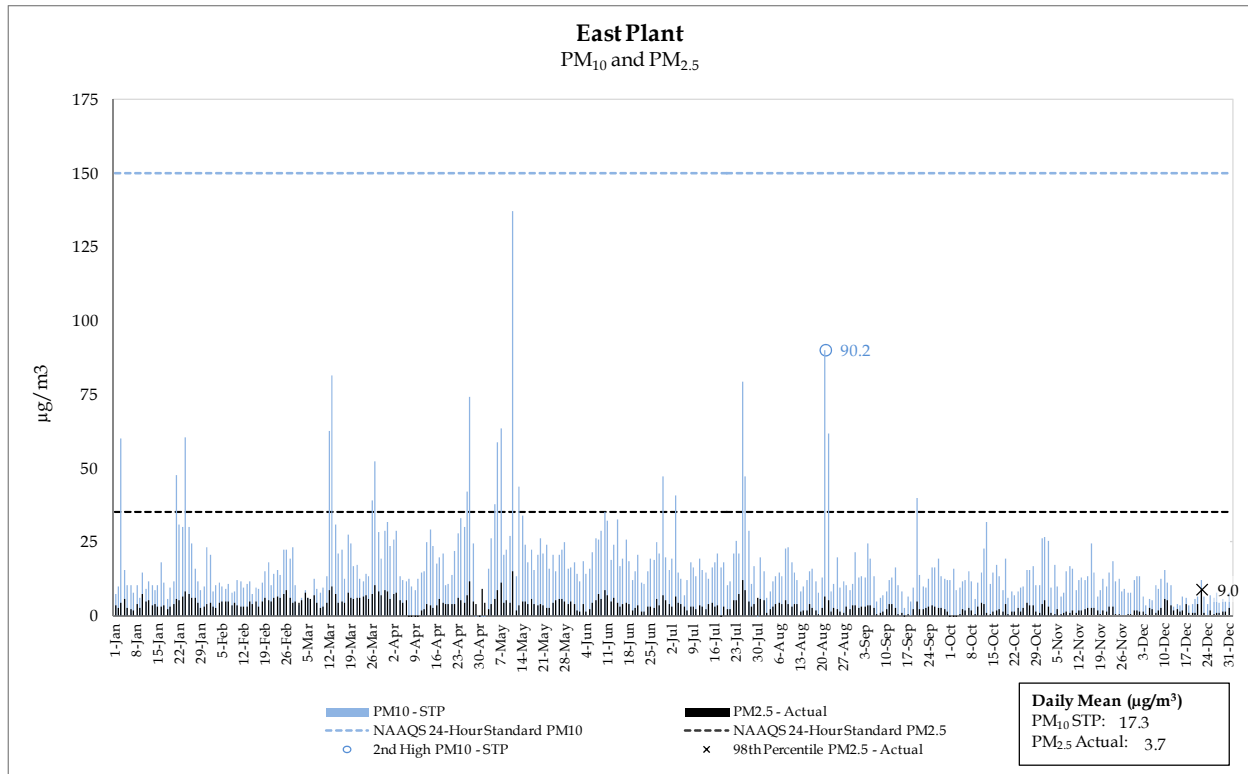
The meteorological data collected at the East and the West Plant sites for the fourth quarter of 2014 met all data recovery objectives.

4.0 PM DATA SUMMARY AND DISCUSSION

4.1 East Plant PM Data Summary

Figure 5 presents the PM₁₀ and PM_{2.5} data collected at the East Plant site for 2014, and compares the data to the PM₁₀ and PM_{2.5} NAAQS. The second-high 24-hour average for PM₁₀, and the 98th percentile for PM_{2.5} are labeled. The daily mean value for PM₁₀ and PM_{2.5} are shown in the lower-right corner.

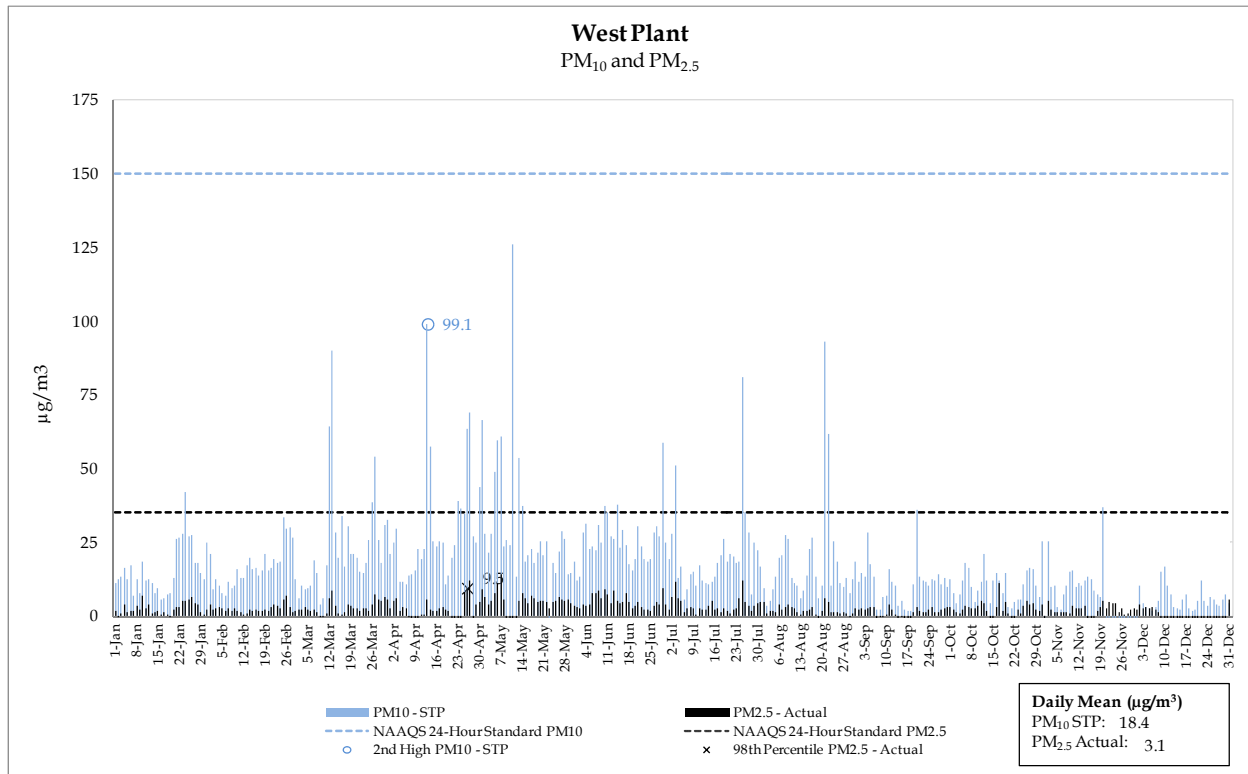
Figure 5. East Plant Particulate Data



4.2 West Plant PM Data Summary

Figure 6 presents the PM₁₀ and PM_{2.5} data collected at the West Plant site for 2014, and compares the data to the PM₁₀ and PM_{2.5} NAAQS. The second-high 24-hour average for PM₁₀, and the 98th percentile for PM_{2.5} are labeled. The daily mean value for PM₁₀ and PM_{2.5} are shown in the lower-right corner.

Figure 6. West Plant Particulate Data



4.3 PM Data Discussion

4.3.1 PM₁₀

The National Ambient Air Quality Standard (NAAQS) for PM₁₀ is 150 $\mu\text{g}/\text{m}^3$ for a 24-hour average concentration. The standard is met when the expected number of days per calendar year with a 24-hour average concentration above 150 $\mu\text{g}/\text{m}^3$ is equal to or less than one (second-high value).

As shown in Figure 5 and Figure 6, the second-high PM₁₀ concentrations recorded at the East and West Plants are 90.2 $\mu\text{g}/\text{m}^3$ and 99.1 $\mu\text{g}/\text{m}^3$, respectively. Both the East and West Plants' second-high values are below the NAAQS of 150 $\mu\text{g}/\text{m}^3$.

Actual comparison to the NAAQS requires three calendar years of monitoring data, which have not been obtained at this time.

4.3.2 PM_{2.5}

The annual primary and secondary PM_{2.5} standards are met when the annual arithmetic mean concentration is less than or equal to 12.0 µg/m³. The 24-hour primary and secondary PM_{2.5} standards are met when the 98th percentile 24-hour concentration is less than or equal to 35 µg/m³.

As shown in Figure 5 and Figure 6, arithmetic mean concentrations for the East and West Plants are 3.7 and 3.1 µg/m³, respectively. Both the East and West Plants' arithmetic mean values are below the NAAQS of 12 µg/m³.

Figure 5 and Figure 6 also show the 98th percentile concentrations at the East and West Plants, which were 9.0 and 9.5 µg/m³, respectively. The 98th percentiles of both the East and West Plants' 24-hour concentrations are also below 35 µg/m³.

Actual comparison to the NAAQS requires three calendar years of monitoring data, which have not been obtained at this time.

5.0 NO₂ DATA SUMMARY AND DISCUSSION

5.1 NO₂ Data Summary

Figure 7 and Figure 8 present the NO₂ maximum hourly concentrations for each calendar day, and hourly data collected at the East Plant site for 2014. Figure 7 shows the 98th percentile compared to the one-hour NO₂ standard. Figure 8 shows the mean hourly NO₂ concentration compared with the annual NO₂ standard.

Figure 7. NO₂ Maximum Hourly Concentration for Each Calendar Day

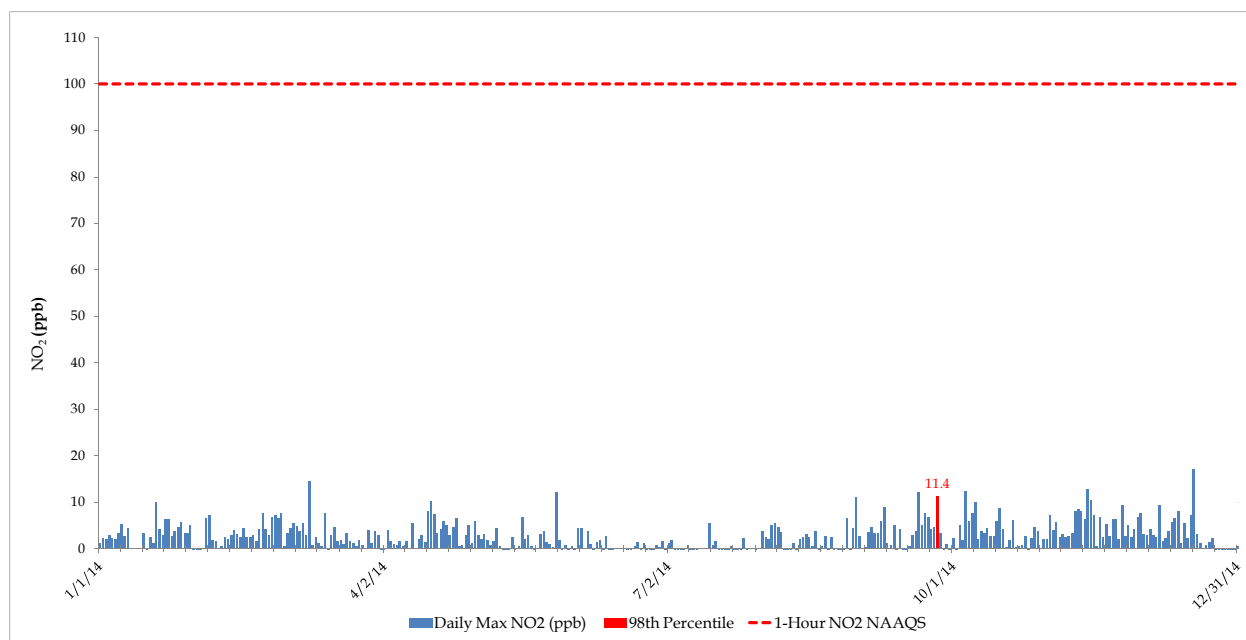
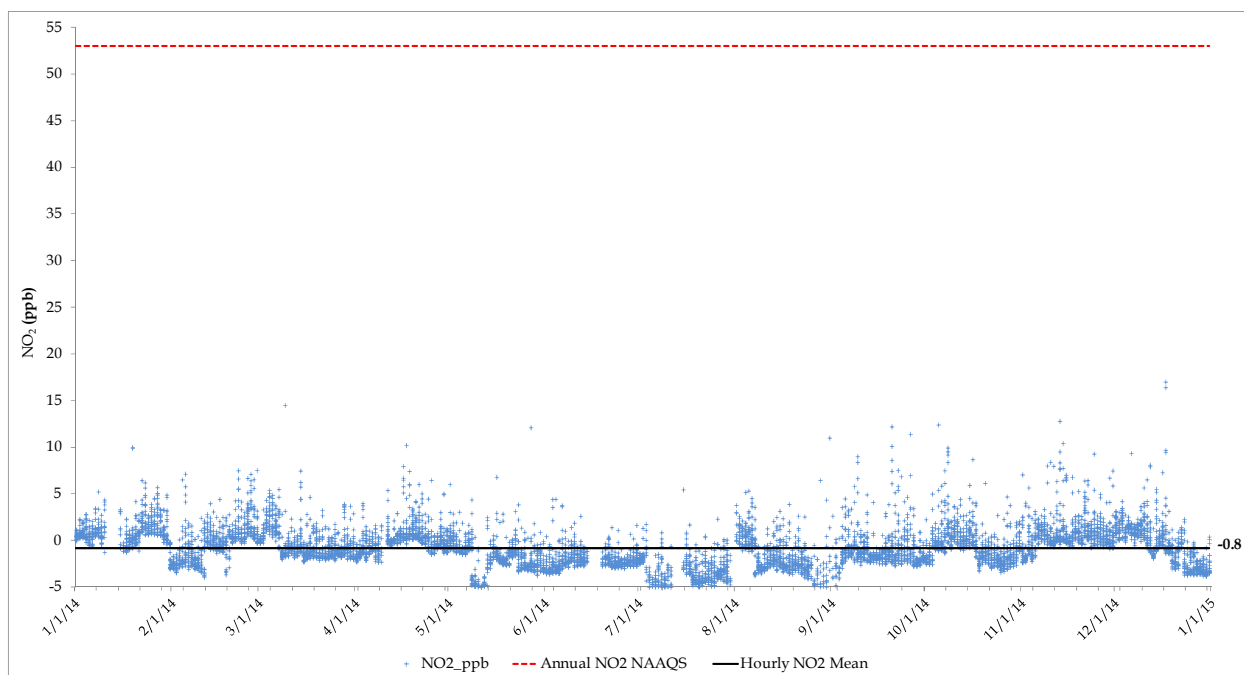


Figure 8. NO₂ Mean Hourly Concentrations



5.2 NO₂ Data Discussion

The level of the annual NAAQS for oxides of nitrogen is 53 parts per billion (ppb), measured in the ambient air as NO₂. The annual NAAQS is met when the annual average concentration in a calendar year is less than or equal to 53 ppb.

The level of the 1-hour NAAQS for oxides of nitrogen is 100 ppb, measured in the ambient air as NO₂. The 1-hour NAAQS is met when the three-year average of the annual 98th percentile of the daily maximum 1-hour average concentration is less than or equal to 100 ppb.

As shown in Figure 7, the 98th percentile of the daily maximum 1-hour average NO₂ concentration for 2014 is 11.4 ppb, which is less than the NAAQS 1-hour primary standard of 100. As shown in Figure 8, the 2014 hourly NO₂ average is -0.8 ppb, which is below the annual NO₂ NAAQS of 53 ppb. Slight, negative concentrations are normal when the analyzer is operating near the zero calibration set point.

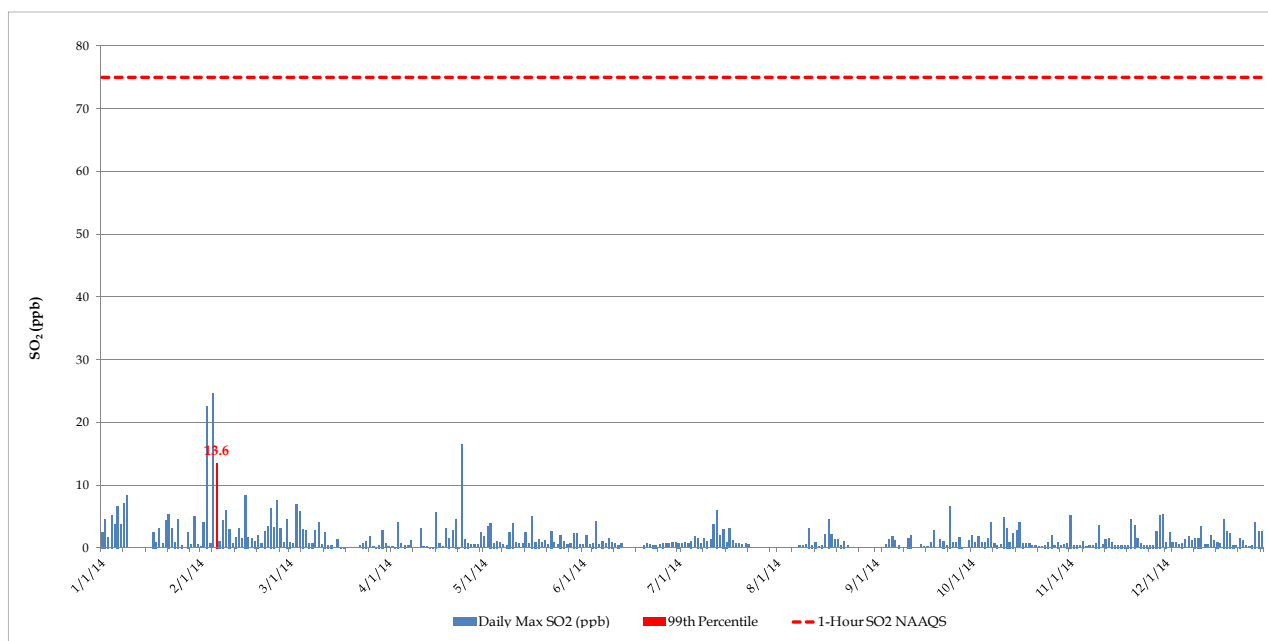
Actual comparison to the NAAQS requires three calendar years of monitoring data, which have not been obtained at this time.

6.0 SO₂ DATA SUMMARY AND DISCUSSION

6.1 SO₂ Data Summary

Figure 9 presents the maximum hourly SO₂ concentrations for each calendar day collected at the East Plant site for 2014, and it shows the 99th percentile (labeled) compared to the one-hour SO₂ standard.

Figure 9. SO₂ Maximum Hourly Concentration for Each Calendar Day



6.2 SO₂ Data Discussion

The level of the primary 1-hour NAAQS for oxides of sulfur is 75 ppb measured in the ambient air as sulfur dioxide (SO₂). The 1-hour primary standard is met at an ambient air quality monitoring site when the three-year average of the annual (99th percentile) daily maximum 1-hour average concentrations is less than or equal to 75 ppb.

As shown in Figure 9, the 99th percentile 1-hour maximum concentration for 2014 is 13.6 ppb, which is below the annual SO₂ NAAQS of 75 ppb.

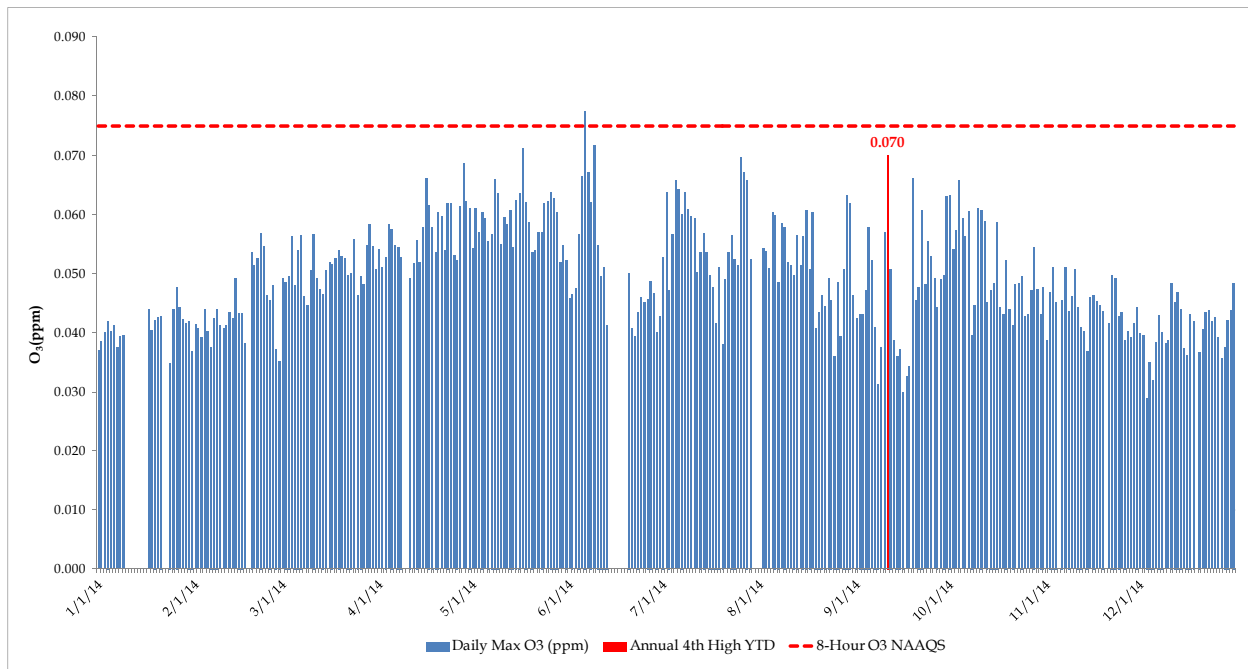
Actual comparison to the NAAQS requires three calendar years of monitoring data, which have not been obtained at this time.

7.0 O₃ DATA SUMMARY AND DISCUSSION

7.1 O₃ Data Summary

Figure 10 presents the daily rolling 8-hour maximum O₃ data collected at the East Plant site for 2014, and it shows the fourth-highest rolling 8-hour average compared to the eight-hour O₃ standard.

Figure 10. O₃ Daily Rolling 8-Hour Maximum, 2014



7.2 O₃ Data Discussion

The level of the primary and secondary 8-hour NAAQS for ozone is 0.075 parts per million, daily maximum average. The 8-hour primary and secondary standard is met at an ambient air quality monitoring site when the three-year average of the annual fourth-highest daily maximum 8-hour average O₃ concentration is less than or equal to 0.075 ppm.

Figure 10 shows that the averaged fourth-high maximum recorded at the East Plant is 0.070 ppm. This concentration is below the NAAQS 8-hour O₃ standard of 0.075 ppm.

Parts of Pinal County and adjacent Maricopa County have been designated as non-attainment areas for 8-hour ozone by the Arizona Department of Environmental Quality (ADEQ).

Actual comparison to the NAAQS requires three calendar years of monitoring data, which have not been obtained at this time.

Appendix A: Meteorological Data - Hourly

SAROAD for Resolution, East_Plant
"Component, Channel: Table100, WS_ms_10m"
Month: Oct 2014

Hour of day																											
Day	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Avg	Max	Min
1	0.5	0.1	0.3	0.5	0.5	0.6	1.0	0.6	1.1	2.2	1.5	2.2	2.7	2.6	2.7	2.2	2.1	2.0	2.1	2.7	1.7	1.6	1.3	2.9	1.6	2.9	0.1
2	3.8	2.5	1.5	6.5	6.1	7.0	9.2	9.7	9.6	9.0	8.5	5.8	6.8	5.6	4.9	3.7	3.6	3.2	1.4	1.1	2.0	5.9	5.9	4.3	5.3	9.7	1.1
3	4.5	3.0	3.0	4.7	3.0	2.7	2.6	3.1	5.5	6.0	7.4	8.5	8.5	6.2	5.7	4.7	4.9	4.7	2.5	1.6	2.0	2.5	5.3	3.9	4.4	8.5	1.6
4	2.3	2.6	2.6	2.6	2.5	2.4	2.3	2.8	4.8	5.2	4.5	2.3	1.8	2.3	2.3	2.4	2.0	1.9	1.2	0.8	1.6	1.4	1.8	1.6	2.4	5.2	0.8
5	1.1	1.2	0.7	0.4	0.8	0.5	0.2	0.5	1.1	2.0	2.5	2.3	2.5	2.4	2.6	2.4	2.8	2.2	2.3	2.4	1.2	0.6	0.3	0.7	1.5	2.8	0.2
6	1.3	1.3	1.1	0.9	0.4	0.7	1.4	1.3	1.0	1.9	1.6	1.5	3.0	2.8	2.7	2.1	2.0	3.0	3.3	1.2	0.2	0.7	0.3	0.2	1.5	3.3	0.2
7	0.3	0.1	0.3	0.4	0.6	0.8	1.1	1.0	1.2	0.9	0.8	1.4	2.2	2.1	2.4	2.4	2.6	2.7	1.4	2.0	2.7	1.8	2.8	1.1	1.5	2.8	0.1
8	1.1	2.7	1.1	1.8	1.9	3.4	4.1	4.6	5.1	3.9	2.2	2.1	1.8	4.1	4.3	4.5	4.0	3.2	2.3	1.5	0.9	1.1	0.9	1.4	2.7	5.1	0.9
9	1.0	0.8	1.5	2.8	3.4	3.4	3.0	3.9	2.7	2.4	2.5	2.5	1.8	1.9	1.5	2.0	1.9	1.8	1.1	0.6	1.4	0.9	0.6	1.0	1.9	3.9	0.6
10	0.6	0.7	0.3	0.5	0.6	0.8	0.9	0.5	0.9	1.8	2.5	3.0	3.1	3.0	3.1	2.4	2.2	2.1	3.2	2.2	1.9	0.5	0.9	0.7	1.6	3.2	0.3
11	0.8	1.2	1.3	1.6	0.8	1.4	1.5	1.7	3.0	3.0	1.9	2.0	1.6	2.3	2.5	2.3	2.2	1.9	2.8	2.5	1.2	0.8	0.6	0.5	1.7	3.0	0.5
12	0.6	0.7	0.3	0.4	0.4	0.3	0.5	0.5	1.1	2.0	2.1	2.6	2.6	2.5	3.2	3.6	2.9	2.8	1.8	1.5	1.4	1.6	4.3	6.8	1.9	6.8	0.3
13	7.3	7.4	9.5	10.5	10.2	10.0	10.1	8.5	9.0	8.9	6.2	6.1	5.4	4.6	2.1	1.3	1.6	1.9	0.6	0.6	0.9	4.0	3.9	3.0	5.6	10.5	0.6
14	5.5	4.1	3.8	6.7	6.0	4.1	5.9	5.1	6.4	6.0	5.6	5.9	4.2	6.0	6.7	5.7	3.9	4.5	2.7	1.8	1.7	1.8	2.2	2.8	4.6	6.7	1.7
15	3.0	2.6	2.7	3.3	2.9	3.1	3.1	3.5	3.5	3.3	4.1	3.6	3.1	3.2	2.7	1.7	1.8	2.4	1.2	0.4	0.6	0.9	0.7	0.1	2.4	4.1	0.1
16	0.2	0.5	0.1	0.3	0.7	1.1	0.7	1.2	2.0	2.1	2.6	3.0	2.7	2.3	2.7	2.0	2.0	1.7	1.6	0.8	0.6	0.5	0.3	0.4	1.4	3.0	0.1
17	0.4	0.6	0.6	0.9	0.9	0.8	0.9	1.3	1.0	0.7	1.7	1.8	3.9	4.6	3.6	2.5	1.3	1.4	1.2	1.3	1.5	1.1	1.1	1.3	1.5	4.6	0.4
18	1.3	1.4	1.7	1.7	1.8	1.8	1.5	2.1	3.0	4.5	4.9	4.1	3.8	3.8	3.4	3.3	3.0	3.0	1.2	1.0	1.2	1.3	1.3	1.2	2.4	4.9	1.0
19	1.1	1.5	1.6	2.1	3.5	3.5	4.2	4.3	5.8	7.7	7.0	6.3	6.1	6.8	5.6	3.8	4.4	2.8	4.7	3.9	5.4	3.5	3.9	3.5	4.3	7.7	1.1
20	3.5	3.7	4.4	5.1	6.6	6.6	7.8	6.0	5.4	5.3	6.1	4.3	3.3	2.1	2.0	0.6	2.6	3.8	3.4	4.0	3.2	2.3	2.1	2.1	4.0	7.8	0.6
21	2.4	2.1	2.9	3.0	3.1	3.3	4.0	5.0	5.8	6.2	6.2	5.2	3.2	2.7	2.0	1.1	2.0	1.0	0.9	0.3	0.8	0.7	0.6	1.2	2.7	6.2	0.3
22	1.0	1.1	1.5	2.1	2.5	2.4	4.7	3.6	3.7	4.0	3.0	2.2	1.7	2.1	1.7	1.7	1.4	1.8	2.0	0.4	1.0	1.5	1.4	1.9	2.1	4.7	0.4
23	1.7	2.0	1.6	1.8	1.8	1.9	1.9	1.9	2.8	3.7	3.2	2.3	2.0	2.1	1.1	1.7	0.7	0.8	1.4	0.9	1.3	1.6	1.6	1.3	1.8	3.7	0.7
24	1.3	1.5	1.9	1.3	1.7	1.6	2.0	2.6	3.0	3.9	3.8	3.2	2.1	1.9	1.8	1.3	0.7	1.6	1.9	0.5	1.4	1.4	1.6	1.0	1.9	3.9	0.5
25	1.2	1.4	1.5	1.6	1.9	2.0	2.0	2.0	2.4	2.9	2.5	2.5	2.0	1.7	1.4	1.1	1.5	1.5	0.4	0.5	0.4	1.9	2.0	2.1	1.7	2.9	0.4
26	1.2	0.3	0.3	0.4	0.3	0.4	0.6	0.5	0.7	2.0	1.5	3.0	2.0	2.8	3.5	2.8	2.8	2.7	1.4	0.8	0.3	0.3	0.9	0.5	1.3	3.5	0.3
27	1.2	0.4	0.6	0.6	0.2	0.5	0.6	0.6	0.8	1.4	2.3	2.3	2.9	2.1	2.2	2.2	1.6	1.5	1.1	1.1	0.7	0.9	0.7	0.4	1.2	2.9	0.2
28	0.3	0.7	0.5	0.6	0.6	0.8	1.0	1.2	2.5	2.1	1.6	1.4	1.5	2.4	1.6	1.5	1.9	2.4	3.0	0.9	0.4	1.1	1.2	1.0	1.3	3.0	0.3
29	1.8	1.9	1.9	2.0	2.1	2.3	2.1	2.6	2.7	3.5	4.3	3.5	3.4	2.7	2.2	2.1	2.4	1.1	0.7	0.9	1.3	1.3	1.7	1.5	2.2	4.3	0.7
30	1.8	1.6	1.9	1.9	2.1	2.0	2.3	2.2	3.3	3.7	4.2	4.6	4.9	4.0	3.3	1.8	1.9	2.1	1.3	1.6	2.0	2.1	1.5	1.8	2.5	4.9	1.3
31	1.5	2.0	2.2	2.7	3.6	3.9	3.8	3.9	5.7	5.3	6.3	6.2	5.4	5.0	4.8	4.6	4.5	3.3	3.9	3.0	2.8	1.4	1.6	2.4	3.7	6.3	1.4
Avg	1.8	1.7	1.8	2.3	2.4	2.5	2.8	2.9	3.4	3.8	3.7	3.5	3.3	3.2	3.0	2.5	2.4	2.4	1.9	1.4	1.5	1.6	1.8	1.8	2.5	--	--
Max	7.3	7.4	9.5	10.5	10.2	10.0	10.1	9.7	9.6	9.0	8.5	8.5	8.5	6.8	6.7	5.7	4.9	4.7	4.7	4.0	5.4	5.9	5.9	6.8	--	10.5	--
Min	0.2	0.1	0.1	0.3	0.2	0.3	0.2	0.5	0.7	0.7	0.8	1.4	1.5	1.7	1.1	0.6	0.7	0.8	0.4	0.3	0.2	0.3	0.3	0.1	--	--	0.1

SAROAD for Resolution, East_Plant
"Component, Channel: Table100, WS_ms_10m"
Month: Nov 2014

Hour of day																											
Day	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Avg	Max	Min
1	1.2	1.2	0.4	0.9	1.7	2.2	1.7	1.9	3.7	3.6	4.7	4.2	4.4	3.5	2.3	3.3	3.0	3.0	3.6	4.1	4.1	3.2	3.7	3.3	2.9	4.7	0.4
2	2.9	3.0	3.1	2.9	1.6	1.6	1.9	1.5	2.1	1.7	1.8	2.3	2.0	2.5	3.3	3.0	2.5	2.1	2.2	2.6	0.9	0.9	0.7	1.7	2.1	3.3	0.7
3	1.0	1.1	1.3	1.6	2.0	2.0	2.4	3.0	4.1	4.5	3.5	2.1	2.3	2.7	2.8	3.0	2.9	2.6	2.8	3.1	2.6	1.9	1.1	0.8	2.4	4.5	0.8
4	0.9	5.0	6.4	7.5	8.0	10.4	10.2	9.9	10.6	12.4	10.9	9.9	6.5	6.2	5.9	5.9	5.2	5.4	5.4	4.5	5.6	5.6	3.3	5.7	7.0	12.4	0.9
5	6.1	4.5	5.9	6.8	7.8	7.1	9.6	8.1	11.0	11.5	11.6	10.6	8.1	6.5	3.2	3.7	3.7	1.5	1.9	3.1	2.8	2.7	3.5	3.3	6.0	11.6	1.5
6	5.0	7.1	7.0	4.3	4.4	2.9	3.9	6.1	6.8	7.0	6.6	5.8	6.6	6.8	5.8	5.9	4.7	3.1	2.6	2.6	2.6	3.6	3.5	4.5	5.0	7.1	2.6
7	5.3	3.2	6.4	5.5	5.0	5.3	3.9	4.4	5.3	5.7	5.4	4.6	3.8	2.3	1.6	2.1	2.5	3.5	3.7	0.9	0.7	1.2	0.4	1.1	3.5	6.4	0.4
8	1.3	1.4	1.7	1.8	4.2	4.5	4.6	5.9	6.5	6.8	7.2	7.0	6.2	5.3	4.4	4.8	6.0	3.2	2.9	3.2	3.7	4.5	3.1	3.7	4.3	7.2	1.3
9	4.2	4.4	4.9	6.1	7.6	8.1	7.9	8.1	7.8	7.1	6.5	4.9	3.4	2.2	1.4	1.2	1.1	1.7	1.8	1.2	0.2	0.7	0.4	0.3	3.9	8.1	0.2
10	0.5	0.4	0.3	0.2	0.4	0.5	0.6	0.5	0.8	2.8	3.2	3.2	3.6	3.0	3.5	4.3	2.1	3.0	3.0	4.5	4.4	2.3	2.9	3.9	2.2	4.5	0.2
11	3.7	3.1	2.9	2.9	2.3	2.1	1.4	0.3	1.3	2.7	3.1	3.0	3.2	2.9	2.5	2.5	2.7	2.1	2.6	1.9	1.9	2.2	1.6	1.3	2.3	3.7	0.3
12	0.7	0.2	0.5	0.5	1.3	0.6	1.2	2.2	2.5	2.7	3.0	2.7	2.7	2.6	1.9	2.7	2.9	1.7	0.4	0.6	0.3	0.3	0.3	0.3	1.5	3.0	0.2
13	0.6	0.5	0.3	0.7	0.7	0.7	0.8	1.1	1.7	2.1	1.7	3.1	3.8	3.1	2.6	2.9	1.9	1.9	0.7	0.9	0.9	0.8	1.0	0.8	1.5	3.8	0.3
14	0.9	0.2	0.8	0.8	0.8	1.1	1.1	1.0	1.5	2.3	2.5	3.0	3.7	2.6	2.2	2.1	1.7	1.6	1.2	2.2	2.7	2.5	2.2	2.4	1.8	3.7	0.2
15	2.3	1.8	2.0	0.6	0.8	0.6	0.2	0.7	1.0	1.6	1.9	2.5	2.2	2.3	2.8	2.8	2.5	2.1	1.9	1.8	1.3	1.5	1.0	1.3	1.6	2.8	0.2
16	3.9	3.2	1.5	1.9	1.6	1.2	3.1	2.8	3.2	3.9	8.4	8.8	8.9	8.9	9.4	8.4	5.6	6.0	6.3	8.1	9.8	9.5	11.8	12.9	6.2	12.9	1.2
17	11.9	11.6	12.1	8.9	9.0	11.7	11.0	10.5	9.2	8.4	9.0	9.9	8.7	6.7	5.1	5.2	5.0	4.0	3.6	4.4	4.6	5.1	6.7	8.1	7.9	12.1	3.6
18	6.7	5.3	5.3	7.3	9.1	9.1	9.5	7.1	7.2	6.2	8.7	7.5	6.9	5.4	5.2	4.5	3.7	2.1	1.1	2.1	2.7	3.3	2.5	2.1	5.4	9.5	1.1
19	3.2	3.8	3.1	3.2	3.2	3.3	3.6	3.7	4.1	5.6	6.1	5.4	3.6	1.9	1.6	1.7	1.5	0.9	0.3	0.7	0.5	0.5	0.4	0.6	2.6	6.1	0.3
20	0.5	0.7	0.5	0.6	0.5	1.0	1.1	1.4	1.0	1.2	1.3	1.4	2.4	2.1	1.7	2.0	1.8	1.8	1.5	1.0	0.2	0.8	0.5	0.5	1.2	2.4	0.2
21	0.8	1.3	0.9	1.2	1.4	1.6	1.3	1.3	1.2	1.7	2.1	3.0	1.8	1.5	1.2	1.7	1.2	1.9	1.2	1.1	0.8	0.9	0.8	1.1	1.4	3.0	0.8
22	1.6	1.6	2.0	1.9	1.8	2.1	1.9	1.9	1.7	2.6	2.4	3.1	3.1	2.4	2.3	2.4	1.6	2.2	1.0	0.4	0.6	0.6	0.7	1.0	1.8	3.1	0.4
23	1.5	0.9	1.3	1.4	0.9	0.6	0.4	0.4	1.2	2.6	3.7	3.5	3.5	2.8	3.8	4.4	3.6	2.6	2.5	4.1	3.5	1.4	1.7	1.4	2.2	4.4	0.4
24	1.3	1.3	1.2	3.4	3.1	2.3	1.6	2.1	2.6	2.9	3.5	2.0	3.1	4.2	4.6	3.1	3.2	3.0	1.7	3.5	5.2	5.5	5.6	6.5	3.2	6.5	1.2
25	5.8	6.6	5.6	7.0	6.9	6.9	7.1	5.8	5.7	5.5	4.8	2.4	2.2	2.0	2.3	2.8	2.9	3.8	3.7	2.6	2.1	0.5	1.3	1.5	4.1	7.1	0.5
26	1.0	1.7	1.5	2.3	1.7	2.9	2.3	2.2	3.8	9.0	7.1	5.2	4.3	4.8	3.8	3.6	2.7	2.4	2.4	3.6	4.0	5.8	6.4	9.0	3.9	9.0	1.0
27	5.6	4.5	7.5	6.9	6.4	8.0	6.5	5.5	7.6	7.3	8.4	8.3	7.4	6.6	6.2	5.6	5.7	6.2	4.4	2.9	3.4	3.4	3.1	3.4	5.9	8.4	2.9
28	3.6	4.3	7.2	6.2	6.7	6.6	5.7	5.7	4.9	5.0	5.2	4.8	3.5	2.6	1.5	1.3	0.2	0.6	0.4	1.1	1.0	1.0	0.7	0.6	3.3	7.2	0.2
29	0.8	0.7	1.1	0.6	1.1	0.8	1.2	1.3	1.4	1.0	1.9	1.8	2.9	2.7	3.3	2.6	3.5	1.1	0.6	0.9	0.6	0.5	2.0	0.8	1.5	3.5	0.5
30	1.6	0.8	0.6	2.3	2.2	1.4	0.6	0.4	0.6	1.3	3.6	3.8	2.9	2.4	2.3	3.3	2.3	2.1	2.1	1.7	1.7	1.0	0.6	0.9	1.8	3.8	0.4
Avg	2.9	2.9	3.2	3.3	3.5	3.6	3.6	3.6	4.1	4.6	5.0	4.7	4.3	3.7	3.4	3.4	3.0	2.6	2.3	2.5	2.5	2.5	2.5	2.8	3.3	--	--
Max	11.9	11.6	12.1	8.9	9.1	11.7	11.0	10.5	11.0	12.4	11.6	10.6	8.9	8.9	9.4	8.4	6.0	6.2	6.3	8.1	9.8	9.5	11.8	12.9	--	12.9	--
Min	0.5	0.2	0.3	0.2	0.4	0.5	0.2	0.3	0.6	1.0	1.3	1.4	1.8	1.5	1.2	1.2	0.2	0.6	0.3	0.4	0.2	0.3	0.3	0.3	--	--	0.2

SAROAD for Resolution, East_Plant
"Component, Channel: Table100, WS_ms_10m"
Month: Dec 2014

Hour of day																											
Day	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Avg	Max	Min
1	0.6	0.6	0.8	1.0	1.2	1.2	1.2	1.5	1.6	1.7	2.9	2.9	4.4	5.7	5.2	4.4	4.2	2.4	1.5	2.7	4.7	3.1	3.3	3.2	2.6	5.7	0.6
2	4.0	3.4	3.3	4.9	4.2	4.8	5.2	3.6	4.0	4.6	3.8	3.7	2.9	2.8	2.0	1.4	1.6	1.4	2.0	3.5	1.9	2.2	2.7	3.1	3.2	5.2	1.4
3	3.4	3.2	3.1	2.3	1.5	1.6	1.7	1.9	2.6	2.0	2.9	2.6	2.2	1.5	2.0	1.3	0.8	0.7	0.8	0.5	0.4	1.1	0.7	0.4	1.7	3.4	0.4
4	2.5	2.8	1.1	0.9	0.9	1.8	1.8	3.2	3.8	3.0	3.1	3.5	2.2	1.7	1.9	2.1	1.4	1.7	1.6	1.1	0.9	1.2	1.2	0.7	1.9	3.8	0.7
5	0.3	0.6	0.9	0.7	0.6	1.6	1.7	2.7	3.5	4.1	4.6	3.8	4.3	4.8	4.8	5.0	4.4	3.1	3.1	2.6	2.5	2.6	3.3	1.5	2.8	5.0	0.3
6	1.8	1.7	2.7	3.0	3.9	3.6	3.4	3.1	3.7	5.1	4.4	3.1	3.7	3.1	3.3	3.4	2.0	3.1	2.8	5.2	4.9	4.0	3.9	3.4	3.4	5.2	1.7
7	3.6	1.9	1.5	2.7	6.6	8.8	4.9	4.6	6.0	5.8	8.9	8.4	6.8	6.2	6.1	6.7	4.7	3.4	4.8	5.2	5.9	4.3	3.6	4.1	5.2	8.9	1.5
8	5.5	8.3	8.8	7.0	4.4	6.2	5.4	5.8	7.1	7.3	7.4	7.4	7.7	7.7	7.1	5.1	3.6	3.8	4.7	2.6	2.5	3.5	2.6	3.3	5.6	8.8	2.5
9	2.4	2.9	3.5	4.6	4.9	4.6	6.1	6.5	6.2	5.9	6.3	6.3	4.2	2.5	2.1	2.0	2.4	1.6	0.9	1.9	2.0	1.8	2.0	1.6	3.6	6.5	0.9
10	3.1	5.8	4.7	3.4	3.2	3.8	3.4	4.6	4.7	5.3	5.9	5.3	5.3	4.7	4.1	2.5	1.4	1.1	1.0	2.4	1.1	1.9	1.9	1.7	3.4	5.9	1.0
11	1.0	1.4	0.4	2.2	2.1	2.0	1.9	1.9	2.5	2.8	3.2	3.6	3.3	2.1	1.7	1.4	1.9	2.0	0.8	1.1	0.9	0.5	0.1	0.1	1.7	3.6	0.1
12	0.5	0.9	0.7	0.6	1.0	1.1	0.9	1.1	0.8	1.8	2.9	2.9	3.3	3.0	2.8	1.6	1.5	2.0	2.9	2.6	4.2	3.7	2.2	3.0	2.0	4.2	0.5
13	2.8	3.2	3.3	3.5	3.4	5.3	5.7	4.0	3.2	3.3	2.7	3.0	1.6	2.3	1.9	2.0	4.2	3.6	2.8	2.8	1.3	1.0	0.9	0.8	2.8	5.7	0.8
14	1.2	1.1	0.8	0.3	0.3	0.2	0.2	0.2	0.3	0.6	1.5	2.4	2.9	2.1	2.3	2.0	2.2	3.2	2.1	0.8	1.2	1.0	1.7	1.6	1.3	3.2	0.2
15	1.7	2.0	2.4	2.3	2.5	2.3	2.9	2.4	3.3	4.9	4.9	5.6	4.5	4.2	4.6	4.6	3.0	1.9	2.0	2.1	1.7	1.3	2.3	1.8	3.0	5.6	1.3
16	1.3	1.6	1.7	2.2	1.7	1.9	1.5	1.0	1.4	1.7	1.9	2.6	1.6	2.3	2.6	2.3	2.8	1.3	2.7	1.2	0.9	1.1	1.8	1.3	1.8	2.8	0.9
17	0.5	1.1	1.3	2.5	2.1	1.1	1.2	1.6	3.3	4.5	3.6	3.9	3.1	2.3	1.8	1.3	2.0	1.6	0.7	0.6	0.8	1.4	1.9	1.9	1.9	4.5	0.5
18	2.0	2.1	1.9	2.1	1.7	2.0	2.2	2.1	1.8	1.2	0.7	1.3	1.7	1.9	2.3	2.0	2.0	0.9	0.2	0.8	0.6	0.6	0.6	1.0	1.5	2.3	0.2
19	1.9	3.4	3.9	2.4	3.1	3.4	4.4	4.7	5.0	5.0	4.8	6.4	5.7	5.1	5.3	4.0	2.4	3.1	1.1	0.7	1.1	1.3	1.7	2.3	3.4	6.4	0.7
20	2.4	2.5	2.5	2.1	2.1	2.2	2.6	1.9	2.1	3.3	4.0	2.9	2.9	3.3	2.9	1.9	2.6	3.0	2.5	0.7	0.9	0.5	0.4	0.5	2.2	4.0	0.4
21	1.5	0.6	0.8	0.5	1.2	0.8	0.9	1.0	0.8	0.8	2.1	2.7	2.1	2.5	2.8	1.8	2.0	2.6	1.5	1.3	1.4	1.8	0.9	1.5	1.5	2.8	0.5
22	1.1	1.5	0.6	0.8	0.9	0.5	0.4	1.1	0.8	0.7	2.1	2.7	3.0	2.7	3.3	3.4	3.4	3.6	3.5	4.0	2.7	4.4	4.1	4.1	2.3	4.4	0.4
23	3.7	3.0	3.4	2.3	4.4	4.1	1.0	3.8	5.6	7.2	7.2	7.9	7.9	9.2	7.5	7.1	7.3	4.8	4.0	4.4	3.7	4.5	4.5	4.3	5.1	9.2	1.0
24	5.8	6.9	9.1	5.2	7.1	7.8	6.3	6.0	5.2	6.3	7.0	5.2	4.8	4.8	4.0	2.3	2.5	1.9	1.4	2.1	1.7	1.6	1.4	1.1	4.5	9.1	1.1
25	1.2	0.5	1.1	0.7	2.1	1.0	2.3	2.0	2.8	3.8	3.3	3.1	3.1	2.6	2.7	2.5	2.4	2.5	2.8	1.9	1.5	1.4	2.0	2.0	2.1	3.8	0.5
26	1.1	1.3	1.1	1.1	1.0	1.7	1.0	1.0	0.8	2.3	2.8	2.2	2.8	2.3	2.0	2.5	1.8	1.9	1.7	0.9	0.9	1.0	0.2	0.4	1.5	2.8	0.2
27	1.3	1.0	1.1	1.2	1.6	2.3	6.3	8.0	7.7	6.3	8.3	6.5	5.4	3.5	2.7	2.8	2.4	2.5	2.7	1.2	1.2	2.2	3.3	2.3	3.5	8.3	1.0
28	2.2	2.2	2.3	2.3	1.9	1.6	1.9	1.8	2.2	3.5	4.5	2.2	1.4	1.4	2.2	2.4	2.8	3.0	2.7	0.1	0.8	0.5	0.4	0.4	1.9	4.5	0.1
29	0.4	0.4	0.7	0.9	1.3	0.5	0.9	1.1	1.0	1.4	2.7	2.6	1.6	2.1	1.7	2.2	1.5	2.8	2.0	0.7	0.2	0.7	0.4	0.1	1.2	2.8	0.1
30	0.1	0.6	0.3	0.6	0.9	0.5	0.6	0.5	1.4	2.3	2.4	3.8	3.6	3.8	4.2	3.2	1.3	1.5	2.0	2.6	1.3	2.0	1.5	1.7	1.8	4.2	0.1
31	0.8	0.7	0.0	1.3	0.6	0.1	2.5	1.4	1.0	1.1	3.8	3.1	2.4	2.3	1.3	1.6	1.8	1.6	2.1	1.6	1.7	2.5	2.3	2.7	1.7	3.8	0.0
Avg	2.0	2.2	2.3	2.2	2.4	2.6	2.7	2.8	3.1	3.5	4.1	4.0	3.6	3.4	3.3	2.9	2.6	2.4	2.2	2.0	1.8	2.0	1.9	1.9	2.7	--	--
Max	5.8	8.3	9.1	7.0	7.1	8.8	6.3	8.0	7.7	7.3	8.9	8.4	7.9	9.2	7.5	7.1	7.3	4.8	4.8	5.2	5.9	4.5	4.5	4.3	--	9.2	--
Min	0.1	0.4	0.0	0.3	0.3	0.1	0.2	0.2	0.3	0.6	0.7	1.3	1.4	1.4	1.3	1.3	0.8	0.7	0.2	0.1	0.2	0.5	0.1	0.1	--	--	0.0

SAROAD for Resolution, East_Plant
"Component, Channel: Table100, WD_10m"
Month: Oct 2014

Hour of day

Day	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Avg	Max	Min
1	187	189	175	168	200	153	150	137	100	117	114	255	228	238	229	228	254	256	277	274	278	274	235	307	214	307	100
2	322	278	197	50	48	44	41	38	39	43	40	50	42	43	43	48	43	39	281	172	107	43	51	62	43	322	38
3	69	96	84	67	93	112	109	80	63	53	55	48	48	55	47	43	37	38	76	111	78	96	57	80	70	112	37
4	119	106	93	106	113	118	123	97	58	55	54	59	40	233	246	263	244	262	226	276	294	287	284	285	119	294	40
5	281	262	232	170	184	152	164	171	112	260	246	248	244	249	249	248	254	256	275	274	303	68	74	179	230	303	68
6	198	194	190	185	202	172	191	154	140	60	330	270	257	259	268	279	274	277	276	266	125	192	219	217	222	330	60
7	185	331	184	168	173	181	174	132	151	127	121	278	274	267	261	265	264	270	295	253	261	257	273	74	226	331	74
8	195	266	161	125	114	94	80	57	59	62	92	81	78	67	52	54	56	56	58	74	194	115	123	233	90	266	52
9	251	169	215	189	222	213	213	210	273	266	256	262	267	273	249	257	263	265	222	358	278	143	126	168	235	358	126
10	174	144	184	133	163	192	166	125	123	274	267	265	268	254	251	239	241	275	275	273	269	15	209	167	220	275	15
11	189	156	143	136	121	104	108	126	77	59	62	126	231	258	238	250	259	265	275	277	190	244	155	178	177	277	59
12	191	187	162	178	163	156	192	132	160	230	232	231	253	244	259	216	255	231	348	57	288	290	46	47	211	348	46
13	48	51	43	38	40	38	40	47	48	46	60	59	57	40	36	34	48	33	189	143	99	103	109	80	58	189	33
14	74	122	103	59	69	81	56	66	59	55	58	47	74	52	50	46	36	39	61	79	102	105	80	74	68	122	36
15	65	75	87	78	76	72	73	74	78	73	117	119	130	179	201	241	226	263	313	174	141	165	147	127	118	313	65
16	141	163	85	46	144	179	164	155	105	84	137	167	237	266	239	253	215	196	251	330	341	230	162	190	181	341	46
17	172	184	152	172	173	161	166	167	190	227	259	88	65	63	47	78	98	31	241	160	115	99	172	144	144	259	31
18	136	129	143	164	183	160	123	106	73	54	48	107	127	125	142	230	267	269	282	181	190	187	203	261	157	282	48
19	151	126	95	79	62	63	58	59	56	47	50	44	40	40	37	280	156	112	106	76	96	67	69	68	73	280	37
20	71	69	63	59	53	54	51	56	58	57	49	59	78	103	49	35	49	43	55	57	63	72	93	91	62	103	35
21	97	83	70	67	75	65	59	56	54	47	52	48	84	129	141	81	43	56	43	128	152	130	144	122	83	152	43
22	143	158	106	80	68	82	54	59	59	56	80	87	145	159	182	264	298	231	262	176	190	184	171	173	133	298	54
23	176	168	164	166	163	149	139	127	80	62	50	67	114	148	157	257	224	235	271	161	154	125	120	121	147	271	50
24	104	126	125	137	137	106	101	82	70	62	50	97	120	152	157	163	139	234	285	37	186	171	204	161	128	285	37
25	170	157	168	170	181	187	186	159	113	75	74	103	106	146	213	229	262	221	214	239	162	198	203	175	174	262	74
26	138	85	58	54	62	196	185	166	116	110	186	265	232	208	215	190	195	213	200	226	240	156	228	282	186	282	54
27	255	250	234	134	156	204	153	154	108	131	254	225	236	274	246	227	237	128	139	291	110	185	184	175	196	291	108
28	161	158	191	168	157	164	162	159	98	84	174	283	285	240	290	242	258	262	269	261	167	161	162	142	193	290	84
29	178	189	194	187	171	152	132	124	111	73	54	42	42	33	55	46	43	49	145	185	139	127	131	108	114	194	33
30	116	145	141	138	100	95	90	90	68	57	48	102	125	110	130	148	90	58	90	97	93	92	99	100	101	148	48
31	88	92	91	77	70	66	72	73	54	82	94	112	123	110	104	108	104	95	109	114	123	152	153	201	101	201	54
Avg	150	147	140	123	128	129	123	110	87	69	72	82	119	174	204	242	250	272	260	187	157	145	149	144	131	--	--
Max	322	331	234	189	222	213	213	210	273	274	330	283	285	274	290	280	298	277	348	358	341	290	284	307	--	358	--
Min	48	51	43	38	40	38	40	38	39	43	40	42	40	33	36	34	36	31	43	37	63	15	46	47	--	--	15

SAROAD for Resolution, East_Plant
"Component, Channel: Table100, WD_10m"
Month: Nov 2014

Hour of day

Day	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Avg	Max	Min
1	105	117	80	165	157	241	205	196	202	186	211	202	206	197	224	212	221	213	233	231	229	226	228	222	202	241	80
2	225	228	221	225	245	276	229	258	235	222	220	222	162	206	172	237	178	244	261	283	309	141	349	297	234	349	141
3	295	196	187	133	129	138	134	129	62	48	52	17	307	238	252	233	238	264	278	274	283	308	332	177	238	332	17
4	121	40	39	41	47	41	46	46	36	40	39	42	42	41	37	42	36	44	51	56	53	55	69	54	48	121	36
5	50	57	73	59	51	53	46	56	53	53	54	54	56	64	59	40	39	68	84	54	92	101	80	78	61	101	39
6	58	56	60	73	71	76	67	50	53	53	53	77	96	108	109	108	102	78	82	81	72	61	63	56	73	109	50
7	53	69	50	57	61	61	86	76	64	60	53	47	55	99	72	243	268	272	274	241	246	238	163	197	68	274	47
8	169	129	163	123	98	111	104	112	61	54	55	54	75	96	73	63	50	62	71	79	80	69	91	73	86	169	50
9	65	77	60	52	51	49	49	48	48	53	50	47	61	117	137	147	229	237	232	240	237	170	177	178	93	240	47
10	166	97	212	138	69	160	116	81	101	202	207	213	223	207	212	209	171	207	219	220	223	218	225	227	188	227	69
11	224	230	230	224	205	201	96	95	127	194	204	227	234	232	217	216	209	215	222	225	219	230	234	238	213	238	95
12	240	105	67	95	213	144	162	205	189	204	216	230	222	236	202	219	220	201	113	172	172	143	176	170	185	240	67
13	193	182	223	165	163	122	98	109	121	111	277	202	193	200	210	217	184	190	236	216	233	210	39	220	187	277	39
14	190	168	170	181	159	164	150	120	110	111	163	215	219	217	223	206	196	187	188	255	269	269	277	270	194	277	110
15	267	265	284	290	161	146	130	156	146	214	254	228	254	218	226	202	214	202	221	220	227	207	209	214	216	290	130
16	217	226	156	124	94	239	284	288	281	311	42	47	49	41	42	47	72	74	76	70	56	51	44	42	51	311	41
17	45	42	42	78	55	46	47	45	53	55	55	50	49	43	37	39	45	69	87	79	74	112	64	52	56	112	37
18	110	98	61	62	47	48	47	56	55	60	51	50	53	43	40	42	40	61	111	85	74	64	79	93	63	111	40
19	77	86	83	76	74	84	66	64	61	57	54	50	45	79	124	263	249	254	162	170	174	144	168	177	99	263	45
20	178	156	155	156	156	148	153	166	139	117	136	199	250	240	253	240	244	258	273	197	154	161	152	131	180	273	117
21	148	152	152	140	128	101	105	129	129	97	77	58	54	331	318	358	308	265	87	123	164	343	335	160	102	358	54
22	193	197	204	195	166	200	198	170	152	102	119	257	257	261	272	227	186	259	239	291	178	267	320	253	217	320	102
23	266	275	254	268	297	331	54	123	223	257	248	266	230	272	353	6	17	34	30	13	32	96	112	205	307	353	6
24	116	116	98	101	130	121	129	134	80	68	64	335	248	277	273	255	243	254	290	14	43	54	61	55	83	335	14
25	59	63	77	90	91	93	90	94	74	61	55	59	45	137	259	255	263	275	283	271	303	43	163	156	74	303	43
26	98	124	109	97	139	80	117	123	86	44	51	61	57	60	44	46	74	109	117	100	74	57	56	50	82	139	44
27	88	89	52	55	58	51	57	63	55	56	51	46	46	45	44	42	43	45	55	80	80	73	75	81	59	89	42
28	79	65	51	54	54	52	54	55	60	65	61	56	63	129	129	132	225	193	100	159	165	156	158	161	97	225	51
29	158	162	144	137	142	143	148	141	134	95	110	219	231	229	225	222	228	235	153	187	149	146	166	72	165	235	72
30	131	65	137	184	172	163	85	133	114	110	171	213	211	209	211	208	194	216	218	239	240	314	107	119	173	314	65
Avg	136	118	117	115	112	109	100	105	95	84	81	65	97	174	194	217	212	219	174	187	165	125	111	147	122	--	--
Max	295	275	284	290	297	331	284	288	281	311	277	335	307	331	353	358	308	275	290	291	309	343	349	297	--	358	--
Min	45	40	39	41	47	41	46	45	36	40	39	17	42	41	37	6	17	34	30	13	32	43	39	42	--	--	6

SAROAD for Resolution, East_Plant
"Component, Channel: Table100, WD_10m"
Month: Dec 2014

Hour of day																											
Day	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Avg	Max	Min
1	259	188	166	143	148	113	122	137	115	102	65	51	43	49	47	44	53	69	97	72	55	76	77	77	89	259	43
2	62	65	65	57	64	58	55	60	62	61	61	62	65	105	122	171	212	186	219	228	249	63	70	84	83	249	55
3	81	91	83	80	119	124	124	118	91	109	114	127	120	100	189	226	160	61	173	188	148	169	143	207	129	226	61
4	206	262	311	106	155	195	213	221	221	265	277	298	297	303	275	260	294	265	259	266	351	265	269	101	259	351	101
5	139	208	193	174	159	93	110	105	78	70	82	56	64	47	50	50	54	59	61	64	77	70	67	98	86	208	47
6	100	91	74	68	61	66	63	76	63	51	52	69	62	71	65	104	83	88	86	53	54	59	61	73	71	104	51
7	62	113	142	81	54	47	85	129	75	62	49	48	52	50	54	52	60	74	62	59	52	61	85	66	68	142	47
8	62	54	52	57	66	57	61	57	56	55	51	51	47	43	54	58	66	56	50	81	69	60	69	64	58	81	43
9	79	69	66	58	56	59	54	54	54	53	50	47	73	123	150	204	273	285	76	73	71	76	74	84	69	285	47
10	65	48	52	65	67	65	64	59	55	54	49	45	44	40	40	25	306	14	191	296	131	99	109	236	55	306	14
11	155	267	183	114	133	107	120	109	82	86	119	134	131	123	212	233	248	270	112	141	139	165	173	186	148	270	82
12	163	134	131	115	119	122	97	56	104	107	129	135	127	133	189	160	133	201	221	238	231	230	242	266	153	266	56
13	221	228	223	220	214	201	206	226	266	281	288	274	250	260	260	135	208	192	264	286	304	260	77	252	241	304	77
14	232	269	251	70	153	163	167	150	99	80	258	236	236	250	237	264	268	272	284	78	168	141	118	102	199	284	70
15	104	107	115	129	122	122	107	125	79	58	58	49	52	60	58	53	72	88	99	118	113	119	91	113	93	129	49
16	99	103	114	92	117	109	134	143	121	103	98	116	107	130	163	144	263	267	273	256	221	239	239	251	148	273	92
17	296	257	233	220	235	91	126	168	208	225	226	221	221	216	167	325	284	279	101	88	126	118	121	125	196	325	88
18	95	105	117	118	89	74	96	85	81	93	95	253	237	220	247	242	226	63	86	261	155	167	150	178	134	261	63
19	116	104	51	73	99	93	100	114	112	87	62	50	57	60	53	45	17	265	122	142	192	131	118	126	92	265	17
20	136	119	112	127	128	144	126	145	140	87	63	71	236	263	263	237	267	277	294	206	245	250	344	175	176	344	63
21	287	7	229	146	269	113	168	162	345	142	245	243	251	263	249	248	267	274	252	282	292	285	252	274	253	345	7
22	65	282	312	212	242	138	81	225	150	151	230	252	264	252	270	268	269	277	276	270	268	285	280	269	254	312	65
23	276	286	302	321	6	13	94	40	45	55	62	54	49	41	47	41	36	37	43	57	83	75	100	94	42	321	6
24	76	75	54	99	71	54	80	82	80	69	52	56	52	57	44	60	63	80	106	111	122	94	82	80	75	122	44
25	44	93	98	91	204	131	176	166	218	222	209	177	155	151	177	299	205	291	303	301	346	272	245	187	197	346	44
26	185	201	250	297	311	281	263	280	142	232	232	231	237	228	224	237	249	271	277	69	273	221	77	202	242	311	69
27	177	151	180	133	127	101	44	41	45	45	43	48	49	40	34	21	332	261	274	193	160	101	85	147	84	332	21
28	145	152	147	139	142	135	114	137	111	65	48	50	146	242	264	265	270	272	271	105	170	181	151	137	151	272	48
29	163	157	167	151	164	159	165	165	148	118	132	129	190	165	236	212	250	261	265	151	60	187	131	175	169	265	60
30	165	200	195	185	83	72	62	107	158	131	135	209	222	217	213	227	195	217	211	244	195	215	200	178	184	244	62
31	157	151	28	183	153	93	229	204	156	162	178	197	240	254	252	240	240	242	242	240	265	245	241	212	212	265	28
Avg	127	133	130	116	120	102	111	120	101	91	85	87	109	117	197	238	264	278	221	155	145	151	115	148	121	--	--
Max	296	286	312	321	311	281	263	280	345	281	288	298	297	303	275	325	332	291	303	301	351	285	344	274	--	351	--
Min	44	7	28	57	6	13	44	40	45	45	43	45	43	40	34	21	17	14	43	53	52	59	61	64	--	--	6

SAROAD for Resolution, East_Plant
"Component, Channel: Table100, DeltaTemp_C"
Month: Oct 2014

Hour of day

Day	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Avg	Max	Min
1	0.62	0.80	0.98	0.99	0.95	0.82	0.75	-0.13	-0.62	-0.94	-1.04	-0.84	-1.27	-1.17	-1.10	-0.99	-0.51	-0.10	0.08	0.12	0.21	0.53	0.67	0.28	-0.04	0.99	-1.27
2	0.22	0.29	0.56	0.41	0.36	0.32	0.19	-0.12	-0.42	-0.79	-1.03	-1.44	-1.43	-1.41	-1.26	-1.16	-0.66	0.29	0.56	0.81	0.75	0.62	0.54	0.51	-0.14	0.81	-1.44
3	0.39	0.39	0.41	0.42	0.37	0.47	0.44	-0.11	-0.45	-0.82	-1.13	-1.15	-1.16	-1.13	-1.11	-0.92	-0.43	0.27	0.55	0.75	0.78	0.55	0.56	0.45	-0.07	0.78	-1.16
4	0.57	0.39	0.34	0.38	0.59	0.68	0.67	0.06	-0.49	-0.96	-1.40	-1.48	-1.25	-0.99	-1.04	-0.70	-0.49	0.04	0.19	0.55	0.51	0.58	0.38	0.63	-0.09	0.68	-1.48
5	0.90	0.76	0.84	1.08	1.03	0.96	0.68	0.17	-0.46	-0.38	-0.79	-0.84	-1.14	-0.95	-0.93	-0.76	-0.46	-0.03	0.09	0.14	0.43	0.97	1.00	0.96	0.14	1.08	-1.14
6	1.01	0.82	0.86	0.91	0.96	0.94	1.01	0.17	-0.46	-0.89	-0.68	-0.74	-0.80	-0.61	-0.36	-0.50	-0.17	-0.02	0.05	0.38	0.60	0.77	1.14	0.86	0.22	1.14	-0.89
7	0.83	0.64	0.79	0.67	0.98	0.92	1.09	0.50	0.15	-0.30	-0.50	-0.67	-0.79	-0.82	-0.80	-0.51	-0.30	-0.06	0.07	0.08	0.01	0.09	-0.01	0.24	0.10	1.09	-0.82
8	0.32	0.04	0.19	0.06	0.08	0.08	0.14	0.19	0.12	0.07	-0.07	-0.14	-0.17	-0.17	-0.44	-0.24	-0.10	-0.07	0.01	-0.02	-0.02	-0.06	-0.11	0.01	-0.01	0.32	-0.44
9	-0.05	-0.07	-0.06	-0.05	-0.06	-0.06	-0.07	-0.08	-0.05	-0.12	-0.17	-0.14	-0.27	-0.62	-0.42	-0.45	-0.25	-0.06	0.13	0.22	0.26	0.36	0.36	0.49	-0.05	0.49	-0.62
10	0.51	0.48	0.55	0.42	0.60	0.54	0.63	-0.07	-0.47	-0.38	-0.49	-0.62	-0.72	-0.76	-0.72	-0.62	-0.38	-0.07	0.05	0.19	0.24	0.62	0.83	0.74	0.05	0.83	-0.76
11	0.93	0.97	0.82	0.74	0.48	0.51	0.42	-0.13	-0.60	-1.05	-1.19	-1.17	-0.90	-0.77	-0.86	-0.77	-0.46	-0.03	0.08	0.13	0.47	0.81	0.70	0.71	-0.01	0.97	-1.19
12	0.87	0.83	1.37	0.88	0.77	0.59	0.79	0.10	-0.42	-0.61	-0.74	-0.75	-0.72	-0.79	-0.63	-0.52	-0.29	0.04	0.23	0.43	0.31	0.31	0.48	0.38	0.12	1.37	-0.79
13	0.38	0.37	0.33	0.30	0.28	0.27	0.24	-0.11	-0.39	-0.70	-1.03	-1.17	-1.34	-1.29	-1.30	-1.04	-0.72	0.45	0.72	0.78	0.69	0.37	0.27	0.50	-0.13	0.78	-1.34
14	0.36	0.32	0.37	0.43	0.37	0.40	0.36	-0.12	-0.46	-0.83	-1.10	-1.23	-1.27	-1.19	-0.87	-0.64	-0.33	0.39	0.56	0.64	0.65	0.80	0.84	0.57	-0.04	0.84	-1.27
15	0.58	0.43	0.52	0.45	0.41	0.40	0.35	0.05	-0.25	-0.93	-0.94	-0.92	-1.05	-0.92	-0.72	-0.38	-0.16	0.05	0.29	0.66	0.42	0.61	0.80	0.60	0.02	0.80	-1.05
16	0.39	0.46	0.54	0.50	0.52	0.97	0.62	0.30	-0.59	-1.01	-1.04	-1.20	-1.02	-0.77	-0.96	-0.68	-0.37	0.07	0.18	0.35	0.92	0.81	0.96	0.89	0.03	0.97	-1.20
17	0.72	0.77	0.70	0.88	0.88	0.71	0.74	0.68	0.08	0.06	0.02	0.32	-0.06	-0.68	-1.05	-0.72	-0.29	0.40	0.67	0.59	0.70	0.71	0.70	0.69	0.34	0.88	-1.05
18	0.61	1.03	0.61	0.73	0.98	0.87	0.80	0.14	-0.48	-0.97	-1.19	-1.15	-1.13	-0.93	-0.84	-0.53	-0.10	0.04	0.57	0.68	0.71	0.88	0.88	0.68	0.12	1.03	-1.19
19	1.00	0.59	0.53	0.53	0.37	0.32	0.33	-0.02	-0.44	-0.81	-0.96	-1.27	-1.15	-0.64	-0.04	0.09	0.46	0.12	0.02	0.25	0.41	0.45	0.30	0.26	0.03	1.00	-1.27
20	0.26	0.28	0.28	0.27	0.29	0.27	0.23	-0.12	-0.48	-0.77	-0.94	-1.24	-1.23	-0.97	-0.70	-0.65	-0.37	0.31	0.43	0.45	0.47	0.56	0.44	0.45	-0.10	0.56	-1.24
21	0.40	0.52	0.42	0.38	0.33	0.30	0.26	-0.19	-0.54	-0.83	-1.03	-1.20	-1.22	-0.98	-0.93	-0.64	-0.45	0.12	0.44	0.89	0.80	0.92	0.95	0.55	-0.03	0.95	-1.22
22	1.08	1.15	0.81	0.45	0.46	0.39	0.37	-0.12	-0.64	-1.00	-1.23	-1.20	-1.11	-1.18	-1.03	-0.63	-0.36	0.47	0.26	0.68	0.63	0.67	1.26	0.93	0.05	1.26	-1.23
23	1.17	1.07	0.90	0.74	1.04	0.68	0.57	0.03	-0.51	-0.91	-1.26	-1.28	-1.16	-1.09	-0.84	-0.37	-0.15	0.71	0.74	0.69	0.83	0.78	0.86	0.88	0.17	1.17	-1.28
24	0.81	0.84	0.61	1.03	0.83	0.94	0.86	0.08	-0.44	-0.80	-1.15	-1.22	-1.05	-1.06	-0.89	-0.72	-0.18	0.52	0.24	0.75	0.88	1.12	1.03	0.96	0.17	1.12	-1.22
25	1.06	1.04	1.26	1.36	1.38	1.26	0.91	0.22	-0.44	-0.83	-1.13	-1.15	-1.13	-0.90	-0.53	-0.12	-0.03	0.51	0.46	0.78	0.96	1.24	1.04	0.99	0.34	1.38	-1.15
26	0.80	0.50	0.58	0.45	0.47	0.67	0.62	0.20	-0.47	-0.80	-0.80	-0.61	-1.00	-0.98	-0.83	-0.49	-0.16	0.05	0.16	0.29	0.52	0.60	0.49	0.26	0.02	0.80	-1.00
27	0.29	0.44	0.43	0.73	0.45	0.52	0.53	0.09	-0.48	-0.76	-0.71	-0.98	-0.86	-0.93	-0.83	-0.56	-0.33	0.09	0.17	0.17	0.51	0.70	0.75	0.85	0.01	0.85	-0.98
28	0.71	0.67	0.72	0.73	0.81	1.24	1.45	0.53	-0.61	-0.98	-0.89	-1.00	-0.88	-0.94	-0.80	-0.66	-0.27	0.14	0.13	0.51	0.72	1.05	1.19	1.58	0.21	1.58	-1.00
29	1.25	0.84	0.78	0.83	0.78	0.71	0.53	-0.13	-0.46	-0.78	-1.18	-1.32	-1.31	-1.19	-0.97	-0.89	-0.07	0.80	0.85	1.00	0.96	0.71	0.93	0.64	0.14	1.25	-1.32
30	0.64	0.92	0.54	0.74	0.90	0.87	0.79	0.24	-0.43	-0.90	-1.10	-0.96	-0.98	-0.82	-0.48	-0.23	0.16	0.36	0.59	0.58	0.61	0.78	0.77	0.77	0.18	0.92	-1.10
31	1.08	0.66	0.64	0.68	0.52	0.43	0.33	0.00	-0.26	-0.58	-0.61	-0.84	-0.98	-0.81	-0.66	-0.46	-0.10	0.18	0.20	0.34	0.28	0.40	0.49	0.56	0.06	1.08	-0.98
Avg	0.67	0.62	0.62	0.62	0.62	0.61	0.57	0.07	-0.40	-0.72	-0.89	-0.96	-0.99	-0.92	-0.80	-0.59	-0.27	0.19	0.32	0.48	0.56	0.65	0.69	0.64	0.06	--	--
Max	1.25	1.15	1.37	1.36	1.38	1.26	1.45	0.68	0.15	0.07	0.02	0.32	-0.06	-0.17	-0.04	0.09	0.46	0.80	0.85	1.00	0.96	1.24	1.26	1.58	--	1.58	--
Min	-0.05	-0.07	-0.06	-0.05	-0.06	-0.06	-0.07	-0.19	-0.64	-1.05	-1.40	-1.48	-1.43	-1.41	-1.30	-1.16	-0.72	-0.10	0.01	-0.02	-0.02	-0.06	-0.11	0.01	--	--	-1.48

SAROAD for Resolution, East_Plant
"Component, Channel: Table100, DeltaTemp_C"
Month: Nov 2014

Hour of day

Day	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Avg	Max	Min
1	0.77	0.63	0.73	0.66	0.81	0.58	0.68	0.49	-0.30	-0.57	-0.90	-0.91	-1.14	-0.88	-0.80	-0.63	-0.27	-0.04	0.08	0.09	0.06	-0.07	-0.09	-0.09	-0.05	0.81	-1.14
2	-0.09	0.18	0.29	0.15	0.00	0.01	0.05	-0.06	-0.18	-0.43	-0.34	-0.30	-0.28	-0.49	-0.64	-0.40	-0.19	0.09	0.08	0.06	0.30	0.63	0.59	0.35	-0.03	0.63	-0.64
3	0.98	0.71	0.73	0.44	0.38	0.33	0.33	-0.21	-0.55	-0.94	-1.34	-1.10	-0.86	-0.84	-0.66	-0.61	-0.22	0.05	0.06	0.08	0.10	0.14	0.59	0.71	-0.07	0.98	-1.34
4	0.93	0.57	0.41	0.32	0.29	0.22	0.22	-0.02	-0.29	-0.51	-0.71	-0.89	-1.04	-0.93	-0.83	-0.53	-0.05	0.40	0.39	0.43	0.41	0.33	0.28	0.35	-0.01	0.93	-1.04
5	0.41	0.40	0.25	0.26	0.26	0.28	0.20	-0.12	-0.38	-0.55	-0.74	-0.87	-0.97	-0.89	-0.99	-0.67	0.07	0.78	0.70	0.68	0.58	0.42	0.38	0.47	0.00	0.78	-0.99
6	0.46	0.32	0.28	0.26	0.32	0.49	0.32	-0.02	-0.44	-0.78	-1.04	-1.02	-0.91	-0.72	-0.63	-0.36	-0.03	0.25	0.46	0.49	0.38	0.34	0.30	0.37	-0.04	0.49	-1.04
7	0.35	0.27	0.29	0.26	0.26	0.24	0.24	-0.08	-0.46	-0.80	-1.14	-1.29	-1.41	-1.10	-1.04	-0.54	-0.08	0.13	0.19	0.47	0.77	1.04	0.93	0.99	-0.06	1.04	-1.41
8	1.32	1.05	1.13	0.86	0.45	0.32	0.31	0.06	-0.25	-0.64	-0.85	-0.98	-0.99	-0.84	-0.83	-0.52	0.00	0.35	0.40	0.38	0.33	0.32	0.30	0.33	0.08	1.32	-0.99
9	0.32	0.25	0.33	0.34	0.28	0.26	0.27	0.00	-0.37	-0.77	-1.06	-1.27	-1.41	-1.13	-0.81	-0.57	-0.20	0.62	1.04	1.16	0.70	0.73	0.69	0.78	0.01	1.16	-1.41
10	0.95	0.60	0.73	0.81	0.84	1.10	1.11	0.41	-0.37	-0.70	-0.98	-0.99	-0.93	-0.89	-0.77	-0.44	-0.11	0.17	0.31	0.22	0.24	0.26	0.28	0.24	0.09	1.11	-0.99
11	0.29	0.27	0.38	0.44	0.64	0.89	0.70	0.35	-0.55	-0.84	-0.98	-0.93	-0.94	-0.92	-0.85	-0.71	-0.27	0.15	0.21	0.17	0.26	0.28	0.43	0.43	-0.04	0.89	-0.98
12	0.38	0.78	0.77	0.48	0.48	0.63	0.58	0.09	-0.32	-0.76	-0.85	-0.72	-1.01	-0.98	-0.91	-0.63	-0.29	0.08	0.36	0.66	0.58	0.54	0.53	0.46	0.04	0.78	-1.01
13	0.74	0.52	0.48	0.59	0.59	0.36	0.45	0.37	-0.47	-0.69	-0.82	-1.31	-1.36	-1.15	-0.86	-0.63	-0.17	0.09	0.20	0.50	0.30	0.61	0.82	0.51	-0.01	0.82	-1.36
14	0.61	0.57	0.56	0.57	0.81	0.94	0.61	0.30	-0.60	-0.74	-0.63	-0.51	-0.41	-0.36	-0.39	-0.19	-0.11	0.08	0.12	0.05	0.03	0.06	0.08	-0.02	0.06	0.94	-0.74
15	-0.02	0.01	0.03	0.19	0.55	0.71	0.44	0.46	-0.46	-0.59	-0.58	-0.94	-0.72	-0.84	-0.71	-0.62	-0.21	0.07	0.21	0.28	0.29	0.39	0.25	0.27	-0.06	0.71	-0.94
16	0.15	0.03	0.08	0.01	-0.09	-0.09	-0.07	-0.09	-0.25	-0.45	-0.88	-1.02	-1.04	-0.90	-0.71	-0.48	-0.08	0.10	0.10	0.12	0.14	0.17	0.15	0.13	-0.21	0.17	-1.04
17	0.14	0.15	0.16	0.11	0.18	0.16	0.17	0.00	-0.40	-0.70	-0.84	-0.90	-0.97	-0.98	-0.93	-0.58	0.05	0.26	0.28	0.28	0.16	0.26	0.32	0.32	-0.14	0.32	-0.98
18	0.19	0.24	0.35	0.28	0.29	0.27	0.27	0.03	-0.32	-0.69	-0.87	-1.00	-1.18	-1.14	-0.92	-0.58	0.12	0.53	0.68	0.70	0.52	0.48	0.50	0.63	-0.03	0.70	-1.18
19	0.46	0.37	0.37	0.34	0.36	0.30	0.32	0.08	-0.26	-0.67	-0.97	-1.17	-1.41	-1.16	-0.72	-0.36	-0.08	0.80	0.49	0.92	0.93	0.75	0.73	0.88	0.05	0.93	-1.41
20	0.97	0.72	0.81	0.73	0.60	1.17	1.34	0.75	-0.42	-0.73	-0.99	-0.83	-0.78	-0.90	-0.71	-0.62	-0.07	0.12	0.34	0.63	0.79	1.03	0.88	0.89	0.24	1.34	-0.99
21	0.88	0.96	1.35	0.89	1.15	1.03	0.61	0.71	0.35	-0.16	-0.41	-0.59	-1.22	-0.95	-0.85	-0.72	0.02	0.20	0.57	0.61	0.93	0.94	0.80	1.06	0.34	1.35	-1.22
22	0.84	0.96	0.90	1.21	0.96	0.86	0.97	0.51	-0.40	-0.76	-0.84	-0.59	-0.68	-0.83	-0.78	-0.44	-0.10	0.09	0.21	0.88	1.00	0.78	0.81	0.43	0.25	1.21	-0.84
23	0.31	0.28	0.25	0.23	0.35	0.46	1.00	0.48	0.07	-0.30	-0.62	-0.61	-1.15	-0.74	-0.75	-0.44	0.04	0.67	0.78	0.43	0.65	0.58	0.75	1.04	0.16	1.04	-1.15
24	0.81	0.73	0.64	0.44	0.32	0.48	0.55	0.23	-0.44	-0.94	-1.13	-1.09	-0.87	-0.48	-0.43	-0.42	-0.09	0.16	0.59	0.76	0.52	0.37	0.31	0.31	0.06	0.81	-1.13
25	0.29	0.23	0.20	0.14	0.13	0.13	0.15	-0.01	-0.42	-0.74	-1.11	-1.28	-1.45	-1.08	-0.74	-0.49	-0.04	0.06	0.09	0.26	0.57	0.75	0.87	0.97	-0.10	0.97	-1.45
26	0.76	0.69	0.60	0.52	0.83	0.58	0.45	0.24	-0.06	-0.36	-0.78	-0.99	-1.13	-1.00	-0.90	-0.50	0.21	0.56	0.79	0.49	0.45	0.48	0.44	0.43	0.12	0.83	-1.13
27	0.34	0.34	0.44	0.41	0.42	0.39	0.32	0.14	-0.21	-0.54	-0.74	-0.86	-0.99	-0.93	-0.74	-0.39	0.18	0.40	0.51	0.49	0.51	0.55	0.46	0.44	0.04	0.55	-0.99
28	0.43	0.44	0.40	0.39	0.41	0.40	0.41	0.18	-0.29	-0.62	-0.92	-1.22	-1.28	-1.06	-0.82	-0.62	0.37	1.06	0.65	0.93	0.93	1.18	0.81	0.79	0.12	1.18	-1.28
29	1.16	0.74	0.92	1.08	0.88	1.00	1.46	1.00	0.04	-0.73	-1.02	-0.89	-1.03	-1.01	-0.92	-0.63	-0.05	0.43	0.98	0.94	0.71	0.75	1.65	0.86	0.35	1.65	-1.03
30	1.23	0.71	0.96	1.35	1.18	1.16	0.63	0.64	0.16	-0.68	-0.97	-0.89	-0.90	-0.94	-0.86	-0.66	-0.10	0.19	0.24	0.30	0.35	0.59	0.86	0.89	0.23	1.35	-0.97
Avg	0.58	0.49	0.53	0.49	0.50	0.52	0.50	0.23	-0.29	-0.65	-0.87	-0.93	-1.01	-0.90	-0.78	-0.53	-0.06	0.30	0.40	0.48	0.49	0.52	0.55	0.54	0.05	--	--
Max	1.32	1.05	1.35	1.35	1.18	1.17	1.46	1.00	0.35	-0.16	-0.34	-0.30	-0.28	-0.36	-0.39	-0.19	0.37	1.06	1.04	1.16	1.00	1.18	1.65	1.06	--	1.65	--
Min	-0.09	0.01	0.03	0.01	-0.09	-0.09	-0.07	-0.21	-0.60	-0.94	-1.34	-1.31	-1.45	-1.16	-1.04	-0.72	-0.29	-0.04	0.06	0.05	0.03	-0.07	-0.09	-0.09	--	--	-1.45

SAROAD for Resolution, East_Plant
"Component, Channel: Table100, DeltaTemp_C"
Month: Dec 2014

Hour of day

Day	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Avg	Max	Min
1	0.86	0.99	0.93	0.74	0.63	0.56	0.83	0.65	-0.33	-0.67	-1.01	-1.15	-1.03	-0.90	-0.60	-0.31	0.09	0.38	0.62	0.40	0.37	0.28	0.31	0.27	0.12	0.99	-1.15
2	0.28	0.33	0.36	0.39	0.38	0.29	0.21	0.17	0.00	-0.38	-0.63	-0.69	-0.71	-0.39	-0.27	-0.14	0.00	0.09	0.08	-0.02	-0.02	0.12	0.04	-0.10	-0.03	0.39	-0.71
3	-0.12	-0.13	-0.13	-0.13	-0.15	-0.14	-0.11	-0.10	-0.23	-0.49	-0.73	-0.53	-0.58	-0.73	-0.47	-0.03	0.16	0.23	0.39	0.31	0.42	0.44	0.61	0.58	-0.07	0.61	-0.73
4	0.43	0.16	0.04	0.04	0.07	-0.01	-0.04	-0.03	-0.04	-0.07	-0.03	-0.13	-0.43	-0.90	-0.40	-0.17	-0.13	-0.06	-0.03	-0.10	0.07	0.08	0.21	0.19	-0.05	0.43	-0.90
5	0.04	0.05	0.06	0.00	0.09	0.14	0.35	0.57	-0.10	-0.53	-0.63	-0.59	-0.79	-0.80	-0.55	-0.41	0.06	0.27	0.31	0.33	0.29	0.30	0.31	0.45	-0.03	0.57	-0.80
6	0.38	0.60	0.28	0.26	0.26	0.22	0.23	0.20	0.11	-0.08	-0.19	-0.23	-0.14	-0.14	0.05	0.24	0.22	0.18	0.27	0.22	0.29	0.37	0.38	0.35	0.18	0.60	-0.23
7	0.39	0.39	0.47	0.42	0.43	0.40	0.33	0.17	-0.14	-0.49	-0.58	-0.70	-0.78	-0.59	-0.33	-0.13	0.20	0.29	0.35	0.36	0.39	0.33	0.25	0.30	0.07	0.47	-0.78
8	0.31	0.31	0.28	0.23	0.24	0.28	0.28	0.24	-0.11	-0.27	-0.30	-0.78	-0.48	-0.36	-0.15	0.02	0.16	0.33	0.34	0.30	0.32	0.37	0.30	0.36	0.09	0.37	-0.78
9	0.36	0.36	0.34	0.29	0.30	0.33	0.31	0.27	-0.23	-0.57	-0.77	-0.93	-1.03	-0.97	-0.81	-0.63	-0.03	0.19	0.48	0.46	0.46	0.46	0.46	0.45	-0.02	0.48	-1.03
10	0.39	0.34	0.35	0.33	0.31	0.32	0.33	0.21	-0.22	-0.64	-0.86	-1.02	-1.05	-0.97	-0.51	-0.54	0.01	0.47	0.66	0.44	0.60	0.39	0.47	0.89	0.03	0.89	-1.05
11	0.92	0.71	0.72	0.54	0.50	0.32	0.43	0.42	-0.20	-0.63	-0.72	-0.93	-0.96	-0.91	-0.72	-0.59	-0.07	0.36	0.57	0.62	0.68	0.98	0.37	0.59	0.13	0.98	-0.96
12	0.47	0.70	1.03	0.63	0.86	0.84	0.87	0.97	0.43	-0.53	-0.79	-0.99	-1.01	-0.96	-0.63	-0.28	0.09	0.46	0.41	0.31	0.14	0.06	0.00	-0.04	0.13	1.03	-1.01
13	-0.06	-0.03	0.01	0.02	0.02	0.05	-0.04	-0.10	-0.07	-0.11	-0.07	-0.12	-0.27	-0.16	-0.14	-0.14	-0.04	-0.01	-0.02	0.00	0.08	0.13	0.23	0.09	-0.03	0.23	-0.27
14	0.12	0.25	0.18	0.32	0.34	0.42	0.41	0.54	-0.20	-0.35	-0.38	-0.75	-0.95	-0.50	-0.49	-0.18	-0.10	0.02	0.09	0.39	0.56	0.65	0.50	0.45	0.06	0.65	-0.95
15	0.39	0.29	0.26	0.30	0.25	0.23	0.21	0.29	-0.12	-0.47	-0.78	-0.75	-0.48	-0.36	-0.28	-0.21	0.06	0.36	0.55	0.42	0.34	0.50	0.40	0.41	0.07	0.55	-0.78
16	0.63	0.55	0.58	0.56	0.46	0.43	0.38	0.40	0.36	-0.02	-0.40	-0.36	-0.51	-0.82	-0.58	-0.24	-0.06	0.60	0.16	0.56	0.54	0.58	0.10	0.04	0.16	0.63	-0.82
17	0.24	0.33	0.27	0.12	-0.06	-0.08	-0.10	-0.07	-0.06	-0.09	-0.10	-0.17	-0.17	-0.12	-0.11	-0.12	0.24	-0.01	-0.02	0.01	0.04	-0.04	-0.08	-0.08	-0.01	0.33	-0.17
18	-0.08	-0.04	0.01	-0.06	-0.07	-0.06	0.02	0.02	-0.05	-0.20	-0.44	-0.36	-0.20	-0.36	-0.70	-0.55	-0.07	0.04	0.04	0.35	0.43	0.46	0.58	0.64	-0.03	0.64	-0.70
19	0.53	0.22	0.65	0.48	0.26	0.23	0.17	0.10	-0.20	-0.44	-0.81	-0.84	-0.85	-0.84	-0.68	-0.38	0.08	0.15	0.54	0.65	0.69	0.52	0.46	0.46	0.05	0.69	-0.85
20	0.49	0.42	0.37	0.37	0.47	0.40	0.43	0.46	-0.04	-0.53	-0.84	-1.03	-0.70	-0.43	-0.37	-0.43	-0.09	0.09	0.33	0.53	0.77	0.89	0.78	0.75	0.13	0.89	-1.03
21	0.65	0.97	0.94	0.91	0.89	0.98	0.68	0.76	0.69	-0.42	-0.52	-0.70	-0.73	-0.56	-0.65	-0.45	-0.14	0.03	0.16	0.18	0.40	0.34	0.38	0.44	0.22	0.98	-0.73
22	0.47	0.28	0.73	0.77	0.77	0.70	0.42	0.73	-0.01	-0.47	-0.54	-0.69	-0.60	-0.65	-0.50	-0.29	-0.10	0.02	0.05	0.06	0.20	0.12	0.12	0.13	0.07	0.77	-0.69
23	0.16	0.22	0.28	0.58	0.42	0.45	0.65	0.50	-0.04	-0.40	-0.62	-0.79	-0.77	-0.60	-0.53	-0.30	0.12	0.44	0.54	0.42	0.33	0.34	0.26	0.24	0.08	0.65	-0.79
24	0.25	0.22	0.24	0.21	0.26	0.31	0.24	0.22	-0.20	-0.50	-0.74	-1.03	-1.05	-1.05	-0.95	-0.53	0.06	0.23	0.49	0.27	0.58	0.48	0.53	0.42	-0.04	0.58	-1.05
25	0.49	0.55	0.67	0.76	0.64	0.73	0.89	0.71	0.37	-0.13	-0.15	-0.25	-0.26	-0.51	-0.20	-0.14	-0.03	0.05	0.04	0.09	0.18	0.16	0.16	0.14	0.21	0.89	-0.51
26	0.17	0.23	0.20	0.30	0.35	0.41	0.40	0.35	-0.24	-0.47	-0.79	-0.84	-0.85	-0.91	-0.83	-0.63	-0.20	0.07	0.13	0.45	0.94	0.65	0.59	0.86	0.01	0.94	-0.91
27	0.75	0.61	0.55	0.66	0.54	0.43	0.41	0.22	-0.17	-0.57	-0.68	-0.95	-1.13	-1.20	-1.04	-0.80	-0.24	0.17	0.16	0.52	0.85	0.53	0.40	0.50	0.02	0.85	-1.20
28	0.46	0.46	0.45	0.47	0.47	0.47	0.42	0.37	-0.31	-0.70	-0.95	-1.32	-0.97	-0.69	-0.49	-0.23	-0.07	0.00	0.07	0.42	0.66	0.91	0.71	0.52	0.05	0.91	-1.32
29	0.80	0.97	0.67	1.16	1.02	0.79	0.87	1.16	0.21	-0.76	-0.98	-1.09	-0.98	-0.96	-0.83	-0.80	-0.12	0.30	0.65	0.82	0.81	1.07	0.95	0.80	0.27	1.16	-1.09
30	0.66	1.03	0.90	0.86	0.89	0.76	0.71	0.55	0.01	-0.67	-0.90	-0.89	-0.94	-0.75	-0.62	-0.46	-0.11	0.94	1.13	0.96	1.12	1.25	1.26	1.08	0.37	1.26	-0.94
31	0.55	0.63	0.30	0.80	0.51	0.66	1.00	1.17	-0.03	-0.24	-0.13	-0.03	0.03	0.00	-0.02	-0.04	-0.03	-0.06	-0.08	-0.09	-0.07	-0.08	-0.06	-0.05	0.19	1.17	-0.24
Avg	0.40	0.42	0.42	0.43	0.40	0.38	0.39	0.39	-0.04	-0.42	-0.58	-0.70	-0.69	-0.65	-0.50	-0.32	0.00	0.21	0.31	0.34	0.43	0.44	0.39	0.39	0.08	--	--
Max	0.92	1.03	1.03	1.16	1.02	0.98	1.00	1.17	0.69	-0.02	-0.03	-0.03	0.03	0.00	0.05	0.24	0.24	0.94	1.13	0.96	1.12	1.25	1.26	1.08	--	1.26	--
Min	-0.12	-0.13	-0.13	-0.13	-0.15	-0.14	-0.11	-0.10	-0.33	-0.76	-1.01	-1.32	-1.13	-1.20	-1.04	-0.80	-0.24	-0.06	-0.08	-0.10	-0.07	-0.08	-0.08	-0.10	--	--	-1.32

SAROAD for Resolution, East_Plant
"Component, Channel: Table100, Temp_2m_C"
Month: Oct 2014

Hour of day																											
Day	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Avg	Max	Min
1	16.4	16.5	16.1	15.6	15.8	15.1	14.3	16.1	18.8	21.0	22.3	22.6	23.6	24.1	24.3	24.4	23.6	22.6	21.5	21.0	20.7	19.8	19.6	21.0	19.9	24.4	14.3
2	21.2	19.9	16.9	17.7	17.4	16.8	16.4	17.1	17.9	18.9	20.2	22.0	23.2	24.2	25.4	26.1	25.6	24.1	22.6	20.3	19.5	21.1	20.6	19.2	20.6	26.1	16.4
3	18.8	17.7	17.8	18.3	17.5	16.7	16.4	19.1	21.0	22.4	23.7	25.3	26.8	28.2	28.7	28.9	28.2	26.7	25.0	22.8	22.9	22.4	23.5	22.3	22.5	28.9	16.4
4	20.0	19.3	19.0	18.6	18.2	17.7	17.8	20.3	23.1	24.6	26.1	27.7	28.6	29.0	29.2	28.9	28.4	27.1	25.9	24.7	24.6	24.5	24.5	23.9	23.8	29.2	17.7
5	23.2	22.4	21.1	19.1	18.6	17.9	18.1	19.3	22.0	23.0	24.3	25.2	26.4	26.6	26.9	26.7	26.1	25.0	24.0	23.2	22.7	21.3	20.6	20.1	22.7	26.9	17.9
6	19.7	19.5	19.7	19.1	18.4	17.9	17.8	17.9	20.9	24.0	24.4	25.2	25.9	25.8	25.1	25.4	24.9	24.0	23.2	22.1	20.5	20.4	20.2	20.1	21.8	25.9	17.8
7	20.3	19.8	19.9	19.5	19.0	19.2	18.6	18.3	19.3	20.9	22.3	23.9	25.1	25.5	25.8	25.3	24.3	23.1	22.9	22.2	21.3	20.9	20.5	19.8	21.6	25.8	18.3
8	19.6	19.6	18.5	17.6	17.0	16.9	14.5	14.1	14.2	14.4	14.1	14.7	14.9	15.4	16.3	16.2	15.7	15.7	15.4	15.3	15.4	15.3	15.4	15.6	15.9	19.6	14.1
9	15.4	15.5	15.6	15.5	15.1	14.9	14.8	14.7	14.6	14.3	14.5	14.2	14.6	15.5	16.6	17.2	17.1	17.0	16.2	15.6	15.7	14.4	14.4	13.5	15.3	17.2	13.5
10	14.0	13.4	13.5	13.1	12.9	13.4	13.0	14.1	16.3	17.9	18.7	19.6	20.4	21.1	21.4	21.3	21.0	20.3	19.5	19.4	19.5	18.4	17.3	17.3	17.4	21.4	12.9
11	16.9	16.5	16.2	16.1	15.8	15.3	15.3	16.4	19.4	21.3	22.5	23.5	24.0	24.2	24.4	24.4	24.0	22.8	22.0	21.4	19.2	18.4	17.9	17.8	19.8	24.4	15.3
12	17.4	17.5	16.9	16.9	16.5	16.3	16.0	16.7	19.2	20.3	21.1	21.9	22.4	23.0	23.0	23.3	23.1	22.6	21.8	21.2	21.4	21.5	19.0	17.5	19.8	23.3	16.0
13	17.1	16.7	16.6	16.6	16.0	15.4	15.0	15.5	16.3	17.3	18.9	20.3	21.6	22.4	23.1	23.3	23.0	20.9	19.6	18.1	17.3	17.3	17.1	17.8	18.5	23.3	15.0
14	17.6	16.2	16.4	17.0	16.6	15.8	16.2	16.8	17.9	19.7	21.7	22.8	24.2	24.6	24.7	25.1	24.7	22.9	21.6	20.7	19.4	19.2	19.0	19.2	20.0	25.1	15.8
15	18.6	18.1	17.9	17.6	17.3	17.4	17.0	17.5	19.0	22.1	23.7	24.5	26.0	26.5	26.2	25.6	24.5	23.6	22.9	21.4	20.9	20.4	20.2	20.1	21.2	26.5	17.0
16	20.1	19.3	19.6	19.4	19.0	17.8	17.8	17.9	20.8	23.5	24.4	25.3	25.3	25.7	25.2	24.3	23.0	21.9	21.2	20.0	18.7	18.0	18.2	18.2	21.3	25.7	17.8
17	18.1	17.9	17.3	17.4	16.9	16.5	16.3	15.8	17.6	18.8	19.0	18.4	19.7	21.6	23.9	24.2	23.6	21.7	20.5	18.2	18.2	19.2	19.2	17.0	19.0	24.2	15.8
18	16.9	16.7	16.0	15.9	15.2	14.7	15.8	17.7	20.0	21.6	23.1	24.9	26.1	26.3	26.4	25.5	23.8	22.8	22.0	20.7	20.4	19.9	20.1	21.0	20.6	26.4	14.7
19	18.6	18.4	18.0	17.8	18.0	17.7	17.4	18.0	19.4	21.0	22.4	23.6	24.0	22.8	21.5	19.8	15.7	13.8	13.0	13.1	13.7	14.1	14.0	13.8	17.9	24.0	13.0
20	13.3	13.2	13.4	13.2	13.2	13.2	13.3	14.2	16.0	18.0	19.2	21.0	22.0	22.5	22.3	22.8	22.2	20.4	19.2	18.6	18.2	17.6	16.6	15.8	17.5	22.8	13.2
21	15.1	15.0	15.6	15.4	15.1	14.5	14.4	15.4	17.2	18.8	19.8	21.0	22.1	22.4	22.9	22.6	22.2	20.9	20.0	18.9	18.2	17.9	17.8	17.1	18.3	22.9	14.4
22	16.9	16.2	16.1	16.8	16.5	16.2	16.4	17.1	19.1	20.6	22.0	22.9	23.7	24.3	24.6	24.5	24.1	22.6	21.9	20.0	19.1	18.2	18.0	17.7	19.8	24.6	16.1
23	16.9	16.6	16.7	16.2	15.9	15.5	15.0	16.5	19.7	21.6	23.3	24.4	25.3	25.7	25.9	25.4	25.0	23.6	22.6	20.2	19.6	19.6	19.9	19.7	20.5	25.9	15.0
24	19.7	18.5	17.4	16.6	16.8	17.4	17.3	19.0	20.9	22.5	24.4	25.9	26.4	27.1	27.2	27.1	26.4	25.0	24.4	22.6	20.8	20.3	20.6	19.9	21.8	27.2	16.6
25	20.1	19.0	18.4	18.1	18.3	16.9	16.9	17.9	21.3	23.9	26.2	27.1	27.4	27.6	27.3	26.8	26.9	25.7	25.2	24.4	22.4	23.1	22.9	22.2	22.8	27.6	16.9
26	21.2	20.3	20.2	19.4	19.0	18.5	17.7	18.2	20.2	22.0	23.0	22.9	24.0	24.4	24.4	23.6	22.5	21.8	20.9	20.2	19.5	18.9	19.0	18.9	20.9	24.4	17.7
27	18.3	17.5	16.7	15.8	16.2	16.2	15.3	16.0	18.2	19.7	20.0	21.0	21.0	21.4	21.7	21.2	20.8	19.8	19.2	18.7	17.0	16.0	15.4	15.2	18.3	21.7	15.2
28	15.3	14.7	15.0	14.7	14.3	14.0	13.5	14.5	17.0	19.5	20.2	21.1	21.5	22.2	22.5	22.7	22.0	20.5	19.6	18.5	17.2	16.6	15.8	16.4	17.9	22.7	13.5
29	15.4	15.0	14.6	14.2	14.3	14.0	13.5	15.0	18.1	20.2	21.8	23.4	24.1	24.4	24.6	24.7	23.9	22.4	21.1	19.8	19.1	19.2	18.8	18.5	19.2	24.7	13.5
30	17.6	17.2	16.5	15.9	17.2	17.0	16.7	17.5	19.6	21.7	23.3	24.8	25.4	25.7	25.4	25.0	24.1	22.4	21.3	20.0	19.8	19.6	18.9	18.3	20.5	25.7	15.9
31	17.6	17.1	17.5	17.3	17.8	17.5	17.1	17.6	19.3	21.3	22.6	23.9	24.7	24.8	25.1	25.3	24.5	23.1	22.4	21.7	21.5	21.1	20.7	20.7	20.9	25.3	17.1
Avg	18.0	17.5	17.1	16.9	16.6	16.3	16.0	16.8	18.9	20.5	21.7	22.7	23.6	24.0	24.3	24.1	23.4	22.2	21.3	20.2	19.5	19.2	18.9	18.6	19.9	--	--
Max	23.2	22.4	21.1	19.5	19.0	19.2	18.6	20.3	23.1	24.6	26.2	27.7	28.6	29.0	29.2	28.9	28.4	27.1	25.9	24.7	24.6	24.5	24.5	23.9	--	29.2	--
Min	13.3	13.2	13.4	13.1	12.9	13.2	13.0	14.1	14.2	14.3	14.1	14.2	14.6	15.4	16.3	16.2	15.7	13.8	13.0	13.1	13.7	14.1	14.0	13.5	--	--	12.9

SAROAD for Resolution, East_Plant
"Component, Channel: Table100, Temp_2m_C"
Month: Nov 2014

Hour of day

Day	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Avg	Max	Min
1	19.3	18.8	18.2	17.8	17.7	17.6	16.7	16.9	18.3	19.2	19.9	20.1	21.5	21.1	20.4	19.9	19.0	17.9	17.1	16.7	16.3	16.0	15.3	15.2	18.2	21.5	15.2
2	14.2	12.8	12.5	12.3	11.6	11.5	12.0	11.8	12.3	13.0	12.5	12.6	12.6	13.2	14.1	13.5	13.0	12.1	11.4	10.8	10.0	8.8	9.0	9.1	11.9	14.2	8.8
3	8.1	7.5	6.6	6.5	6.4	6.0	5.9	7.1	10.4	12.0	13.3	13.7	13.9	14.3	14.2	14.2	13.5	12.6	11.9	11.6	11.5	11.7	10.7	9.2	10.5	14.3	5.9
4	9.1	10.0	9.9	9.7	9.0	9.2	9.0	9.6	10.4	11.6	13.1	14.9	16.4	17.2	17.6	17.6	16.9	15.6	14.8	14.2	13.7	12.7	12.1	11.6	12.7	17.6	9.0
5	11.8	10.6	11.1	11.2	9.9	9.6	9.2	9.7	11.3	13.2	14.7	16.2	17.9	18.9	19.8	20.1	19.5	18.0	16.4	15.6	15.3	14.4	13.9	13.1	14.2	20.1	9.2
6	13.3	13.3	12.8	11.9	11.3	11.1	10.5	11.3	13.1	14.8	16.7	18.5	19.1	20.0	20.9	20.8	20.0	17.7	15.9	15.7	14.8	14.0	13.6	13.2	15.2	20.9	10.5
7	13.1	12.3	12.1	11.4	11.4	11.3	10.9	11.6	13.3	14.6	16.3	18.4	19.9	21.0	21.9	21.5	20.5	19.4	18.1	16.6	16.7	16.2	15.6	15.1	15.8	21.9	10.9
8	14.6	13.7	13.1	13.3	15.0	14.5	14.7	15.7	17.3	18.7	19.8	21.1	22.0	22.6	22.8	22.4	21.2	19.2	17.7	16.8	16.2	15.9	15.4	14.7	17.4	22.8	13.1
9	14.3	14.0	13.9	13.8	13.8	13.6	13.4	14.0	15.2	16.6	17.8	19.7	21.2	21.8	22.0	22.2	21.7	20.3	19.2	17.9	16.9	15.9	15.8	15.6	17.1	22.2	13.4
10	15.3	14.6	14.5	14.0	13.2	12.9	12.2	13.4	15.6	17.3	18.3	19.3	20.1	20.6	20.9	20.6	20.1	19.5	19.1	18.9	18.3	18.0	17.6	17.0	17.1	20.9	12.2
11	16.3	15.7	15.2	15.0	14.4	13.6	12.4	12.6	15.1	17.1	17.8	18.5	19.1	19.6	20.0	20.0	19.3	18.3	18.1	17.8	17.5	17.2	16.8	16.5	16.8	20.0	12.4
12	16.2	14.8	14.0	13.9	14.8	13.3	13.4	14.7	15.1	16.0	16.5	16.6	17.6	17.9	17.9	17.8	17.2	16.3	15.7	14.2	14.1	13.5	13.3	13.2	15.3	17.9	13.2
13	12.7	12.8	12.9	12.6	12.7	12.3	12.1	12.5	14.0	15.3	16.4	17.6	18.4	18.6	18.7	18.9	17.6	16.3	15.7	15.3	15.5	14.5	13.6	12.9	15.0	18.9	12.1
14	11.8	11.6	11.3	10.8	10.6	9.8	9.3	10.0	12.5	14.2	15.5	15.8	15.8	15.7	15.8	15.3	14.9	14.2	13.7	13.0	13.0	12.8	12.7	12.8	13.0	15.8	9.3
15	12.6	12.1	11.8	11.5	10.1	9.2	9.0	9.0	11.2	13.3	13.6	14.7	14.7	15.8	16.2	16.0	15.2	14.3	14.0	13.9	13.7	13.4	13.1	12.8	13.0	16.2	9.0
16	12.4	11.5	10.6	10.3	10.1	10.1	10.1	9.6	9.8	11.1	11.3	11.5	11.5	11.4	11.3	10.9	9.8	8.4	7.4	6.7	6.4	6.1	5.6	5.2	9.6	12.4	5.2
17	4.9	4.8	4.6	3.9	3.6	4.2	4.0	4.1	5.2	6.6	8.3	9.6	10.6	11.7	12.4	12.2	11.2	9.6	8.5	8.8	8.5	7.7	6.9	6.9	7.5	12.4	3.6
18	6.5	6.2	6.0	5.8	6.0	5.8	5.9	6.5	7.9	9.0	10.0	11.6	13.0	14.1	14.3	14.3	13.1	11.4	9.6	9.1	9.4	9.8	9.5	8.7	9.3	14.3	5.8
19	8.8	8.7	9.0	8.8	8.4	7.9	7.6	7.6	9.0	10.1	11.9	13.8	15.7	16.7	16.5	16.2	15.5	13.6	12.5	11.1	10.8	10.0	10.2	9.6	11.2	16.7	7.6
20	9.9	9.5	9.0	9.2	8.5	7.4	7.5	6.2	9.1	12.3	14.5	15.4	15.6	16.1	16.0	16.0	14.8	13.6	12.6	11.0	10.7	9.9	10.1	9.7	11.4	16.1	6.2
21	9.2	9.3	9.2	8.6	9.0	8.8	9.1	8.9	8.9	9.7	11.4	12.2	14.1	15.0	15.4	15.3	13.9	12.8	10.8	10.4	11.0	10.3	10.4	7.9	10.9	15.4	7.9
22	8.2	7.8	7.2	6.9	6.5	6.4	6.4	7.1	10.2	13.2	14.1	13.5	14.1	14.9	15.2	14.5	13.4	12.3	11.7	10.8	10.0	10.0	10.5	11.0	10.7	15.2	6.4
23	11.0	10.6	10.4	10.0	9.3	9.1	8.2	7.9	9.7	10.7	11.4	11.9	13.1	13.5	14.2	13.8	12.8	11.3	10.4	10.4	9.0	7.2	5.7	6.6	10.3	14.2	5.7
24	6.9	6.4	5.0	4.3	5.7	5.5	5.4	6.3	8.0	9.7	10.8	11.9	12.0	11.4	11.3	11.9	11.4	10.2	9.3	9.6	9.0	8.1	7.4	7.0	8.5	12.0	4.3
25	6.1	5.6	5.2	4.7	4.1	3.8	3.7	4.1	5.6	7.5	9.5	11.0	12.4	13.1	13.1	13.0	12.0	10.6	9.6	9.0	8.9	8.2	7.7	7.2	8.2	13.1	3.7
26	7.7	7.4	7.1	7.6	6.8	7.5	8.1	9.3	12.8	15.3	16.2	17.7	19.5	20.4	21.2	21.0	19.9	18.7	17.8	17.2	15.9	15.6	15.9	15.7	14.3	21.2	6.8
27	14.8	14.9	15.2	15.1	14.8	14.7	13.6	13.0	14.4	16.1	17.5	18.7	19.7	20.1	20.7	20.4	19.1	17.6	16.9	16.1	15.6	15.4	15.3	14.8	16.4	20.7	13.0
28	14.3	14.3	14.3	13.8	13.9	13.6	13.2	13.4	14.5	15.7	17.5	19.2	20.7	21.7	21.9	21.8	20.7	19.0	17.3	16.3	15.3	14.4	14.9	14.8	16.5	21.9	13.2
29	13.8	14.4	13.1	12.6	11.4	11.0	11.5	11.1	13.7	16.2	18.3	19.2	19.9	20.4	20.3	19.9	18.9	17.6	15.7	14.7	14.3	13.8	14.0	13.1	15.4	20.4	11.0
30	13.1	12.3	12.1	12.8	12.6	11.8	11.2	11.4	12.3	14.7	16.5	16.9	17.5	17.9	18.2	18.1	17.0	16.1	15.5	14.9	14.3	13.1	11.8	11.1	14.3	18.2	11.1
Avg	11.7	11.3	10.9	10.7	10.4	10.1	9.9	10.2	11.9	13.5	14.7	15.7	16.7	17.2	17.5	17.3	16.4	15.2	14.2	13.5	13.1	12.5	12.1	11.7	13.3	--	--
Max	19.3	18.8	18.2	17.8	17.7	17.6	16.7	16.9	18.3	19.2	19.9	21.1	22.0	22.6	22.8	22.4	21.7	20.3	19.2	18.9	18.3	18.0	17.6	17.0	--	22.8	--
Min	4.9	4.8	4.6	3.9	3.6	3.8	3.7	4.1	5.2	6.6	8.3	9.6	10.6	11.4	11.3	10.9	9.8	8.4	7.4	6.7	6.4	6.1	5.6	5.2	--	--	3.6

SAROAD for Resolution, East_Plant
"Component, Channel: Table100, Temp_2m_C"
Month: Dec 2014

Hour of day																											
Day	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Avg	Max	Min
1	12.1	10.6	9.2	8.6	8.4	8.4	7.9	8.2	11.5	14.2	15.7	16.3	16.3	16.5	16.7	16.7	15.7	14.3	13.2	13.3	13.9	13.6	13.1	13.1	12.8	16.7	7.9
2	13.4	13.0	12.7	12.6	11.9	12.2	12.4	12.1	12.4	13.5	14.8	15.8	16.6	17.1	17.0	17.1	16.6	16.0	15.6	14.4	12.8	11.2	10.2	9.9	13.8	17.1	9.9
3	9.3	9.1	9.1	9.4	9.8	9.9	10.2	10.5	11.5	13.7	16.0	16.5	16.9	17.8	18.4	17.3	16.3	15.8	15.1	15.3	14.9	14.7	14.7	14.3	13.6	18.4	9.1
4	15.4	13.0	12.0	12.2	12.6	12.1	11.7	11.6	11.4	11.0	10.5	10.2	11.0	12.0	12.4	11.4	11.4	11.1	10.9	10.9	10.7	10.3	10.0	9.3	11.5	15.4	9.3
5	8.9	8.3	8.2	8.8	9.0	8.6	8.2	8.3	10.0	11.3	11.8	12.2	12.9	13.6	13.9	14.0	13.2	12.0	11.6	11.4	11.3	11.0	11.0	10.5	10.8	14.0	8.2
6	10.2	10.5	10.5	10.8	10.6	10.7	10.7	10.8	11.1	11.5	12.3	13.1	12.7	13.2	13.2	13.5	13.3	12.4	12.4	12.0	11.7	11.3	11.2	11.1	11.7	13.5	10.2
7	10.9	10.4	10.0	10.5	11.3	12.1	10.9	9.5	11.8	13.4	14.4	15.3	16.5	17.0	16.9	16.7	15.7	14.6	14.4	14.2	14.2	13.6	12.1	12.1	13.3	17.0	9.5
8	12.2	12.4	12.3	12.0	11.6	11.4	11.2	11.3	12.5	13.5	14.2	15.7	16.2	16.6	16.5	16.1	15.5	14.8	14.9	14.5	14.2	14.1	13.9	13.8	13.8	16.6	11.2
9	13.2	13.1	13.2	13.3	13.2	12.6	12.3	12.3	13.6	15.7	16.7	17.7	19.1	19.7	19.8	19.4	17.4	16.2	15.0	14.6	14.4	14.1	14.0	13.8	15.2	19.8	12.3
10	13.1	13.1	12.8	12.7	12.5	12.3	12.0	12.2	13.3	14.6	15.9	17.0	17.9	18.5	18.3	18.5	17.4	16.3	14.7	14.6	13.0	13.4	13.8	13.3	14.6	18.5	12.0
11	12.6	12.1	11.3	10.1	10.1	9.9	10.0	9.9	12.2	14.5	15.6	16.7	17.1	17.4	17.6	17.5	16.3	15.0	13.1	12.2	12.3	12.8	13.2	12.8	13.4	17.6	9.9
12	12.4	12.2	12.0	12.0	11.9	11.7	11.9	11.3	11.9	13.9	15.9	17.0	17.7	17.9	17.9	17.2	16.6	16.1	16.1	15.2	14.3	12.8	11.9	11.5	14.1	17.9	11.3
13	11.1	10.4	10.2	10.1	10.0	9.8	9.4	7.6	6.2	5.8	6.3	6.2	6.4	6.3	6.5	7.1	7.4	7.0	6.5	6.0	5.4	5.5	5.4	5.6	7.4	11.1	5.4
14	5.4	4.9	4.4	3.4	3.0	2.5	2.4	2.3	3.5	4.8	5.9	6.9	7.8	7.4	7.7	7.1	6.7	6.1	5.7	4.5	3.8	3.7	3.8	3.8	4.9	7.8	2.3
15	3.6	3.7	3.5	3.2	3.1	2.9	3.1	3.8	5.9	7.0	8.6	9.7	10.0	10.4	10.6	11.0	10.3	9.2	8.4	8.0	8.2	8.4	8.4	7.5	7.0	11.0	2.9
16	8.1	7.4	7.1	7.7	7.3	7.3	6.9	7.3	7.4	8.9	10.7	11.7	12.1	13.8	13.5	12.8	11.2	10.2	9.5	8.8	8.9	8.9	8.3	7.5	9.3	13.8	6.9
17	7.2	7.3	6.9	5.8	4.8	4.9	5.0	5.1	5.1	5.1	5.2	5.5	5.8	6.0	5.9	5.9	5.7	5.7	5.5	5.3	5.2	5.3	5.2	5.2	5.6	7.3	4.8
18	5.0	4.9	4.7	4.5	4.5	4.5	4.6	4.5	4.9	5.7	7.0	7.5	7.1	7.3	8.2	7.8	6.3	5.7	5.8	5.5	4.6	4.2	3.7	3.1	5.5	8.2	3.1
19	3.5	3.8	3.5	3.1	2.7	2.5	2.3	2.6	3.6	5.6	7.2	8.1	9.3	10.1	10.2	10.1	9.4	7.9	6.5	6.2	5.7	5.2	5.6	5.4	5.8	10.2	2.3
20	5.5	4.9	5.6	5.4	4.6	3.3	3.5	3.2	4.4	7.5	9.4	11.0	11.3	10.1	10.1	10.7	9.9	8.6	8.2	7.3	7.3	7.0	6.7	6.7	7.2	11.3	3.2
21	7.3	6.3	6.3	4.8	5.2	4.7	4.4	4.2	4.8	7.0	8.9	9.8	10.2	10.1	10.5	10.2	9.3	8.3	7.7	7.4	7.1	7.1	6.8	7.0	7.3	10.5	4.2
22	6.6	7.1	5.9	5.9	5.7	4.8	4.6	4.8	5.9	8.1	9.0	9.5	9.9	10.4	10.2	10.1	9.5	8.6	8.1	8.0	8.1	9.2	9.1	8.2	7.8	10.4	4.6
23	8.4	9.1	9.7	9.9	10.1	9.0	6.4	6.6	7.3	7.8	8.1	8.6	9.3	9.4	9.8	9.7	8.9	7.8	7.0	6.5	6.0	5.6	5.2	4.6	7.9	10.1	4.6
24	4.6	4.4	3.9	3.4	3.3	3.9	3.4	3.5	4.4	5.5	7.1	9.2	10.2	10.8	11.2	10.8	9.4	7.8	7.1	6.5	7.3	7.6	7.4	7.4	6.7	11.2	3.3
25	7.5	6.9	7.2	6.8	8.1	6.8	7.6	7.9	8.8	9.3	9.2	9.5	8.9	8.8	7.7	7.3	7.0	6.2	5.8	5.0	4.5	3.8	3.4	2.7	6.9	9.5	2.7
26	1.8	1.0	0.3	-0.1	-0.5	0.1	0.1	0.1	0.9	2.3	2.7	3.3	4.0	4.7	4.5	4.2	3.5	2.6	2.2	1.3	0.7	0.4	-0.3	-0.1	1.7	4.7	-0.5
27	-1.0	-0.9	-0.8	-1.3	-1.6	-1.0	0.6	0.6	1.1	2.3	3.2	4.5	5.7	6.7	7.0	7.0	6.2	4.9	4.5	2.7	2.0	1.5	2.2	1.0	2.4	7.0	-1.6
28	0.6	0.2	-0.1	-0.3	-0.6	-1.0	-0.9	-1.3	1.0	4.0	5.3	6.9	7.6	8.2	8.0	7.1	6.2	5.7	5.2	4.5	3.4	3.1	2.8	2.9	3.3	8.2	-1.3
29	2.8	2.0	2.5	0.9	0.7	0.6	0.7	0.9	1.6	4.7	7.6	8.6	9.0	9.6	10.3	10.4	9.1	7.3	5.9	4.7	5.6	5.3	5.0	5.2	5.0	10.4	0.6
30	5.5	5.5	5.7	5.5	4.5	4.4	3.8	4.1	5.8	8.3	10.3	12.2	12.3	12.3	12.0	11.7	10.9	9.2	8.9	8.3	7.4	7.4	6.5	6.7	7.9	12.3	3.8
31	6.4	7.0	7.1	7.1	7.1	6.9	6.3	3.6	3.2	5.0	6.6	3.3	0.4	-0.1	-0.1	-0.2	-0.1	-0.3	-0.4	-0.5	-0.7	-1.0	-1.9	-2.3	2.6	7.1	-2.3
Avg	7.9	7.5	7.3	7.1	6.9	6.7	6.6	6.4	7.4	8.9	10.1	10.8	11.2	11.6	11.7	11.5	10.7	9.8	9.2	8.7	8.3	8.1	7.8	7.5	8.7	--	--
Max	15.4	13.1	13.2	13.3	13.2	12.6	12.4	12.3	13.6	15.7	16.7	17.7	19.1	19.7	19.8	19.4	17.4	16.3	16.1	15.3	14.9	14.7	14.7	14.3	--	19.8	--
Min	-1.0	-0.9	-0.8	-1.3	-1.6	-1.0	-0.9	-1.3	0.9	2.3	2.7	3.3	0.4	-0.1	-0.1	-0.2	-0.1	-0.3	-0.4	-0.5	-0.7	-1.0	-1.9	-2.3	--	--	-2.3

SAROAD for Resolution, East_Plant
"Component, Channel: Table100, RH_Percent"
Month: Oct 2014

Hour of day																											
Day	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Avg	Max	Min
1	36	34	34	34	32	36	38	33	30	26	23	21	22	22	20	20	21	23	25	27	28	30	31	28	28	38	20
2	26	29	38	38	33	31	29	27	25	24	23	21	19	18	14	11	11	12	16	20	22	12	10	12	22	38	10
3	13	16	15	14	16	18	19	15	14	15	15	15	13	12	11	10	10	10	10	13	13	14	13	15	14	19	10
4	19	20	20	21	21	23	22	20	17	17	16	14	12	12	12	11	11	13	15	18	18	15	15	16	17	23	11
5	18	20	24	29	30	32	31	29	25	21	20	21	19	16	14	15	16	17	18	21	22	23	24	22	22	32	14
6	23	25	26	29	31	32	32	33	29	23	19	19	20	20	21	20	20	22	26	28	32	31	28	26	26	33	19
7	23	24	24	25	26	25	26	29	31	30	27	21	19	18	17	19	24	26	28	31	34	35	37	42	27	42	17
8	41	42	52	59	63	60	81	85	83	83	94	94	94	93	89	88	90	90	94	95	96	97	97	95	81	97	41
9	96	97	97	98	99	99	99	100	100	100	100	100	99	98	82	77	77	76	82	88	87	94	95	96	93	100	76
10	97	97	98	97	97	97	95	85	78	67	64	63	62	62	61	60	59	59	65	66	59	64	65	65	74	98	59
11	64	65	69	72	74	78	77	73	64	58	53	48	42	42	47	43	42	48	52	54	64	68	70	70	60	78	42
12	71	69	73	73	73	73	74	67	57	55	52	46	41	36	36	30	31	27	26	29	27	26	27	18	47	74	18
13	16	15	14	14	16	18	19	20	21	22	21	20	17	16	15	14	16	21	25	28	30	26	23	20	20	30	14
14	20	23	22	20	21	22	22	22	22	23	21	20	19	20	18	17	17	18	18	20	23	24	25	24	21	25	17
15	25	26	26	26	26	26	27	27	27	24	19	18	18	21	22	23	26	29	31	36	38	39	39	39	27	39	18
16	38	41	41	43	44	48	47	46	37	33	32	28	24	22	25	23	23	26	34	38	42	44	44	41	36	48	22
17	39	39	37	36	36	37	38	45	42	40	36	45	38	37	31	28	28	33	37	44	45	39	38	45	38	45	28
18	45	44	48	47	49	51	45	39	34	32	30	25	20	18	19	22	28	33	36	38	36	36	34	31	35	51	18
19	38	42	42	43	46	49	51	51	48	45	42	39	38	41	44	47	71	86	89	86	74	68	68	69	55	89	38
20	71	71	70	71	71	72	71	67	62	58	53	49	45	40	43	32	39	49	52	50	47	51	54	54	56	72	32
21	58	60	57	59	62	68	70	65	59	55	52	50	45	42	41	41	43	46	48	52	53	53	53	55	54	70	41
22	56	58	59	56	58	60	59	56	54	52	47	40	34	32	30	27	27	32	37	43	48	47	44	45	46	60	27
23	47	52	54	58	56	57	60	54	45	42	39	36	30	27	25	23	25	30	33	41	44	43	41	42	42	60	23
24	41	44	48	51	49	47	48	42	39	38	35	30	26	22	21	21	21	26	29	35	39	41	40	42	36	51	21
25	40	45	46	46	45	50	49	46	37	33	28	27	25	26	26	28	27	30	32	34	39	37	37	39	36	50	25
26	43	46	47	50	52	53	56	53	46	43	40	42	41	40	35	37	41	41	48	52	55	58	58	60	47	60	35
27	61	64	67	71	69	68	71	64	53	46	47	45	45	41	41	41	42	43	42	42	48	52	54	55	53	71	41
28	54	56	55	56	58	59	59	53	47	39	34	32	32	31	28	27	29	35	37	40	44	45	46	44	43	59	27
29	46	46	47	48	47	48	49	43	36	32	31	28	25	25	24	22	17	14	17	19	21	22	24	26	32	49	14
30	31	34	34	33	30	31	32	30	28	26	25	19	15	15	14	16	19	26	27	28	28	26	27	28	26	34	14
31	29	30	30	30	29	29	30	30	29	28	28	27	27	28	29	29	32	35	37	38	39	40	42	41	32	42	27
Avg	43	44	46	47	47	48	49	47	43	40	38	36	33	32	31	30	32	35	38	40	42	42	42	42	40	--	--
Max	97	97	98	98	99	99	99	100	100	100	100	100	99	98	89	88	90	90	94	95	96	97	97	96	--	100	--
Min	13	15	14	14	16	18	19	15	14	15	15	14	12	12	11	10	10	10	10	10	13	13	12	10	--	--	10

SAROAD for Resolution, East_Plant
"Component, Channel: Table100, RH_Percent"
Month: Nov 2014

Hour of day																											
Day	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Avg	Max	Min
1	45	47	50	50	49	49	53	52	45	42	37	37	32	36	43	42	48	54	56	54	56	61	63	63	49	63	32
2	69	79	72	67	63	61	71	69	69	68	61	61	61	55	43	44	41	41	41	42	46	53	51	45	57	79	41
3	49	51	55	56	58	61	63	58	46	40	35	27	28	32	32	30	31	33	34	34	34	31	35	40	41	63	27
4	39	31	31	32	35	34	35	33	32	31	29	26	24	22	21	20	21	23	25	25	24	25	26	27	28	39	20
5	27	30	31	33	37	41	47	43	36	31	27	27	23	20	18	16	15	16	19	25	26	30	33	34	29	47	15
6	32	39	42	46	48	46	51	52	46	40	36	25	21	16	18	21	23	27	31	32	36	42	40	40	35	52	16
7	39	42	44	46	46	46	48	44	40	37	35	30	26	21	19	19	21	25	27	31	31	32	32	31	34	48	19
8	32	37	39	39	29	26	24	21	20	19	18	17	18	17	20	20	21	25	28	29	30	33	35	38	26	39	17
9	39	40	40	41	40	41	42	40	38	36	33	30	26	21	19	18	19	22	23	26	29	30	31	32	32	42	18
10	33	35	36	37	40	41	43	37	32	25	23	21	20	19	18	17	19	18	18	19	24	26	28	34	28	43	17
11	36	39	39	41	46	54	57	54	47	42	38	36	32	29	29	28	35	39	38	36	35	35	36	38	39	57	28
12	41	44	47	51	48	56	61	64	61	56	52	49	43	41	40	38	39	44	48	52	52	55	56	56	50	64	38
13	58	58	59	60	59	62	63	60	53	52	50	49	44	42	43	36	42	47	51	54	52	56	58	63	53	63	36
14	65	63	65	68	68	74	75	67	53	51	54	59	59	59	60	56	63	67	68	72	65	61	61	63	63	75	51
15	69	75	77	77	82	84	85	81	70	58	57	57	56	50	44	46	48	50	53	52	52	55	56	58	62	85	44
16	63	75	84	86	90	88	86	91	87	63	36	31	19	15	14	13	13	13	14	15	14	14	16	16	44	91	13
17	17	18	18	20	20	18	18	18	18	18	17	17	17	15	16	16	16	20	22	22	22	20	19	18	18	22	15
18	17	17	18	19	20	20	20	19	17	16	15	17	17	16	15	16	16	17	19	18	17	18	19	20	18	20	15
19	21	23	22	22	23	24	25	24	23	22	20	18	16	12	11	10	12	15	17	19	18	20	19	20	19	25	10
20	19	19	20	19	20	23	24	27	23	18	14	14	12	11	12	11	12	14	16	20	20	21	19	18	18	27	11
21	17	15	18	19	19	20	20	22	25	28	26	26	22	21	22	23	24	25	30	30	29	32	32	36	24	36	15
22	34	35	36	37	38	39	39	35	29	24	24	26	25	26	24	24	28	32	33	35	36	35	33	31	32	39	24
23	31	33	33	35	37	38	41	40	36	34	34	33	31	27	13	5	5	6	7	6	6	9	10	9	23	41	5
24	9	10	12	13	12	11	11	10	10	11	10	9	8	8	9	9	11	14	16	13	10	9	11	11	11	16	8
25	14	15	17	18	20	20	20	19	18	16	14	11	9	8	8	9	9	9	10	11	12	13	14	15	14	20	8
26	15	15	15	15	16	15	16	17	17	17	17	17	16	14	13	13	14	15	16	16	18	18	18	18	16	18	13
27	19	18	18	17	17	17	19	19	18	17	16	15	14	13	13	13	14	15	15	16	17	18	19	20	16	20	13
28	21	21	21	22	22	22	23	23	22	21	19	17	15	11	10	10	11	13	15	16	18	19	18	19	18	23	10
29	20	20	22	23	25	26	25	25	21	19	16	15	13	12	12	13	14	17	19	21	22	23	22	23	20	26	12
30	23	25	25	27	25	26	28	26	24	22	20	19	18	17	15	17	21	23	23	22	22	25	28	29	23	29	15
Avg	34	36	37	38	38	39	41	40	36	32	29	28	25	24	22	22	24	26	28	29	29	31	31	32	31	--	--
Max	69	79	84	86	90	88	86	91	87	68	61	61	61	59	60	56	63	67	68	72	65	61	63	63	--	91	--
Min	9	10	12	13	12	11	11	10	10	11	10	9	8	8	8	5	5	6	7	6	6	9	10	9	--	--	5

SAROAD for Resolution, East_Plant
"Component, Channel: Table100, RH_Percent"
Month: Dec 2014

Hour of day																											
Day	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Avg	Max	Min
1	30	33	36	38	39	40	42	41	32	28	27	25	25	24	23	22	22	23	24	25	24	24	25	25	29	42	22
2	24	25	25	24	25	24	22	23	23	22	21	20	19	16	16	15	15	17	16	22	36	50	63	69	26	69	15
3	76	78	77	76	76	77	76	74	72	66	58	58	58	56	53	61	69	72	75	72	73	72	70	72	69	78	53
4	65	85	93	96	94	95	96	97	97	98	98	98	92	82	80	90	91	94	95	95	93	95	96	96	92	98	65
5	97	97	98	98	95	93	93	90	82	74	72	71	70	67	61	59	61	66	68	69	68	70	70	72	78	98	59
6	74	74	76	74	74	72	70	68	65	62	58	57	58	56	56	53	55	59	58	59	60	61	61	61	63	76	53
7	62	64	66	63	57	52	58	66	55	50	47	44	41	39	38	39	42	46	46	46	46	48	56	56	51	66	38
8	56	55	55	56	58	58	57	55	51	48	46	43	42	40	38	38	40	42	42	43	45	45	47	48	48	58	38
9	50	50	49	48	48	49	50	49	45	41	40	39	36	33	32	35	43	49	52	51	52	53	54	55	46	55	32
10	58	58	61	63	64	65	66	65	61	57	54	51	49	46	46	45	51	53	59	63	69	62	59	62	58	69	45
11	65	69	74	73	71	72	71	70	61	53	43	33	32	34	34	35	41	48	54	56	53	51	48	49	54	74	32
12	50	49	47	46	46	44	42	40	37	36	36	37	38	38	39	41	42	42	42	48	50	59	67	74	45	74	36
13	85	93	93	92	92	91	94	96	97	95	85	89	90	93	93	91	80	77	81	79	82	82	82	81	88	97	77
14	81	82	85	91	94	95	95	95	86	81	66	68	61	62	64	69	72	76	76	83	87	82	79	77	79	95	61
15	78	79	81	84	84	85	82	74	62	58	54	48	46	46	42	40	42	39	37	38	37	41	46	53	57	85	37
16	51	55	58	56	58	56	58	56	57	53	48	44	44	38	39	42	64	66	69	69	59	54	66	72	55	72	38
17	73	65	72	83	95	96	96	96	95	96	97	97	97	92	92	90	84	86	91	93	94	95	96	96	90	97	65
18	97	97	97	97	97	97	97	96	93	92	82	76	77	77	65	67	79	86	85	86	89	92	92	92	88	97	65
19	90	87	85	82	82	82	81	78	72	64	59	56	50	45	43	44	47	64	70	64	66	70	67	65	67	90	43
20	65	68	62	62	65	72	69	69	62	50	47	42	41	49	49	48	50	58	57	63	63	65	65	61	58	72	41
21	61	61	60	65	66	66	66	67	64	56	48	48	46	51	48	49	58	64	65	66	67	64	65	66	60	67	46
22	68	68	72	72	73	78	77	78	68	59	58	58	57	57	57	59	64	70	72	72	71	68	68	71	67	78	57
23	71	68	61	58	51	48	64	43	31	29	29	26	24	19	16	15	15	21	23	23	23	24	25	26	35	71	15
24	25	25	26	27	27	23	24	23	22	22	20	18	18	18	19	21	24	28	30	32	28	26	26	26	24	32	18
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26	43	42	40	41	43	37	34	32	32	27	29	29	28	27	27	28	30	34	37	42	45	46	49	46	36	49	27
27	49	48	48	51	53	50	41	41	40	37	37	35	31	28	25	24	27	33	32	38	39	37	33	37	38	53	24
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31	28	28	28	27	27	29	31	40	43	44	63	89	96	96	96	96	96	96	96	96	96	96	96	96	68	96	27
Avg	58	59	60	60	61	61	61	60	56	52	49	48	47	45	44	46	49	53	54	56	57	57	58	59	54	--	--
Max	97	97	98	98	97	97	97	97	97	98	98	98	97	96	96	96	96	96	96	96	96	96	96	96	--	98	--
Min	23	25	25	24	25	23	22	23	22	22	20	17	16	14	13	13	14	17	16	21	23	24	25	22	--	--	13

SAROAD for Resolution, East_Plant
"Component, Channel: Table100, Precip_Inches"
Month: Oct 2014

SAROAD for Resolution, East_Plant
"Component, Channel: Table100, Precip_Inches"
Month: Nov 2014

SAROAD for Resolution, East_Plant
"Component, Channel: Table100, Precip_Inches"
Month: Dec 2014

SAROAD for Resolution, East_Plant
"Component, Channel: Table100, BP_mmHg"
Month: Oct 2014

Hour of day

Day	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Avg	Max	Min
1	650	650	650	649	650	650	650	651	651	651	651	651	651	650	650	650	650	651	651	651	651	652	652	652	651	652	649
2	652	652	652	652	653	654	654	654	655	656	656	655	655	655	654	654	654	654	654	655	655	655	655	655	654	656	652
3	655	655	655	655	656	656	656	656	657	657	657	656	656	656	655	655	655	655	655	655	656	656	656	656	656	657	655
4	656	656	655	655	655	655	655	656	656	656	656	656	655	655	654	654	654	654	654	654	654	654	654	654	655	656	654
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7	654	654	654	654	653	654	654	654	655	655	655	655	654	654	653	653	653	653	653	653	653	653	653	653	654	655	653
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12	652	652	652	652	652	652	652	652	653	653	652	652	652	651	651	651	651	651	651	651	651	652	652	652	652	652	651
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16	653	653	653	653	653	653	654	654	654	654	654	654	653	653	653	652	652	653	653	653	653	653	653	653	653	654	652
17	652	652	652	652	652	652	653	653	654	654	654	654	653	652	652	652	652	652	652	652	652	652	653	653	652	654	652
18	652	652	652	651	652	652	652	652	652	652	652	652	651	651	651	650	650	650	650	651	651	651	651	650	651	652	650
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23	655	655	655	654	654	655	655	655	656	656	656	656	656	655	655	655	655	655	655	655	655	655	655	655	655	656	654
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Avg	653	653	653	653	653	653	653	654	654	654	654	654	654	653	653	653	653	653	653	653	653	653	653	653	653	--	--
Max	656	656	656	656	656	656	656	656	657	657	657	657	656	656	656	655	655	655	655	655	656	656	656	656	--	657	--
Min	650	650	650	649	650	650	650	651	651	651	651	651	651	650	650	650	650	650	650	650	651	651	651	650	--	--	649

SAROAD for Resolution, East_Plant
"Component, Channel: Table100, BP_mmHg"
Month: Nov 2014

Hour of day																											
Day	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Avg	Max	Min
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7	658	658	658	657	657	657	657	657	657	658	657	657	656	656	655	655	655	654	655	655	655	655	655	655	656	658	654
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18	656	655	655	656	656	656	656	657	657	658	658	658	657	657	657	657	657	657	657	657	657	657	657	657	657	658	655
19	657	656	656	656	656	656	656	656	656	657	656	656	655	655	654	654	654	654	654	654	654	654	654	654	655	657	654
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Avg	654	654	654	654	654	654	654	654	655	655	655	655	654	654	653	653	653	653	654	654	654	654	654	654	654	--	--
Max	659	659	660	660	660	660	660	660	661	661	661	661	660	660	659	659	659	659	659	659	659	659	659	659	--	661	--
Min	650	650	650	650	650	650	650	650	651	651	651	651	650	650	650	649	649	649	649	650	650	650	650	650	--	--	649

SAROAD for Resolution, East_Plant
"Component, Channel: Table100, BP_mmHg"
Month: Dec 2014

Hour of day																											
Day	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Avg	Max	Min
1	655	655	655	655	655	655	656	656	657	657	657	657	656	656	655	655	655	655	655	655	655	655	655	655	656	657	655
2	654	654	654	653	653	653	653	653	654	654	654	654	653	653	653	653	653	653	654	654	655	655	655	655	654	655	653
3	654	654	654	654	654	654	654	654	655	655	655	655	654	654	653	654	654	654	654	654	654	653	653	653	654	655	653
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5	655	655	655	656	656	655	656	656	656	657	657	657	656	656	656	656	656	656	656	656	656	656	656	656	656	657	655
6	656	656	656	656	656	656	656	657	657	657	657	657	657	656	656	656	657	657	657	657	657	657	657	657	657	657	656
7	657	657	657	657	656	657	657	657	658	658	658	657	657	657	656	656	656	656	656	656	656	656	657	656	657	658	656
8	656	656	656	655	656	655	656	656	656	657	656	656	656	655	655	655	655	655	655	655	655	655	655	655	656	657	655
9	655	655	655	654	654	654	654	655	655	655	655	655	654	654	654	653	653	653	653	653	654	654	654	654	654	655	653
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21	654	654	654	654	654	654	653	653	654	654	654	654	654	653	653	653	653	653	653	653	653	653	653	653	653	654	653
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31	649	649	649	649	648	648	648	648	649	649	649	649	649	649	649	649	649	648	648	648	648	648	648	649	649	649	648
Avg	653	653	653	653	653	653	653	653	654	654	654	654	653	653	653	653	653	653	653	653	653	653	653	653	653	--	--
Max	657	657	657	657	656	657	657	657	658	658	658	657	657	657	656	656	657	657	657	657	657	657	657	657	--	658	--
Min	646	646	647	647	646	646	646	646	646	646	646	646	645	645	645	645	645	645	645	645	646	646	646	646	--	--	645

SAROAD for Resolution, West_Plant
"Component, Channel: Table100, WS_ms_10m"
Month: Oct 2014

Hour of day																											
Day	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Avg	Max	Min
1	1.6	2.0	2.5	1.2	1.9	1.0	0.8	1.9	3.1	1.6	2.2	2.0	2.6	3.6	3.2	3.3	3.6	3.8	1.4	0.7	0.4	0.4	0.8	0.6	1.9	3.8	0.4
2	1.0	0.5	0.7	2.9	1.2	2.3	2.8	4.0	6.9	6.8	6.4	3.1	3.2	2.8	1.7	1.7	2.3	2.2	1.5	1.7	0.8	1.7	2.1	1.3	2.6	6.9	0.5
3	1.2	0.9	1.4	1.4	1.4	2.4	1.9	3.2	2.7	5.1	4.8	5.3	4.2	4.1	3.0	2.4	3.4	3.9	3.5	3.0	2.6	5.9	3.2	2.6	3.1	5.9	0.9
4	2.6	2.3	2.2	2.7	3.3	2.6	2.8	2.9	3.0	2.9	2.8	1.8	1.2	3.1	3.5	3.6	3.7	3.5	1.2	0.4	1.4	0.8	0.3	0.3	2.3	3.7	0.3
5	0.7	0.5	0.8	1.3	2.4	1.8	1.9	0.5	0.7	1.0	1.6	2.2	3.0	3.4	4.0	3.6	4.0	3.7	1.0	0.6	0.6	0.5	0.6	0.7	1.7	4.0	0.5
6	1.1	1.4	1.0	0.8	0.8	0.6	0.8	2.1	2.1	1.3	1.2	1.3	2.6	4.0	3.2	2.0	2.4	2.0	0.9	0.3	1.0	0.9	1.0	0.6	1.5	4.0	0.3
7	0.3	0.4	0.6	1.3	2.2	0.7	0.9	1.5	2.8	3.3	1.1	1.0	2.3	2.8	2.8	3.7	3.7	1.7	1.2	1.2	0.8	0.6	1.1	0.8	1.6	3.7	0.3
8	0.6	0.2	1.0	2.5	2.8	3.7	9.0	8.5	6.3	2.8	3.0	2.7	3.2	4.5	2.7	3.1	2.4	2.0	1.8	1.1	1.2	0.5	0.4	1.0	2.8	9.0	0.2
9	1.3	1.5	1.6	3.2	2.9	1.8	0.6	2.2	2.7	1.7	2.1	2.2	2.2	1.7	2.1	1.8	2.5	1.9	0.7	0.6	1.5	1.4	2.2	2.2	1.9	3.2	0.6
10	1.5	0.8	0.5	1.8	2.0	1.1	1.0	2.0	1.4	1.0	1.5	2.2	2.1	3.0	3.3	3.1	3.2	2.0	0.9	1.0	0.4	1.3	0.7	1.4	1.6	3.3	0.4
11	0.8	0.8	2.1	2.8	3.0	3.5	3.7	0.8	1.2	1.1	1.6	2.0	2.0	2.6	3.4	2.8	2.7	2.4	0.9	0.2	1.7	1.2	0.9	1.2	1.9	3.7	0.2
12	1.0	0.9	0.5	0.6	1.1	0.2	0.7	0.7	0.7	1.0	2.0	3.6	4.0	4.8	5.1	5.9	5.0	3.8	1.7	0.6	1.7	0.6	3.5	6.5	2.3	6.5	0.2
13	8.2	8.5	9.6	10.8	10.2	8.7	8.2	8.1	8.7	8.7	6.5	7.2	5.0	2.8	1.9	2.2	1.5	2.0	1.0	1.9	1.9	3.7	3.0	1.1	5.5	10.8	1.0
14	0.9	3.3	3.3	1.9	1.6	2.6	2.9	3.6	2.8	3.2	2.2	2.3	3.2	3.5	4.4	2.4	2.4	2.4	2.5	5.2	5.7	6.4	5.6	2.7	3.2	6.4	0.9
15	2.0	2.2	3.0	4.3	3.7	4.3	5.9	4.0	4.2	3.7	2.5	3.4	2.5	2.9	2.6	4.7	3.3	1.1	1.1	2.0	2.8	1.5	1.8	1.2	2.9	5.9	1.1
16	1.0	0.8	0.5	0.4	1.0	0.7	1.1	1.6	1.2	1.2	1.5	3.6	3.1	2.9	3.6	4.1	3.5	2.9	0.9	1.0	0.7	0.5	0.9	0.7	1.6	4.1	0.4
17	0.7	0.2	0.9	1.3	0.7	2.0	1.5	2.7	1.5	0.7	0.7	2.2	4.5	4.2	4.1	2.4	3.1	2.0	1.1	1.8	2.6	1.9	2.5	5.2	2.1	5.2	0.2
18	4.7	2.3	3.2	1.7	1.9	3.5	1.4	1.5	1.6	1.6	3.2	3.8	2.3	3.3	3.7	4.5	3.5	1.0	0.6	1.5	1.4	1.2	0.8	1.1	2.3	4.7	0.6
19	1.6	2.1	3.1	2.2	2.8	2.2	1.5	1.6	2.9	4.2	5.7	3.1	2.7	5.2	4.6	3.3	5.2	8.8	6.3	3.8	5.2	5.7	5.4	2.5	3.8	8.8	1.5
20	5.9	6.1	4.1	3.7	3.0	3.7	3.4	5.4	5.4	3.9	3.2	2.2	2.7	2.0	2.0	1.8	1.4	2.8	5.6	6.5	2.7	2.3	2.8	2.6	3.5	6.5	1.4
21	3.7	4.9	2.9	2.3	2.8	3.6	3.3	1.9	1.9	2.4	3.0	1.6	1.9	3.7	2.6	2.9	2.6	1.3	1.4	1.4	0.8	3.0	1.5	4.0	2.6	4.9	0.8
22	3.4	1.9	3.1	1.4	1.6	1.8	2.2	3.2	2.2	2.0	4.1	2.7	2.0	2.2	2.4	2.0	1.1	1.7	0.6	1.6	1.2	1.0	0.4	0.6	1.9	4.1	0.4
23	1.0	0.7	0.6	0.4	0.6	1.2	3.6	2.4	1.8	2.0	2.0	3.0	2.0	2.6	2.8	1.7	1.0	1.5	1.1	2.0	1.4	1.6	1.3	0.8	1.6	3.6	0.4
24	1.7	2.9	4.3	3.3	3.7	3.3	3.8	3.6	1.7	2.2	2.4	3.1	2.2	2.6	2.6	1.9	1.6	2.0	0.8	0.2	1.8	2.1	0.9	1.4	2.3	4.3	0.2
25	3.1	5.5	4.1	0.8	2.5	1.9	2.1	3.9	4.8	4.0	2.6	2.8	2.2	2.2	1.3	0.8	2.2	1.2	0.3	1.3	2.3	1.5	1.5	1.3	2.3	5.5	0.3
26	0.7	1.3	1.2	0.8	1.0	0.7	1.7	1.7	1.0	1.1	1.7	1.9	2.9	3.7	4.2	5.1	4.1	2.3	0.9	0.7	1.3	1.0	0.6	0.8	1.8	5.1	0.6
27	0.6	1.1	1.3	1.4	1.2	0.4	1.0	0.6	0.7	1.1	2.1	3.0	3.7	2.7	3.3	3.2	3.1	2.8	1.6	0.6	0.7	0.2	1.9	1.3	1.7	3.7	0.2
28	1.4	2.0	1.2	2.4	2.4	0.7	2.0	1.2	3.3	2.4	1.9	2.1	2.5	2.0	2.1	2.3	2.9	2.5	0.2	0.9	0.9	0.4	0.5	0.7	1.7	3.3	0.2
29	0.5	0.5	0.6	0.4	0.4	1.2	2.8	2.5	3.7	3.2	2.9	2.2	1.9	2.6	1.8	2.9	2.3	1.8	1.9	1.8	2.5	4.1	4.6	5.7	2.3	5.7	0.4
30	6.6	5.6	5.5	5.6	5.2	4.2	5.7	7.8	6.5	4.7	4.7	2.9	3.8	4.9	2.8	1.3	1.3	2.5	2.4	4.3	5.1	4.3	3.2	5.4	4.4	7.8	1.3
31	5.9	5.9	6.5	6.2	5.8	4.5	5.9	6.4	7.4	6.6	8.7	7.3	3.7	4.2	4.5	3.6	4.7	5.3	5.9	5.2	5.3	3.1	2.8	2.6	5.3	8.7	2.6
Avg	2.2	2.3	2.4	2.4	2.5	2.3	2.8	3.0	3.1	2.9	3.0	2.9	2.8	3.2	3.1	2.9	2.9	2.6	1.7	1.8	2.0	2.0	1.9	2.0	2.5	--	--
Max	8.2	8.5	9.6	10.8	10.2	8.7	9.0	8.5	8.7	8.7	8.7	7.3	5.0	5.2	5.1	5.9	5.2	8.8	6.3	6.5	5.7	6.4	5.6	6.5	--	10.8	--
Min	0.3	0.2	0.5	0.4	0.4	0.2	0.6	0.5	0.7	0.7	0.7	1.0	1.2	1.7	1.3	0.8	1.0	1.0	0.2	0.2	0.4	0.2	0.3	0.3	--	--	0.2

SAROAD for Resolution, West_Plant
"Component, Channel: Table100, WS_ms_10m"
Month: Nov 2014

Hour of day																											
Day	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Avg	Max	Min
1	1.9	1.8	0.9	1.4	1.1	0.8	0.5	0.8	1.6	3.3	4.5	5.1	4.9	5.1	5.0	4.5	4.5	3.4	1.8	1.0	1.4	1.7	1.9	2.7	2.6	5.1	0.5
2	2.8	1.7	1.3	1.6	2.3	0.8	0.8	0.6	1.1	1.8	2.9	3.2	3.7	5.1	6.1	6.3	4.8	3.9	1.9	0.4	1.1	1.3	1.7	0.9	2.4	6.3	0.4
3	1.0	0.2	0.5	1.2	1.2	1.2	0.6	1.7	1.2	1.1	2.0	2.4	3.8	4.1	3.6	4.1	4.2	3.0	0.8	0.8	1.1	0.5	0.5	0.5	1.7	4.2	0.2
4	0.6	1.7	6.2	8.4	10.3	11.6	12.1	10.8	11.1	8.8	7.2	6.5	5.3	4.1	4.0	3.2	3.3	3.4	3.9	4.7	4.1	4.5	3.6	4.4	6.0	12.1	0.6
5	6.2	5.4	3.5	3.2	5.2	5.8	6.7	5.1	5.6	5.8	6.3	3.1	3.4	3.1	2.9	2.5	2.0	2.2	3.1	3.1	1.5	3.2	4.1	2.2	4.0	6.7	1.5
6	4.6	7.9	7.1	6.8	4.9	3.3	4.4	6.1	3.2	2.8	2.9	3.7	3.5	4.7	3.0	2.7	3.3	3.5	3.0	3.2	1.6	2.7	2.0	5.2	4.0	7.9	1.6
7	2.4	1.2	1.5	1.8	2.2	2.8	3.3	2.3	1.8	5.3	3.8	4.6	2.7	1.8	2.0	2.8	2.3	1.8	0.5	1.3	1.3	1.4	0.5	0.5	2.2	5.3	0.5
8	0.7	3.2	2.4	1.5	1.5	1.9	3.5	2.9	4.7	3.2	3.4	2.6	4.0	4.2	3.2	2.8	3.8	2.4	3.0	3.1	4.0	3.4	3.0	2.3	2.9	4.7	0.7
9	2.5	3.1	3.7	3.6	3.2	3.2	3.8	3.6	3.6	4.1	4.3	2.5	2.3	1.8	2.7	2.8	1.3	0.7	0.7	1.1	1.5	1.9	2.1	0.5	2.5	4.3	0.5
10	1.5	1.4	2.0	0.5	1.4	2.1	2.4	1.8	1.1	1.3	2.5	2.6	3.5	4.2	4.4	5.2	3.9	1.5	0.7	0.7	0.6	1.2	0.5	0.9	2.0	5.2	0.5
11	1.1	0.7	1.5	1.6	1.0	1.0	1.4	1.9	1.4	2.2	2.9	4.0	4.0	3.9	3.5	3.7	3.2	1.4	0.4	0.3	0.9	0.9	1.0	0.7	1.9	4.0	0.3
12	0.5	0.4	0.9	0.8	0.3	1.4	0.9	0.6	0.8	2.2	3.6	3.2	4.2	4.3	3.1	3.5	3.2	1.8	0.6	1.9	2.2	0.7	0.3	1.4	1.8	4.3	0.3
13	1.0	1.3	1.2	2.8	2.5	2.4	5.7	6.1	4.8	3.1	1.4	2.7	4.2	2.9	3.5	3.9	4.6	2.5	1.0	0.7	1.3	1.7	1.1	1.9	2.7	6.1	0.7
14	1.2	2.2	2.7	2.8	3.1	3.2	4.7	5.0	6.3	3.5	3.1	2.3	4.2	3.9	3.7	3.3	2.7	1.8	1.6	0.5	0.3	0.5	0.6	0.4	2.7	6.3	0.3
15	0.2	0.7	0.7	0.5	0.9	1.1	2.6	2.9	3.1	1.2	2.0	2.6	2.2	2.6	4.5	4.2	3.9	2.2	0.5	0.6	0.5	0.6	0.1	0.5	1.7	4.5	0.1
16	0.6	0.6	0.8	2.5	1.8	0.5	0.7	0.8	2.0	1.2	5.3	5.5	4.5	3.2	5.0	3.1	3.0	2.6	2.1	2.8	5.0	4.6	11.2	8.4	3.2	11.2	0.5
17	3.5	3.9	4.3	5.8	7.9	4.2	7.6	9.6	10.2	10.8	11.9	9.3	4.9	3.9	3.6	3.1	4.5	4.0	2.4	5.5	9.8	8.2	10.3	8.7	6.6	11.9	2.4
18	9.6	8.2	5.1	11.1	11.1	8.7	5.2	8.1	6.7	7.8	6.3	7.4	4.0	2.7	3.3	2.7	2.7	3.1	4.0	3.5	1.9	1.6	3.2	4.3	5.5	11.1	1.6
19	6.3	6.0	1.7	1.4	2.1	3.5	3.4	2.4	2.8	3.5	3.5	3.7	1.9	2.8	3.2	2.3	2.5	0.9	0.3	0.7	1.4	1.2	1.1	1.4	2.5	6.3	0.3
20	0.5	1.7	1.9	1.0	1.2	2.6	1.3	2.1	2.4	1.7	1.3	1.9	1.9	3.0	2.7	2.8	2.7	1.6	0.5	1.6	1.7	2.9	3.6	1.5	1.9	3.6	0.5
21	2.6	5.7	3.8	5.3	5.4	6.0	6.4	4.9	4.6	4.6	2.5	2.1	1.6	1.4	1.2	2.5	2.8	1.5	2.1	2.9	1.3	1.5	1.3	0.9	3.1	6.4	0.9
22	1.4	0.7	0.6	0.6	0.7	0.7	0.8	0.8	0.9	1.0	1.2	1.9	2.0	3.0	3.6	3.2	4.0	1.9	1.0	1.2	0.4	0.7	0.3	0.6	1.4	4.0	0.3
23	1.1	0.6	0.4	0.9	0.6	0.6	0.6	0.5	0.3	1.2	2.4	3.3	3.0	4.0	3.3	4.3	3.2	2.6	3.7	4.3	2.8	1.8	2.0	1.5	2.0	4.3	0.3
24	0.8	0.8	2.5	2.5	1.1	1.0	1.0	0.7	0.6	0.8	1.4	1.8	3.5	4.3	3.5	4.0	2.8	1.2	1.0	1.7	2.7	4.1	2.5	2.3	2.0	4.3	0.6
25	2.6	3.3	2.7	3.8	2.1	3.2	3.7	2.4	1.8	4.1	2.2	1.5	1.7	2.5	2.1	3.0	3.3	1.9	0.7	0.5	1.5	0.7	0.9	1.4	2.2	4.1	0.5
26	1.9	1.7	2.6	3.0	0.6	0.9	0.7	1.0	0.8	0.8	1.8	2.1	3.1	3.5	3.1	2.8	2.1	1.5	0.8	0.6	1.2	3.8	2.6	3.3	1.9	3.8	0.6
27	3.2	2.6	2.0	2.0	2.5	3.1	3.1	3.3	2.9	4.4	3.7	3.0	3.0	2.3	3.0	2.1	3.4	1.7	1.5	1.4	1.4	1.4	1.8	1.1	2.5	4.4	1.1
28	2.8	1.8	1.0	2.2	4.3	5.3	3.6	2.1	3.1	3.3	3.2	3.0	3.1	2.1	3.9	1.9	0.7	0.7	0.8	3.3	3.4	3.1	1.7	1.9	2.6	5.3	0.7
29	1.1	1.6	4.6	3.6	3.4	4.9	5.6	5.6	6.3	4.3	2.2	2.7	2.2	3.4	3.8	3.6	3.2	0.9	1.3	1.3	3.0	0.5	1.4	1.7	3.0	6.3	0.5
30	1.3	1.7	1.9	1.4	1.9	1.2	1.5	1.7	1.0	1.2	2.2	3.8	3.7	3.2	3.5	4.7	3.7	1.3	0.9	1.1	1.0	1.5	1.1	1.6	2.0	4.7	0.9
Avg	2.3	2.5	2.4	2.8	2.9	3.0	3.3	3.3	3.3	3.3	3.5	3.5	3.3	3.4	3.5	3.4	3.2	2.1	1.6	1.8	2.1	2.1	2.3	2.2	2.8	--	--
Max	9.6	8.2	7.1	11.1	11.1	11.6	12.1	10.8	11.1	10.8	11.9	9.3	5.3	5.1	6.1	6.3	4.8	4.0	4.0	5.5	9.8	8.2	11.2	8.7	--	12.1	--
Min	0.2	0.2	0.4	0.5	0.3	0.5	0.5	0.5	0.3	0.8	1.2	1.5	1.6	1.4	1.2	1.9	0.7	0.7	0.3	0.3	0.3	0.5	0.1	0.4	--	--	0.1

SAROAD for Resolution, West_Plant
"Component, Channel: Table100, WD_10m"
Month: Nov 2014

Hour of day

Day	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Avg	Max	Min
1	83	64	13	339	5	47	41	74	138	164	167	164	204	229	262	254	253	244	195	162	156	192	178	197	175	339	5
2	223	154	114	233	305	17	198	66	175	232	288	221	269	246	245	257	259	261	272	55	47	356	22	281	258	356	17
3	314	82	297	40	48	356	297	49	152	153	262	274	253	264	265	251	256	259	330	70	28	299	275	288	300	356	28
4	322	13	33	27	36	34	33	33	30	27	21	4	7	23	28	17	22	8	9	17	6	7	20	4	18	322	4
5	6	32	89	76	87	122	71	78	85	81	67	304	110	104	112	74	32	34	71	85	27	73	75	120	73	304	6
6	82	61	63	58	77	77	69	57	62	132	93	88	67	63	81	80	60	66	105	101	97	82	171	86	81	171	57
7	331	334	18	297	344	322	58	28	60	82	91	118	129	112	221	252	274	295	17	47	39	58	340	335	15	344	17
8	304	63	40	49	354	20	57	358	72	283	30	276	103	100	140	83	56	127	89	109	124	116	139	94	72	358	20
9	76	324	288	322	312	280	356	16	24	44	49	95	98	91	205	211	217	223	43	58	45	49	45	14	26	356	14
10	64	69	59	337	75	58	56	68	94	144	172	185	222	237	231	233	262	225	2	182	64	64	29	69	92	337	2
11	65	64	59	73	80	70	66	71	101	153	174	179	210	223	204	216	234	260	309	141	56	50	72	65	106	309	50
12	92	192	102	290	355	63	276	287	240	175	192	218	254	253	256	250	210	258	335	41	49	21	333	52	272	355	21
13	4	53	55	59	96	88	70	65	81	192	192	169	176	164	174	235	265	283	33	35	35	56	109	46	86	283	4
14	57	58	52	58	56	62	71	72	72	78	183	187	230	237	246	255	273	281	291	316	301	61	46	59	38	316	46
15	76	278	61	16	63	76	60	58	87	191	194	219	233	188	240	250	237	267	70	52	56	47	68	80	84	278	16
16	132	142	326	331	343	317	279	259	289	270	22	43	31	16	16	212	76	58	281	63	66	239	66	70	5	343	16
17	242	236	243	260	60	324	71	71	78	72	62	58	58	82	71	66	70	64	73	54	63	70	60	55	63	324	54
18	66	69	53	66	65	68	60	75	80	82	60	58	68	56	41	60	60	97	86	116	337	299	42	80	63	337	41
19	76	69	324	358	64	91	89	94	142	72	65	43	36	159	223	229	273	358	4	19	37	13	23	28	46	358	4
20	7	34	47	8	41	60	186	97	119	185	174	190	194	236	267	268	270	299	351	50	47	50	66	44	48	351	7
21	51	70	76	76	69	73	64	78	76	82	60	69	293	254	288	234	264	312	47	89	74	64	19	58	55	312	19
22	79	9	330	11	68	279	328	253	249	188	193	228	247	281	276	263	270	277	68	53	327	11	32	64	311	330	9
23	63	39	294	344	334	257	353	24	243	186	244	251	236	256	312	5	20	28	34	30	25	357	39	31	346	357	5
24	351	308	46	79	302	358	304	343	206	147	133	219	261	273	257	241	216	125	351	8	25	32	3	329	324	358	3
25	26	109	150	84	128	123	162	194	355	120	83	277	249	203	261	257	268	300	343	11	35	336	26	99	68	355	11
26	353	73	77	34	8	300	32	343	128	178	256	255	257	216	278	283	283	304	67	358	348	56	245	225	319	358	8
27	245	327	306	308	292	308	336	3	306	341	220	231	238	240	51	152	52	76	235	338	290	317	181	48	302	341	3
28	245	102	2	304	42	58	12	301	303	273	240	150	84	109	198	201	211	101	35	55	53	49	50	56	49	304	2
29	53	19	67	75	58	73	75	79	71	79	181	173	174	211	214	202	210	326	35	33	52	45	76	67	80	326	19
30	100	93	87	80	84	74	89	99	257	218	183	172	201	208	198	212	241	293	349	62	58	51	63	55	112	349	51
Avg	41	53	38	20	38	39	44	48	91	141	150	192	211	208	240	237	265	306	19	54	40	36	49	53	45	--	--
Max	353	334	330	358	355	358	356	358	355	341	288	304	293	281	312	283	283	358	351	358	348	357	340	335	--	358	--
Min	4	9	2	8	5	17	12	3	24	27	21	4	7	16	16	5	20	8	2	8	6	7	3	4	--	--	2

SAROAD for Resolution, West_Plant
"Component, Channel: Table100, SR_Wm2_2m"

Hour of day

SAROAD for Resolution, West_Plant
"Component, Channel: Table100, SR_Wm2_2m"
Month: Nov 2014

Hour of day

SAROAD for Resolution, West_Plant
"Component, Channel: Table100, SR_Wm2_2m"
Month: Dec 2014

SAROAD for Resolution, West_Plant
"Component, Channel: Table100, RH_Percent"
Month: Oct 2014

Hour of day																												
Day	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Avg	Max	Min	
1	35	31	29	32	32	34	35	30	25	24	20	19	21	20	20	19	20	21	25	27	32	32	33	36	27	36	19	
2	36	36	35	34	38	36	28	26	19	18	17	17	15	14	13	11	10	10	18	22	22	22	18	16	22	38	10	
3	13	15	17	15	14	12	14	15	13	12	12	12	11	10	9	9	9	9	8	9	11	10	12	14	12	17	8	
4	15	15	15	15	15	16	17	16	14	13	13	12	11	11	11	11	11	12	15	18	20	22	22	24	15	24	11	
5	23	25	26	28	27	28	29	27	21	21	19	20	17	16	14	14	15	15	18	21	24	23	23	24	22	29	14	
6	23	25	26	27	28	30	32	29	26	22	20	20	19	20	20	19	19	22	25	29	31	32	30	30	25	32	19	
7	32	31	31	29	24	26	28	28	24	23	24	19	19	18	17	21	23	26	29	31	32	35	36	39	27	39	17	
8	41	40	46	45	45	43	62	62	62	64	82	85	85	80	70	71	76	74	87	95	97	99	98	96	71	99	40	
9	96	97	98	99	99	97	96	96	96	94	92	90	84	75	70	69	66	67	76	81	80	83	81	82	86	99	66	
10	85	88	89	86	85	85	86	77	66	61	58	57	56	55	55	55	52	54	63	63	73	71	72	73	69	89	52	
11	70	69	66	64	65	66	67	67	59	54	48	43	39	40	45	40	39	44	50	59	61	64	66	67	56	70	39	
12	67	69	72	72	69	73	73	69	55	48	47	41	37	33	32	28	29	24	26	32	34	35	31	19	46	73	19	
13	14	12	11	12	12	14	14	14	14	15	16	17	15	13	11	12	12	16	23	27	26	21	20	25	16	27	11	
14	26	19	20	21	20	20	22	20	19	17	17	16	15	16	15	14	14	14	15	15	16	17	17	19	18	26	14	
15	19	19	18	19	19	19	19	19	18	18	16	16	16	19	19	21	25	28	31	32	32	33	33	39	23	39	16	
16	40	40	43	44	46	46	49	45	40	33	30	26	22	21	22	20	21	24	34	37	39	43	44	43	35	49	20	
17	41	43	42	40	42	36	38	35	38	39	40	40	29	26	25	22	21	28	35	37	33	33	34	31	34	43	21	
18	29	30	32	36	36	34	39	36	33	25	24	22	18	16	17	22	26	30	34	37	37	35	38	35	30	39	16	
19	36	37	34	34	35	39	44	44	41	35	33	32	31	34	34	48	75	73	76	62	53	47	49	56	45	76	31	
20	50	50	51	49	49	50	54	50	48	46	43	40	38	35	35	34	34	39	41	40	40	45	42	42	43	54	34	
21	44	44	45	46	48	51	54	57	48	45	43	41	39	37	37	36	36	39	48	46	53	47	51	45	45	57	36	
22	45	48	50	53	54	55	51	49	46	41	39	36	30	27	26	25	24	31	38	43	46	47	47	48	42	55	24	
23	46	47	49	51	50	51	44	43	37	34	32	31	26	22	21	21	21	28	35	38	40	37	38	37	36	51	21	
24	38	36	34	35	34	35	35	35	31	29	27	26	22	18	20	18	17	25	29	35	36	35	40	39	30	40	17	
25	33	33	33	37	36	36	37	35	31	28	26	23	22	22	23	24	24	28	33	36	35	35	36	36	31	37	22	
26	38	43	44	47	51	54	53	50	43	41	39	36	38	35	32	34	36	36	44	48	50	51	56	55	44	56	32	
27	58	59	58	58	58	60	64	64	51	45	42	39	40	37	35	37	36	38	38	41	44	46	45	46	47	64	35	
28	47	50	49	49	49	50	47	45	39	35	30	30	28	27	24	25	27	32	35	40	41	42	44	43	39	50	24	
29	44	45	43	46	47	43	41	36	29	26	24	21	20	20	20	20	18	13	17	24	22	18	20	22	28	47	13	
30	24	24	23	23	23	23	24	24	22	21	20	17	13	13	12	13	13	19	20	19	19	18	17	18	19	24	12	
31	18	19	19	20	21	21	23	24	24	24	24	24	23	24	25	25	27	29	31	32	33	34	35	35	26	35	18	
Avg	40	40	40	41	41	41	42	41	37	34	33	31	29	27	27	27	28	31	35	38	39	39	40	40	36	--	--	
Max	96	97	98	99	99	97	96	96	96	94	92	90	85	80	70	71	76	74	87	95	97	99	98	96	--	99	--	
Min	13	12	11	12	12	12	14	14	13	12	12	12	11	10	9	9	9	9	8	9	11	10	12	14	--	--	8	

SAROAD for Resolution, West_Plant
"Component, Channel: Table100, RH_Percent"
Month: Nov 2014

Hour of day																												
Day	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Avg	Max	Min	
1	39	42	43	46	48	51	51	54	45	38	33	30	27	32	40	38	42	46	49	50	51	53	55	55	44	55	27	
2	59	77	75	70	56	57	65	59	56	53	51	52	52	46	37	38	35	35	38	44	48	43	42	47	52	77	35	
3	50	51	52	48	51	51	57	54	45	38	28	24	28	30	28	27	27	30	32	36	40	39	40	40	40	57	24	
4	40	38	25	27	26	27	27	28	26	25	23	22	20	18	18	18	18	19	20	19	19	18	20	22	23	40	18	
5	23	23	26	28	30	33	32	31	26	24	22	22	19	16	16	14	12	12	15	20	25	25	26	27	23	33	12	
6	27	29	29	32	34	34	38	38	33	30	27	20	18	14	16	19	19	21	24	26	30	33	34	31	27	38	14	
7	34	37	38	38	39	38	35	33	30	29	27	25	20	18	18	19	20	24	27	31	32	32	34	35	30	39	18	
8	35	30	30	31	29	26	20	19	15	14	13	13	14	14	16	17	16	19	21	21	22	24	26	27	21	35	13	
9	28	29	30	29	30	29	29	30	25	24	25	24	22	18	18	16	17	20	24	25	27	28	27	31	25	31	16	
10	32	32	32	35	35	36	38	36	28	23	21	19	18	19	18	17	18	18	20	21	24	26	29	32	26	38	17	
11	36	40	41	41	45	50	55	55	44	39	33	30	28	26	26	27	31	36	38	40	39	37	38	38	38	55	26	
12	40	39	44	48	50	52	56	54	50	47	44	40	40	39	38	36	33	39	43	43	45	49	51	52	45	56	33	
13	53	53	52	50	51	51	49	50	47	46	45	44	39	39	38	34	38	42	47	50	52	53	57	56	47	57	34	
14	56	58	57	56	57	59	58	54	47	44	46	48	50	51	52	51	56	58	60	64	64	64	61	58	55	64	44	
15	57	59	65	72	76	78	73	71	60	54	49	47	47	43	38	41	39	45	49	50	52	53	54	56	55	78	38	
16	57	66	73	78	82	80	78	80	86	74	32	24	16	11	11	10	10	11	11	12	11	12	9	8	39	86	8	
17	12	14	15	15	12	14	12	12	12	13	12	12	12	11	11	12	10	14	17	17	17	16	14	14	13	17	10	
18	13	13	15	17	18	16	15	12	10	11	11	13	13	12	12	12	13	13	14	13	11	13	13	13	13	18	10	
19	13	14	17	16	18	17	16	15	15	15	13	12	11	10	10	10	12	16	18	19	20	19	20	19	15	20	10	
20	21	19	19	20	22	18	21	21	18	15	13	12	9	12	12	12	12	14	17	19	19	14	14	13	16	22	9	
21	13	11	13	13	14	15	16	18	19	21	21	20	19	20	20	21	21	22	24	24	29	30	31	35	20	35	11	
22	32	34	36	36	34	36	36	36	31	26	23	23	25	24	22	22	25	29	32	32	34	34	35	34	30	36	22	
23	35	35	37	36	38	41	41	40	35	30	30	29	26	25	15	5	4	5	5	5	6	6	8	9	23	41	4	
24	10	12	11	10	11	11	11	13	11	8	8	7	8	9	11	10	11	14	17	16	9	8	9	10	11	17	7	
25	11	13	14	15	16	16	16	16	15	12	11	10	9	8	9	10	10	11	13	17	16	16	17	15	13	17	8	
26	16	15	14	13	17	16	18	19	14	12	14	13	13	12	12	11	11	14	17	18	17	13	18	17	15	19	11	
27	17	17	18	17	16	15	16	16	16	13	12	12	11	11	10	11	11	12	13	14	14	14	16	18	14	18	10	
28	17	18	21	20	15	15	16	18	15	14	13	13	12	9	9	8	9	12	14	14	15	15	17	18	14	21	8	
29	19	19	17	17	19	18	18	18	16	15	15	13	12	10	11	12	12	16	18	20	18	20	20	20	16	20	10	
30	22	21	21	24	23	24	23	23	25	20	17	16	15	14	14	15	18	22	23	23	24	24	26	28	21	28	14	
Avg	31	32	33	33	34	34	35	34	30	28	24	23	22	21	20	20	20	23	25	27	28	28	29	29	28	--	--	
Max	59	77	75	78	82	80	78	80	86	74	51	52	52	51	52	51	56	58	60	64	64	64	61	58	--	86	--	
Min	10	11	11	10	11	11	11	12	10	8	8	7	8	8	9	5	4	5	5	5	6	6	8	8	--	--	4	

SAROAD for Resolution, West_Plant
"Component, Channel: Table100, RH_Percent"
Month: Dec 2014

Hour of day																												
Day	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Avg	Max	Min	
1	30	32	30	28	29	29	29	31	28	25	22	21	20	19	19	18	18	20	20	17	19	17	18	17	23	32	17	
2	16	18	18	17	15	15	15	16	15	15	15	15	15	13	13	16	18	19	20	22	36	42	48	56	21	56	13	
3	62	65	65	67	66	65	63	62	59	55	50	49	49	45	45	56	60	60	60	58	57	60	56	57	58	67	45	
4	61	82	92	91	96	95	95	97	98	98	98	98	95	89	81	83	84	90	92	92	93	96	96	95	91	98	61	
5	90	88	83	86	79	78	72	72	65	55	53	54	53	51	49	45	48	50	48	51	47	48	45	46	61	90	45	
6	48	50	51	50	51	50	48	46	46	45	43	43	44	42	43	40	42	44	44	42	46	46	45	47	46	51	40	
7	52	48	47	48	57	60	59	50	48	40	35	33	31	31	30	30	31	33	32	41	47	47	49	49	43	60	30	
8	50	45	42	37	40	38	35	36	34	31	32	31	30	30	30	31	29	30	29	31	32	32	33	34	34	50	29	
9	35	36	36	40	38	41	41	37	34	31	32	31	30	28	29	38	40	45	50	52	57	55	59	61	41	61	28	
10	59	60	58	60	58	58	58	61	56	48	43	39	38	36	42	45	48	55	61	63	68	61	61	64	54	68	36	
11	69	71	72	62	67	57	62	64	49	52	47	37	27	29	31	34	39	44	48	43	41	39	40	40	48	72	27	
12	39	38	35	37	34	31	34	35	36	34	31	32	34	33	33	35	35	39	41	48	48	54	59	65	39	65	31	
13	76	88	87	84	84	91	96	97	98	90	89	91	86	85	83	83	69	70	73	77	84	79	81	83	84	98	69	
14	77	80	85	85	87	88	86	84	79	65	62	61	56	56	58	61	63	67	69	75	77	80	80	78	73	88	56	
15	77	70	66	68	69	69	61	65	64	54	41	36	34	33	26	25	26	31	27	24	25	29	32	33	45	77	24	
16	37	39	39	41	41	41	41	54	57	53	38	36	36	35	45	46	61	66	73	73	70	70	73	72	52	73	35	
17	69	75	75	84	92	93	97	97	95	95	95	89	81	80	83	81	79	80	85	83	86	90	87	91	86	97	69	
18	82	84	91	81	79	79	76	75	74	74	72	65	67	67	58	62	73	73	74	82	85	82	82	83	76	91	58	
19	83	75	72	72	67	64	64	64	58	49	46	40	37	34	35	34	45	58	69	66	65	60	58	54	57	83	34	
20	52	51	52	56	60	57	54	59	56	42	36	36	41	45	45	44	46	53	57	62	65	66	67	68	53	68	36	
21	68	69	71	69	72	71	56	61	61	50	47	45	46	48	43	48	53	57	59	62	66	70	68	69	60	72	43	
22	72	72	73	74	75	74	75	75	70	56	53	51	53	53	54	54	57	62	65	66	72	74	76	77	66	77	51	
23	77	78	78	78	80	57	43	43	37	24	23	22	20	16	14	14	13	17	21	21	25	23	23	22	36	80	13	
24	19	20	19	20	16	13	12	15	14	14	9	12	13	14	16	19	23	23	20	21	18	18	19	19	17	23	9	
25	21	23	26	30	28	28	27	26	30	23	22	20	23	26	32	35	34	39	43	47	50	52	50	45	32	52	20	
26	41	43	41	47	48	44	46	43	37	29	27	26	25	26	27	27	27	33	35	42	45	47	48	49	38	49	25	
27	50	42	47	46	49	52	51	46	33	31	29	27	26	24	22	21	26	30	33	39	42	39	38	35	37	52	21	
28	38	40	40	37	38	35	32	32	29	24	22	19	18	18	21	25	27	29	31	37	41	42	43	44	32	44	18	
29	40	36	34	36	32	36	40	40	35	25	23	21	19	14	14	20	25	30	35	36	33	29	20	23	29	40	14	
30	28	31	31	32	32	29	31	33	27	23	17	15	14	12	13	13	16	21	23	27	27	33	33	31	25	33	12	
31	35	31	26	30	26	31	36	37	41	48	57	94	94	91	91	87	87	92	93	94	97	98	99	99	67	99	26	
Avg	53	54	54	55	55	54	53	53	50	45	42	42	41	39	40	41	43	47	49	51	54	54	54	55	49	--	--	
Max	90	88	92	91	96	95	97	97	98	98	98	98	95	91	91	87	87	92	93	94	97	98	99	99	--	99	--	
Min	16	18	18	17	15	13	12	15	14	14	9	12	13	12	13	13	13	17	20	17	18	17	18	17	--	--	9	

Appendix B: PM₁₀ and PM_{2.5} Data - Hourly

SAROAD for Resolution, East_Plant
"Component, Channel: Table125, conc_PM10_μg/m³_STP"
Month: Nov 2014

Day	Hour of day																								Avg	Max	Min
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24			
1	14.9	61.7	74.2	68.4	39.9	30.7	32.9	29.5	14.8	16.0	19.5	12.6	9.2	10.4	20.7	25.3	28.6	29.7	26.1	22.7	14.7	12.4	7.9	10.2	26.4	74.2	7.9
2	11.3	13.4	43.6	45.8	52.4	47.9	25.7	32.4	25.7	21.3	30.2	25.7	21.3	15.7	19.1	21.3	20.2	14.5	17.8	31.1	24.4	22.0	19.8	8.8	25.5	52.4	8.8
3	6.6	4.4	3.3	4.4	8.7	8.7	8.7	12.0	12.2	12.2	11.2	6.7	3.4	9.0	13.5	10.1	6.7	7.8	12.2	18.9	16.7	14.4	7.8	6.6	9.4	18.9	3.3
4	7.7	8.8	7.7	6.6	4.4	50.6	24.2	23.1	62.9	45.4	39.0	24.7	10.1	11.3	11.3	6.8	5.7	9.0	7.9	6.7	7.8	10.0	11.1	10.0	17.2	62.9	4.4
5	6.7	3.3	3.3	2.2	1.1	7.7	20.9	11.0	23.2	13.4	26.8	15.7	10.2	6.8	8.0	5.7	5.7	6.8	6.8	7.9	11.2	8.9	8.9	10.0	9.7	26.8	1.1
6	7.8	7.8	8.9	5.5	5.5	6.6	4.4	5.5	6.6	3.3	2.2	3.4	6.8	7.9	5.7	5.7	5.7	5.6	10.1	11.2	8.9	7.8	6.7	5.6	6.5	11.2	2.2
7	3.3	1.1	3.3	6.6	6.6	6.6	7.7	6.6	5.6	5.6	7.9	9.1	8.0	10.3	11.5	9.2	8.0	9.1	12.5	11.3	12.4	11.3	7.9	6.7	7.8	12.5	1.1
8	4.5	4.5	6.7	6.7	5.6	7.8	7.8	5.6	19.2	10.2	10.2	12.6	18.3	6.9	49.5	14.9	24.0	27.3	20.4	19.2	14.6	19.1	20.2	21.3	14.9	49.5	4.5
9	14.5	19.0	20.1	20.1	23.5	23.5	23.4	26.8	21.3	23.7	19.3	12.6	18.4	18.4	11.5	11.6	11.5	10.3	11.5	12.5	12.5	12.5	13.6	9.1	16.7	26.8	9.1
10	6.8	12.4	20.3	16.9	19.1	15.7	16.8	18.0	20.4	6.8	9.1	8.0	6.9	10.4	18.5	20.8	18.4	19.5	17.2	20.6	27.4	19.4	19.4	13.6	15.9	27.4	6.8
11	11.3	10.2	12.4	7.9	4.5	5.6	10.1	12.3	10.1	7.9	4.6	3.4	2.3	5.7	6.9	6.9	9.2	13.7	17.1	14.8	10.2	9.1	6.8	4.5	8.7	17.1	2.3
12	6.8	9.0	10.1	11.2	11.3	10.1	10.1	12.4	13.5	12.4	11.3	11.3	18.2	6.8	9.1	18.2	14.8	15.9	20.3	14.6	12.4	11.2	12.3	10.1	12.2	20.3	6.8
13	8.9	10.0	11.2	12.3	12.3	11.1	12.2	13.4	10.1	11.2	10.1	9.1	9.1	9.1	10.3	9.1	17.0	23.7	24.8	15.8	14.6	13.5	16.8	13.4	12.9	24.8	8.9
14	11.1	7.8	8.9	11.1	12.2	14.4	12.1	11.1	13.4	12.3	12.4	10.2	9.0	11.3	12.4	12.4	18.0	16.9	20.2	19.0	12.3	10.1	6.7	6.7	12.2	20.2	6.7
15	8.9	8.9	10.0	8.9	8.9	8.8	8.8	9.9	17.7	12.3	12.3	13.5	14.6	12.4	12.4	18.1	24.8	20.2	21.3	10.1	13.5	15.7	14.6	16.8	13.5	24.8	8.8
16	13.4	12.3	13.4	11.1	11.1	8.9	8.9	10.0	10.0	22.2	53.3	40.0	48.9	10.0	18.9	22.2	13.2	18.7	39.4	30.5	44.6	40.2	31.5	52.0	24.4	53.3	8.9
17	18.4	51.9	81.1	17.2	5.4	17.3	10.8	12.9	13.0	9.8	8.7	9.9	8.8	3.3	2.2	4.4	6.6	7.7	5.5	9.9	13.1	13.1	12.0	8.7	14.7	81.1	2.2
18	6.5	5.4	3.3	4.3	6.5	6.5	8.7	6.5	3.3	7.7	9.9	8.8	8.9	10.0	7.8	5.6	7.8	8.8	7.7	7.7	4.4	3.3	5.5	3.3	6.6	10.0	3.3
19	5.5	7.7	5.5	6.6	6.6	5.5	7.6	6.5	3.3	7.7	12.2	10.0	7.9	6.8	18.1	6.8	10.1	14.5	13.4	10.0	7.7	8.8	8.8	6.6	8.5	18.1	3.3
20	6.6	6.6	4.4	5.5	5.5	5.5	7.7	7.6	20.9	10.0	13.4	11.2	30.4	13.6	16.9	13.6	14.6	13.4	20.1	18.9	16.6	17.7	11.1	10.0	12.6	30.4	4.4
21	7.7	6.6	6.6	8.8	8.8	8.8	10.0	8.8	8.8	11.1	12.3	10.1	10.1	7.9	5.7	6.8	7.9	20.2	18.9	15.5	11.1	7.8	8.9	7.7	9.9	20.2	5.7
22	7.7	9.9	7.7	9.9	9.8	8.7	6.6	6.6	8.8	5.6	7.8	11.2	14.6	16.9	19.1	18.0	23.5	30.1	32.3	21.1	25.5	16.6	16.6	14.5	14.5	32.3	5.6
23	11.1	10.0	12.2	22.2	18.8	19.9	22.0	20.9	18.8	14.4	22.2	30.0	29.1	23.5	31.4	11.2	11.2	18.9	7.7	17.7	16.5	15.3	17.4	17.4	18.3	31.4	7.7
24	21.8	12.0	9.7	8.6	7.6	4.3	3.3	2.2	5.5	6.6	9.9	8.9	6.7	7.7	7.7	11.1	11.1	17.6	19.7	13.2	27.3	12.0	18.5	22.7	11.5	27.3	2.2
25	13.0	25.9	23.7	18.3	16.1	18.2	16.0	19.3	8.6	19.5	14.2	12.1	11.0	11.1	8.9	6.6	7.7	8.8	8.8	8.7	6.6	5.4	4.4	5.4	12.4	25.9	4.4
26	3.3	3.3	5.4	4.4	4.3	4.4	6.5	9.8	18.8	15.6	12.3	6.8	6.8	8.0	5.7	9.1	14.8	13.6	12.4	11.3	4.5	1.1	5.6	7.8	8.1	18.8	1.1
27	6.7	5.6	2.2	4.5	5.6	6.7	6.7	8.9	22.3	14.5	19.1	12.4	13.6	12.5	11.4	10.3	6.8	7.9	9.0	4.5	4.5	6.7	5.6	5.6	8.9	22.3	2.2
28	6.7	5.6	8.9	7.8	7.8	7.8	5.6	6.7	5.6	9.0	10.2	30.7	12.6	8.1	5.8	4.6	4.6	5.7	5.7	3.4	4.5	5.6	6.8	5.6	7.7	30.7	3.4
29	3.4	2.3	5.6	5.6	6.7	6.7	4.5	5.6	5.6	9.0	9.1	6.9	8.0	5.7	6.9	8.0	8.0	10.2	12.4	12.4	9.0	6.7	18.0	13.4	7.9	18.0	2.3
30	12.3	27.9	11.2	10.1	6.7	6.7	10.0	7.8	5.6	10.1	10.2	9.0	10.2	11.4	10.2	8.0	12.5	29.3	22.5	14.6	11.2	11.1	11.1	12.2	12.2	29.3	5.6
Avg	9.2	12.5	14.8	12.6	11.4	13.1	12.0	12.3	14.5	12.9	15.0	13.2	13.1	10.3	13.2	11.4	12.6	15.2	16.1	14.5	14.0	12.3	12.1	11.5	12.9	--	--
Max	21.8	61.7	81.1	68.4	52.4	50.6	32.9	32.4	62.9	45.4	53.3	40.0	48.9	23.5	49.5	25.3	28.6	30.1	39.4	31.1	44.6	40.2	31.5	52.0	--	81.1	--
Min	3.3	1.1	2.2	2.2	1.1	4.3	3.3	2.2	3.3	3.3	2.2	3.4	2.3	3.3	2.2	4.4	4.6	5.6	5.5	3.4	4.4	1.1	4.4	3.3	--	--	1.1

SAROAD for Resolution, East_Plant
"Component, Channel: Table125, conc_PM10_μg/m³_STP"
Month: Dec 2014

Day	Hour of day																								Avg	Max	Min
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24			
1	14.4	12.1	11.0	7.7	9.9	9.9	9.8	10.9	19.9	13.4	19.0	10.1	18.0	19.1	16.9	7.9	10.1	19.0	23.4	13.4	10.1	8.9	11.1	12.3	13.3	23.4	7.7
2	20.1	6.7	6.7	11.1	14.5	12.3	12.3	12.2	13.4	22.3	13.5	14.6	19.2	18.1	11.3	32.9	11.3	13.5	10.1	6.7	8.9	7.8	9.9	6.6	13.2	32.9	6.6
3	4.4	6.6	7.7	9.9	7.7	8.8	12.2	7.7	8.9	8.9	5.6	5.6	4.5	2.3	4.6	6.8	5.6	2.3	4.5	5.6	5.6	7.9	6.7	6.7	6.6	12.2	2.3
4	5.6	5.6	5.6	4.5	4.5	1.1	0.0	2.2	3.3	1.1	0.0	0.0	2.2	3.3	2.2	4.5	3.3	5.6	8.9	6.7	5.5	4.4	2.2	3.3	3.6	8.9	0.0
5	6.6	4.4	2.2	4.4	6.6	7.7	5.5	2.2	2.2	2.2	6.6	6.7	5.6	7.8	8.9	7.8	6.7	6.7	6.6	5.5	6.6	7.7	5.5	3.3	5.7	8.9	2.2
6	4.4	4.4	2.2	5.5	6.6	5.5	5.5	6.6	--	3.3	3.3	4.4	4.4	8.9	10.0	4.5	3.3	3.3	3.3	7.8	10.0	5.5	2.2	0.0	5.0	10.0	0.0
7	1.1	5.5	5.5	2.2	1.1	4.4	7.7	6.6	4.4	5.6	27.9	12.3	19.1	22.5	18.0	28.1	12.3	9.0	6.7	7.8	10.0	10.0	7.8	6.7	10.1	28.1	1.1
8	6.7	17.8	11.1	11.1	8.9	6.6	6.6	7.7	7.8	7.8	6.7	7.9	10.1	18.0	6.8	6.8	7.9	11.2	9.0	4.5	6.7	10.1	10.0	8.9	9.0	18.0	4.5
9	7.8	6.7	8.9	10.0	7.8	10.0	13.3	13.3	12.3	9.0	10.1	12.5	11.4	25.1	16.0	28.5	15.9	14.7	13.5	13.5	12.3	9.0	9.0	10.1	12.5	28.5	6.7
10	10.0	13.4	13.4	12.3	13.4	16.7	17.8	11.1	13.4	14.6	19.2	15.8	32.9	16.0	18.2	14.8	18.2	20.4	14.6	21.4	17.9	6.7	7.8	10.1	15.4	32.9	6.7
11	10.0	12.2	18.9	10.0	8.9	9.9	14.4	12.1	10.0	17.9	11.2	9.0	7.9	10.2	11.3	12.5	10.2	10.1	12.3	12.2	11.1	10.0	8.9	6.7	11.2	18.9	6.7
12	5.6	5.6	7.8	6.7	5.6	6.7	6.7	6.6	6.7	8.9	18.0	9.0	--	12.5	14.8	19.3	6.8	9.0	9.0	9.0	11.2	12.3	22.2	18.9	10.4	22.2	5.6
13	16.6	10.0	8.9	6.6	7.7	4.4	-2.2	0.0	1.1	-1.1	0.0	0.0	0.0	-1.1	0.0	1.1	1.1	2.2	4.4	6.6	2.2	0.0	2.2	4.4	3.1	16.6	-2.2
14	4.4	4.4	4.3	2.2	3.2	6.5	7.5	6.5	6.5	6.5	4.4	2.2	0.0	0.0	1.1	1.1	3.3	5.5	3.3	3.3	4.3	3.2	4.3	4.3	3.8	7.5	0.0
15	2.2	3.2	4.3	5.4	3.2	2.2	3.2	3.2	4.4	2.2	2.2	2.2	1.1	-1.1	2.2	7.8	5.5	3.3	2.2	4.4	6.6	4.4	3.3	2.2	3.3	7.8	-1.1
16	4.4	4.4	3.3	3.3	3.3	3.3	5.5	7.7	4.4	3.3	2.2	0.0	3.3	7.9	12.3	14.5	13.3	10.0	7.7	9.9	8.8	4.4	6.6	13.2	6.5	14.5	0.0
17	18.6	14.3	17.5	18.5	6.5	9.8	10.9	6.5	3.3	1.1	0.0	2.2	5.4	4.4	3.3	2.2	3.3	4.4	2.2	3.3	4.3	4.3	1.1	1.1	6.2	18.6	0.0
18	3.3	1.1	2.2	4.3	4.3	1.1	1.1	2.2	4.3	6.5	4.4	3.3	4.4	2.2	2.2	3.3	4.4	6.5	3.3	1.1	3.2	5.4	5.4	4.3	3.5	6.5	1.1
19	3.2	0.0	-1.1	3.2	4.3	2.2	2.1	2.1	2.2	--	2.2	2.2	5.5	7.7	4.4	2.2	3.3	3.3	6.5	7.6	5.4	4.3	7.6	8.7	3.9	8.7	-1.1
20	6.5	5.4	6.5	6.5	6.5	4.3	6.5	7.5	4.3	4.4	4.4	5.5	4.4	1.1	4.4	8.9	7.7	6.6	6.6	4.4	4.4	3.3	4.4	6.5	5.5	8.9	1.1
21	5.5	3.3	2.2	1.1	2.2	4.3	3.3	2.2	3.3	4.4	6.6	6.6	3.3	4.4	5.5	5.5	7.7	11.0	16.4	12.0	10.9	9.9	9.8	8.8	6.3	16.4	1.1
22	7.7	8.8	12.0	12.0	12.0	12.0	8.7	8.7	12.0	16.5	9.9	12.2	14.4	14.4	12.2	11.1	14.4	13.3	18.7	11.0	11.0	10.0	8.8	16.5	12.0	18.7	7.7
23	16.5	8.8	12.2	11.1	7.8	7.7	6.6	7.6	12.0	10.9	6.6	6.6	7.7	7.7	3.3	-1.1	2.2	4.4	4.4	4.4	4.3	4.3	2.2	0.0	6.6	16.5	-1.1
24	1.1	7.6	28.1	3.2	1.1	0.0	2.2	3.2	0.0	0.0	3.3	4.4	3.3	4.4	4.5	5.6	5.5	5.5	6.6	4.4	0.0	1.1	1.1	1.1	4.1	28.1	0.0
25	2.2	1.1	2.2	2.2	1.1	2.2	1.1	0.0	1.1	2.2	2.2	6.7	6.7	3.3	4.4	6.7	10.0	17.7	17.6	16.5	20.8	15.3	12.0	9.8	6.9	20.8	0.0
26	9.8	16.2	8.6	8.6	8.6	6.5	4.3	5.4	8.6	4.3	2.2	5.4	5.4	4.4	3.3	2.2	4.3	3.2	1.1	4.3	7.5	6.4	4.3	5.3	5.8	16.2	1.1
27	4.3	3.2	2.1	1.1	2.1	3.2	5.3	6.4	4.3	5.4	65.5	21.6	7.6	7.6	6.5	5.4	6.5	5.4	2.2	3.2	4.3	5.3	4.3	7.4	7.9	65.5	1.1
28	4.3	1.1	4.2	2.1	2.1	1.1	1.1	2.1	3.2	3.2	1.1	1.1	2.2	3.3	5.5	6.6	7.6	9.8	10.8	9.7	7.5	6.5	5.4	5.4	4.5	10.8	1.1
29	1.1	2.2	3.2	1.1	1.1	0.0	0.0	3.2	5.4	6.5	9.8	7.7	3.3	4.4	3.3	4.4	9.9	13.2	15.3	13.0	9.8	8.7	4.4	1.1	5.5	15.3	0.0
30	-2.2	0.0	2.2	0.0	1.1	2.2	5.4	5.4	5.5	6.6	3.3	2.2	3.4	6.7	7.8	5.6	5.6	5.5	3.3	5.5	6.6	8.8	11.0	8.8	4.6	11.0	-2.2
31	7.7	17.6	19.8	15.4	11.0	5.5	8.8	19.6	19.5	22.9	9.9	7.6	1.1	-1.1	2.2	3.2	3.2	1.1	1.1	3.2	2.1	2.1	0.0	-1.1	7.6	22.9	-1.1
Avg	6.9	6.9	7.9	6.6	6.0	5.7	6.2	6.4	6.9	7.4	9.1	6.7	7.3	7.9	7.3	8.7	7.4	8.3	8.2	7.8	7.8	6.7	6.5	6.5	7.2	--	--
Max	20.1	17.8	28.1	18.5	14.5	16.7	17.8	19.6	19.9	22.9	65.5	21.6	32.9	25.1	18.2	32.9	18.2	20.4	23.4	21.4	20.8	15.3	22.2	18.9	--	65.5	--
Min	-2.2	0.0	-1.1	0.0	1.1	0.0	-2.2	0.0	0.0	-1.1	0.0	0.0	0.0	-1.1	0.0	-1.1	1.1	1.1	1.1	1.1	0.0	0.0	0.0	-1.1	--	--	-2.2

-- Indicates Invalid Data

SAROAD for Resolution, East_Plant
"Component, Channel: Table126, conc_PM_{2.5}_μg/m³ Actual"
Month: Oct 2014

Hour of day

Day	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Avg	Max	Min
1	4.0	3.0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	4.0	3.0
2	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
3	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	-1.0	0.0	0.0	2.0	3.0	3.0	1.0	-1.0	2.0	--	3.0	-1.0
4	2.0	2.0	0.0	-3.0	-2.0	0.0	1.0	2.0	2.0	2.0	1.0	-1.0	1.0	1.0	-1.0	-1.0	-2.0	-1.0	0.0	1.0	3.0	0.0	-1.0	2.0	0.3	3.0	-3.0
5	2.0	2.0	1.0	1.0	2.0	2.0	3.0	4.0	4.0	3.0	4.0	3.0	2.0	2.0	0.0	0.0	2.0	2.0	2.0	0.0	3.0	4.0	2.0	2.0	2.2	4.0	0.0
6	-1.0	2.0	5.0	3.0	2.0	1.0	1.0	3.0	5.0	2.0	1.0	0.0	2.0	3.0	2.0	0.0	-1.0	1.0	2.0	3.0	3.0	3.0	2.0	1.0	1.9	5.0	-1.0
7	1.0	1.0	0.0	2.0	3.0	1.0	-1.0	2.0	3.0	2.0	1.0	3.0	4.0	2.0	1.0	1.0	2.0	5.0	6.0	4.0	3.0	4.0	5.0	6.0	2.5	6.0	-1.0
8	4.0	6.0	9.0	6.0	6.0	5.0	2.0	1.0	2.0	4.0	2.0	0.0	0.0	-1.0	2.0	3.0	2.0	2.0	-1.0	1.0	0.0	-3.0	-3.0	-3.0	1.9	9.0	-3.0
9	-3.0	-2.0	-2.0	-4.0	-2.0	-1.0	-3.0	-3.0	-1.0	3.0	5.0	2.0	1.0	2.0	1.0	1.0	4.0	4.0	3.0	2.0	1.0	2.0	1.0	2.0	0.5	5.0	-4.0
10	0.0	0.0	6.0	5.0	3.0	4.0	4.0	1.0	2.0	2.0	2.0	4.0	3.0	3.0	3.0	3.0	3.0	3.0	2.0	5.0	7.0	4.0	3.0	4.0	3.2	7.0	0.0
11	3.0	2.0	3.0	2.0	2.0	3.0	5.0	6.0	4.0	4.0	6.0	5.0	5.0	5.0	2.0	3.0	5.0	3.0	4.0	6.0	6.0	6.0	4.0	5.0	4.1	6.0	2.0
12	6.0	5.0	4.0	3.0	4.0	7.0	7.0	5.0	5.0	6.0	6.0	5.0	3.0	2.0	2.0	3.0	2.0	2.0	4.0	3.0	1.0	2.0	3.0	0.0	3.8	7.0	0.0
13	0.0	0.0	3.0	6.0	4.0	3.0	2.0	3.0	4.0	3.0	1.0	-2.0	-2.0	-2.0	-2.0	-3.0	-3.0	0.0	1.0	2.0	3.0	1.0	0.0	0.0	0.9	6.0	-3.0
14	0.0	-1.0	-1.0	1.0	3.0	1.0	-2.0	-1.0	3.0	3.0	3.0	1.0	-2.0	-2.0	1.0	2.0	-1.0	-1.0	-1.0	-2.0	-1.0	0.0	2.0	1.0	0.3	3.0	-2.0
15	-1.0	-1.0	0.0	-1.0	-1.0	1.0	3.0	0.0	-1.0	1.0	2.0	1.0	1.0	2.0	2.0	1.0	6.0	8.0	3.0	3.0	2.0	2.0	1.0	1.0	1.5	8.0	-1.0
16	2.0	2.0	1.0	2.0	3.0	2.0	1.0	3.0	4.0	3.0	1.0	2.0	2.0	2.0	1.0	-1.0	0.0	2.0	4.0	4.0	0.0	1.0	2.0	1.0	1.8	4.0	-1.0
17	2.0	1.0	2.0	2.0	0.0	1.0	2.0	4.0	7.0	6.0	3.0	2.0	0.0	2.0	4.0	1.0	1.0	2.0	2.0	3.0	4.0	1.0	1.0	2.0	2.3	7.0	0.0
18	0.0	-1.0	3.0	4.0	2.0	-1.0	0.0	3.0	3.0	3.0	2.0	1.0	0.0	-1.0	-1.0	1.0	2.0	2.0	1.0	2.0	2.0	2.0	3.0	1.0	1.4	4.0	-1.0
19	0.0	2.0	1.0	2.0	6.0	5.0	5.0	9.0	8.0	8.0	8.0	6.0	6.0	6.0	5.0	6.0	4.0	2.0	2.0	-1.0	-1.0	2.0	3.0	1.0	4.0	9.0	-1.0
20	0.0	0.0	-1.0	0.0	2.0	2.0	1.0	2.0	1.0	0.0	-1.0	0.0	-1.0	-3.0	-1.0	--	--	6.0	4.0	0.0	1.0	0.0	-1.0	0.0	0.5	6.0	-3.0
21	2.0	1.0	0.0	0.0	1.0	1.0	2.0	5.0	4.0	-1.0	-1.0	2.0	2.0	0.0	-2.0	0.0	1.0	1.0	3.0	2.0	1.0	1.0	1.0	1.0	1.1	5.0	-2.0
22	1.0	1.0	1.0	2.0	1.0	1.0	2.0	3.0	3.0	3.0	2.0	0.0	-1.0	1.0	1.0	-1.0	-2.0	2.0	4.0	0.0	1.0	3.0	2.0	1.0	1.3	4.0	-2.0
23	3.0	2.0	0.0	1.0	2.0	2.0	2.0	2.0	3.0	2.0	--	1.0	3.0	1.0	-1.0	2.0	3.0	2.0	4.0	6.0	5.0	3.0	3.0	4.0	2.4	6.0	-1.0
24	3.0	1.0	2.0	1.0	2.0	2.0	1.0	4.0	3.0	2.0	2.0	0.0	-3.0	-1.0	1.0	1.0	1.0	1.0	1.0	2.0	2.0	-1.0	0.0	2.0	1.2	4.0	-3.0
25	0.0	-1.0	0.0	1.0	1.0	1.0	1.0	2.0	1.0	1.0	4.0	3.0	1.0	1.0	5.0	5.0	2.0	4.0	5.0	5.0	5.0	5.0	6.0	4.0	2.6	6.0	-1.0
26	4.0	4.0	5.0	4.0	4.0	6.0	6.0	6.0	7.0	7.0	5.0	4.0	7.0	5.0	2.0	2.0	1.0	4.0	4.0	3.0	4.0	6.0	5.0	3.0	4.5	7.0	1.0
27	5.0	4.0	4.0	4.0	2.0	3.0	4.0	4.0	3.0	2.0	5.0	5.0	4.0	4.0	2.0	1.0	4.0	3.0	4.0	4.0	4.0	2.0	2.0	4.0	3.5	5.0	1.0
28	3.0	5.0	6.0	4.0	4.0	2.0	1.0	4.0	5.0	2.0	0.0	0.0	4.0	5.0	1.0	1.0	3.0	6.0	6.0	6.0	6.0	4.0	3.0	1.0	3.4	6.0	0.0
29	1.0	1.0	0.0	1.0	2.0	2.0	2.0	5.0	5.0	3.0	2.0	2.0	1.0	1.0	1.0	0.0	0.0	1.0	1.0	0.0	-1.0	0.0	0.0	0.0	1.3	5.0	-1.0
30	0.0	2.0	4.0	2.0	2.0	1.0	-1.0	1.0	2.0	0.0	-1.0	2.0	2.0	-1.0	-1.0	1.0	4.0	2.0	1.0	2.0	1.0	0.0	0.0	0.0	1.0	4.0	-1.0
31	0.0	2.0	3.0	3.0	3.0	1.0	2.0	3.0	4.0	3.0	0.0	1.0	3.0	5.0	5.0	5.0	7.0	6.0	6.0	6.0	8.0	8.0	7.0	6.0	4.0	8.0	0.0
Avg	1.5	1.6	2.1	1.9	2.2	2.1	1.9	3.0	3.4	2.8	2.4	1.9	1.7	1.6	1.3	1.3	1.8	2.6	2.7	2.6	2.6	2.2	1.9	1.9	2.1	--	--
Max	6.0	6.0	9.0	6.0	6.0	7.0	7.0	9.0	8.0	8.0	8.0	6.0	7.0	6.0	5.0	6.0	7.0	8.0	6.0	6.0	8.0	8.0	7.0	6.0	--	9.0	--
Min	-3.0	-2.0	-2.0	-4.0	-2.0	-1.0	-3.0	-3.0	-1.0	-1.0	-1.0	-2.0	-3.0	-3.0	-2.0	-3.0	-3.0	-1.0	-1.0	-2.0	-1.0	-3.0	-3.0	-3.0	--	--	-4.0

-- Indicates Invalid Data

SAROAD for Resolution, East_Plant
"Component, Channel: Table126, conc_PM_{2.5}_μg/m³ Actual"
Month: Nov 2014

Hour of day

Day	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Avg	Max	Min
1	4.0	7.0	11.0	11.0	10.0	8.0	5.0	6.0	7.0	6.0	5.0	6.0	4.0	3.0	7.0	6.0	4.0	2.0	1.0	2.0	3.0	3.0	0.0	-1.0	5.0	11.0	-1.0
2	0.0	1.0	5.0	9.0	7.0	5.0	3.0	4.0	7.0	5.0	3.0	5.0	4.0	0.0	1.0	0.0	-1.0	1.0	1.0	1.0	1.0	2.0	3.0	2.0	2.9	9.0	-1.0
3	0.0	0.0	0.0	0.0	1.0	3.0	2.0	2.0	2.0	0.0	0.0	-3.0	-2.0	1.0	2.0	2.0	0.0	0.0	1.0	2.0	3.0	2.0	3.0	2.0	1.0	3.0	-3.0
4	0.0	-1.0	-2.0	1.0	0.0	1.0	2.0	2.0	4.0	3.0	2.0	3.0	-2.0	-4.0	-1.0	1.0	0.0	0.0	0.0	1.0	0.0	1.0	3.0	0.0	0.6	4.0	-4.0
5	0.0	0.0	0.0	1.0	4.0	1.0	-1.0	0.0	2.0	3.0	5.0	10.0	6.0	-1.0	2.0	2.0	2.0	1.0	4.0	3.0	1.0	1.0	1.0	2.0	2.0	10.0	-1.0
6	3.0	2.0	0.0	-1.0	0.0	1.0	1.0	2.0	2.0	1.0	-2.0	-3.0	-3.0	-2.0	0.0	0.0	-3.0	1.0	2.0	0.0	-1.0	2.0	4.0	1.0	0.3	4.0	-3.0
7	0.0	2.0	1.0	-1.0	1.0	0.0	1.0	2.0	2.0	2.0	0.0	-1.0	0.0	0.0	0.0	1.0	1.0	-1.0	1.0	2.0	4.0	4.0	2.0	0.0	1.0	4.0	-1.0
8	2.0	2.0	1.0	2.0	2.0	3.0	4.0	2.0	1.0	1.0	-1.0	-1.0	0.0	0.0	-3.0	-3.0	5.0	7.0	1.0	0.0	0.0	1.0	3.0	5.0	1.4	7.0	-3.0
9	2.0	0.0	0.0	1.0	3.0	4.0	1.0	3.0	4.0	0.0	1.0	-1.0	-1.0	0.0	-1.0	1.0	1.0	0.0	1.0	1.0	2.0	0.0	0.0	3.0	1.0	4.0	-1.0
10	2.0	2.0	2.0	1.0	0.0	0.0	2.0	3.0	1.0	-1.0	0.0	1.0	1.0	4.0	3.0	1.0	1.0	2.0	4.0	3.0	3.0	2.0	0.0	1.0	1.6	4.0	-1.0
11	2.0	0.0	-1.0	0.0	0.0	2.0	4.0	3.0	2.0	3.0	2.0	0.0	0.0	0.0	-2.0	-2.0	-1.0	0.0	1.0	2.0	2.0	2.0	2.0	2.0	1.0	4.0	-2.0
12	2.0	3.0	2.0	0.0	1.0	4.0	3.0	2.0	4.0	4.0	0.0	-1.0	3.0	3.0	1.0	2.0	2.0	2.0	0.0	0.0	1.0	3.0	3.0	0.0	1.8	4.0	-1.0
13	1.0	1.0	-1.0	-2.0	-1.0	3.0	3.0	0.0	1.0	3.0	1.0	2.0	1.0	0.0	3.0	1.0	-1.0	4.0	4.0	4.0	3.0	2.0	4.0	3.0	1.6	4.0	-2.0
14	2.0	1.0	2.0	3.0	3.0	2.0	1.0	2.0	4.0	2.0	0.0	2.0	1.0	2.0	3.0	2.0	3.0	2.0	2.0	3.0	2.0	0.0	2.0	5.0	2.1	5.0	0.0
15	3.0	3.0	3.0	3.0	4.0	4.0	4.0	3.0	5.0	4.0	4.0	3.0	1.0	4.0	4.0	1.0	-1.0	2.0	2.0	3.0	2.0	1.0	2.0	3.0	2.8	5.0	-1.0
16	4.0	6.0	2.0	0.0	1.0	0.0	2.0	5.0	5.0	2.0	2.0	2.0	-1.0	0.0	0.0	2.0	4.0	1.0	-2.0	0.0	1.0	3.0	9.0	13.0	2.5	13.0	-2.0
17	11.0	7.0	10.0	11.0	4.0	1.0	2.0	4.0	1.0	-2.0	0.0	2.0	2.0	-2.0	-1.0	2.0	1.0	1.0	3.0	1.0	0.0	1.0	0.0	0.0	2.5	11.0	-2.0
18	1.0	1.0	2.0	3.0	2.0	1.0	2.0	2.0	3.0	3.0	1.0	0.0	1.0	3.0	5.0	3.0	0.0	2.0	3.0	1.0	1.0	0.0	0.0	-1.0	1.8	5.0	-1.0
19	-3.0	-2.0	1.0	1.0	3.0	4.0	1.0	1.0	2.0	2.0	-2.0	-2.0	-1.0	-1.0	2.0	2.0	0.0	0.0	1.0	1.0	0.0	0.0	2.0	3.0	0.6	4.0	-3.0
20	1.0	2.0	3.0	2.0	0.0	0.0	-1.0	0.0	2.0	1.0	1.0	-1.0	-1.0	2.0	2.0	2.0	1.0	0.0	3.0	5.0	3.0	3.0	4.0	3.0	1.5	5.0	-1.0
21	1.0	0.0	2.0	1.0	0.0	2.0	2.0	1.0	0.0	0.0	1.0	1.0	1.0	3.0	2.0	0.0	0.0	2.0	4.0	5.0	3.0	0.0	1.0	4.0	1.5	5.0	0.0
22	5.0	5.0	5.0	5.0	5.0	4.0	3.0	3.0	2.0	1.0	2.0	3.0	2.0	2.0	1.0	1.0	2.0	2.0	2.0	2.0	4.0	4.0	2.0	1.0	2.8	5.0	1.0
23	1.0	1.0	1.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	9.0	11.0	11.0	8.0	6.0	2.0	-1.0	-2.0	-2.0	0.0	0.0	0.0	0.0	2.0	3.1	11.0	-2.0
24	1.0	1.0	1.0	-1.0	-2.0	0.0	0.0	2.0	3.0	3.0	2.0	-3.0	-4.0	-3.0	-3.0	1.0	3.0	-1.0	3.0	3.0	0.0	2.0	0.0	-1.0	0.3	3.0	-4.0
25	1.0	3.0	3.0	1.0	0.0	0.0	0.0	-1.0	0.0	0.0	2.0	0.0	-2.0	-2.0	-2.0	0.0	0.0	0.0	0.0	0.0	1.0	2.0	1.0	-1.0	0.3	3.0	-2.0
26	-1.0	1.0	1.0	0.0	-2.0	-1.0	-2.0	0.0	2.0	3.0	2.0	-1.0	0.0	0.0	-1.0	-1.0	-1.0	-1.0	-1.0	-2.0	-1.0	-2.0	-1.0	0.0	-0.4	3.0	-2.0
27	-2.0	-2.0	-2.0	-1.0	0.0	1.0	-1.0	0.0	3.0	1.0	-1.0	-3.0	-1.0	1.0	-3.0	-4.0	-4.0	-3.0	-1.0	-1.0	0.0	0.0	-1.0	-1.0	-1.0	3.0	-4.0
28	-1.0	0.0	-1.0	0.0	1.0	2.0	1.0	-1.0	2.0	3.0	1.0	0.0	-1.0	-2.0	-1.0	-1.0	0.0	2.0	2.0	0.0	-3.0	0.0	2.0	1.0	0.3	3.0	-3.0
29	0.0	0.0	0.0	1.0	1.0	0.0	1.0	1.0	1.0	0.0	0.0	-2.0	-2.0	-1.0	-1.0	1.0	2.0	2.0	2.0	2.0	2.0	1.0	1.0	1.0	0.5	2.0	-2.0
30	1.0	2.0	3.0	2.0	0.0	1.0	1.0	4.0	3.0	1.0	2.0	2.0	1.0	0.0	2.0	2.0	1.0	3.0	1.0	-1.0	0.0	3.0	4.0	3.0	1.7	4.0	-1.0
Avg	1.4	1.6	1.8	1.9	1.7	2.0	1.7	2.0	2.7	1.9	1.5	1.1	0.6	0.5	0.8	1.0	0.8	1.0	1.4	1.5	1.2	1.5	1.9	1.8	1.5	--	--
Max	11.0	7.0	11.0	11.0	10.0	8.0	5.0	6.0	7.0	6.0	9.0	11.0	11.0	8.0	7.0	6.0	5.0	7.0	4.0	5.0	4.0	4.0	9.0	13.0	--	13.0	--
Min	-3.0	-2.0	-2.0	-2.0	-2.0	-1.0	-2.0	-1.0	0.0	-2.0	-2.0	-3.0	-4.0	-4.0	-3.0	-4.0	-4.0	-3.0	-2.0	-2.0	-3.0	-2.0	-1.0	-1.0	--	--	-4.0

SAROAD for Resolution, East_Plant
"Component, Channel: Table126, conc_PM_{2.5}_µg/m³ Actual"
Month: Dec 2014

Hour of day

Day	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Avg	Max	Min
1	3.0	2.0	2.0	1.0	2.0	2.0	1.0	2.0	2.0	1.0	0.0	0.0	1.0	3.0	3.0	2.0	2.0	1.0	3.0	2.0	0.0	1.0	2.0	2.0	1.7	3.0	0.0
2	0.0	1.0	3.0	3.0	1.0	0.0	-1.0	2.0	3.0	2.0	1.0	2.0	2.0	1.0	0.0	0.0	2.0	3.0	1.0	2.0	0.0	0.0	1.0	3.0	1.3	3.0	-1.0
3	3.0	1.0	1.0	1.0	2.0	3.0	4.0	2.0	2.0	1.0	-1.0	0.0	2.0	2.0	2.0	2.0	1.0	0.0	0.0	2.0	3.0	0.0	-1.0	1.0	1.4	4.0	-1.0
4	2.0	0.0	-2.0	-1.0	-1.0	0.0	2.0	2.0	1.0	-1.0	-3.0	-2.0	-2.0	-2.0	-1.0	-1.0	-1.0	1.0	2.0	4.0	3.0	2.0	3.0	2.0	0.3	4.0	-3.0
5	3.0	5.0	5.0	3.0	1.0	4.0	3.0	0.0	2.0	3.0	1.0	-1.0	3.0	5.0	3.0	1.0	1.0	1.0	3.0	1.0	1.0	2.0	2.0	5.0	2.4	5.0	-1.0
6	5.0	4.0	4.0	4.0	4.0	4.0	1.0	0.0	--	1.0	2.0	2.0	1.0	2.0	0.0	2.0	2.0	1.0	2.0	1.0	-1.0	1.0	2.0	2.0	2.0	5.0	-1.0
7	1.0	0.0	1.0	0.0	-2.0	1.0	2.0	2.0	2.0	0.0	1.0	2.0	1.0	0.0	1.0	1.0	-2.0	-1.0	2.0	1.0	2.0	3.0	2.0	3.0	1.0	3.0	-2.0
8	2.0	4.0	4.0	3.0	4.0	2.0	1.0	2.0	4.0	3.0	0.0	2.0	1.0	-1.0	2.0	2.0	0.0	1.0	1.0	0.0	1.0	1.0	2.0	3.0	1.8	4.0	-1.0
9	3.0	2.0	1.0	2.0	1.0	0.0	2.0	3.0	3.0	2.0	-1.0	-1.0	1.0	-1.0	1.0	4.0	5.0	4.0	5.0	5.0	4.0	6.0	5.0	3.0	2.5	6.0	-1.0
10	4.0	3.0	4.0	6.0	6.0	6.0	5.0	4.0	5.0	6.0	5.0	8.0	8.0	6.0	5.0	4.0	3.0	3.0	7.0	10.0	10.0	8.0	6.0	5.0	5.7	10.0	3.0
11	6.0	6.0	7.0	6.0	5.0	6.0	6.0	6.0	5.0	4.0	6.0	4.0	1.0	2.0	4.0	4.0	3.0	5.0	6.0	5.0	5.0	5.0	6.0	6.0	5.0	7.0	1.0
12	4.0	4.0	5.0	4.0	3.0	4.0	4.0	5.0	5.0	5.0	4.0	2.0	--	1.0	2.0	5.0	5.0	3.0	3.0	3.0	2.0	1.0	3.0	4.0	3.5	5.0	1.0
13	5.0	7.0	6.0	3.0	3.0	1.0	1.0	3.0	1.0	1.0	1.0	-1.0	-1.0	0.0	0.0	1.0	4.0	3.0	1.0	1.0	1.0	0.0	-1.0	2.0	1.8	7.0	-1.0
14	3.0	1.0	-1.0	-1.0	1.0	2.0	3.0	5.0	5.0	2.0	0.0	2.0	5.0	2.0	1.0	4.0	4.0	5.0	5.0	3.0	3.0	1.0	0.0	1.0	2.3	5.0	-1.0
15	1.0	1.0	2.0	3.0	3.0	2.0	0.0	0.0	0.0	0.0	2.0	4.0	3.0	1.0	2.0	1.0	-1.0	1.0	1.0	2.0	3.0	2.0	0.0	1.0	1.4	4.0	-1.0
16	3.0	1.0	-1.0	1.0	3.0	2.0	1.0	0.0	1.0	2.0	0.0	1.0	1.0	-1.0	-1.0	-1.0	2.0	3.0	4.0	5.0	3.0	0.0	3.0	8.0	1.7	8.0	-1.0
17	11.0	9.0	10.0	15.0	10.0	6.0	5.0	3.0	1.0	1.0	0.0	2.0	1.0	0.0	1.0	1.0	2.0	1.0	0.0	2.0	3.0	2.0	2.0	1.0	3.7	15.0	0.0
18	0.0	1.0	1.0	-1.0	1.0	3.0	0.0	-2.0	-1.0	1.0	3.0	3.0	1.0	1.0	2.0	1.0	-1.0	0.0	1.0	2.0	3.0	2.0	1.0	1.0	1.0	3.0	-2.0
19	1.0	1.0	1.0	1.0	0.0	1.0	3.0	3.0	4.0	--	3.0	-1.0	-2.0	-2.0	-3.0	-3.0	-1.0	2.0	4.0	2.0	-1.0	1.0	3.0	3.0	0.9	4.0	-3.0
20	4.0	3.0	4.0	2.0	1.0	0.0	1.0	0.0	0.0	1.0	-1.0	0.0	0.0	-2.0	-1.0	0.0	1.0	1.0	4.0	4.0	3.0	1.0	-2.0	0.0	1.0	4.0	-2.0
21	2.0	1.0	0.0	0.0	2.0	2.0	2.0	1.0	1.0	3.0	3.0	2.0	1.0	5.0	6.0	2.0	5.0	7.0	7.0	8.0	8.0	8.0	7.0	7.0	3.8	8.0	0.0
22	7.0	7.0	9.0	8.0	9.0	11.0	8.0	9.0	13.0	12.0	10.0	11.0	10.0	7.0	7.0	9.0	9.0	7.0	9.0	11.0	10.0	7.0	6.0	9.0	9.0	13.0	6.0
23	11.0	11.0	7.0	4.0	1.0	-1.0	2.0	2.0	2.0	1.0	1.0	1.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	0.0	-2.0	-4.0	-2.0	-2.0	-3.0	0.7	11.0	-4.0
24	-2.0	-1.0	-1.0	-1.0	-1.0	0.0	0.0	-1.0	-1.0	-2.0	-1.0	-1.0	-1.0	-2.0	-3.0	-2.0	1.0	1.0	-1.0	1.0	1.0	0.0	0.0	-2.0	-0.8	1.0	-3.0
25	-1.0	-1.0	0.0	1.0	-2.0	-2.0	0.0	0.0	1.0	0.0	2.0	3.0	1.0	1.0	3.0	4.0	5.0	5.0	4.0	6.0	6.0	3.0	2.0	2.0	1.8	6.0	-2.0
26	1.0	0.0	0.0	0.0	0.0	0.0	1.0	2.0	1.0	-1.0	-1.0	-2.0	-1.0	0.0	-2.0	-2.0	-2.0	-1.0	0.0	2.0	3.0	2.0	1.0	2.0	0.1	3.0	-2.0
27	2.0	0.0	1.0	1.0	0.0	1.0	0.0	1.0	3.0	2.0	1.0	-1.0	-1.0	0.0	1.0	1.0	1.0	2.0	3.0	2.0	3.0	0.0	-1.0	1.0	1.0	3.0	-1.0
28	0.0	0.0	1.0	2.0	1.0	1.0	2.0	3.0	3.0	2.0	2.0	2.0	2.0	1.0	0.0	-2.0	0.0	1.0	0.0	0.0	0.0	2.0	0.0	-1.0	0.9	3.0	-2.0
29	1.0	2.0	0.0	0.0	1.0	1.0	-2.0	-1.0	2.0	1.0	3.0	2.0	1.0	-1.0	-3.0	-2.0	2.0	3.0	4.0	4.0	3.0	3.0	3.0	2.0	1.2	4.0	-3.0
30	1.0	0.0	1.0	0.0	0.0	1.0	2.0	4.0	3.0	2.0	-1.0	0.0	2.0	1.0	1.0	2.0	1.0	0.0	1.0	1.0	3.0	2.0	2.0	4.0	1.4	4.0	-1.0
31	5.0	10.0	13.0	9.0	5.0	4.0	2.0	2.0	5.0	5.0	3.0	1.0	0.0	0.0	1.0	1.0	1.0	2.0	0.0	0.0	0.0	-2.0	-2.0	0.0	2.7	13.0	-2.0
Avg	2.9	2.7	2.8	2.6	2.1	2.2	2.0	2.1	2.6	2.0	1.5	1.5	1.3	0.9	1.0	1.3	1.7	2.0	2.7	2.9	2.6	2.0	1.8	2.5	2.1	--	--
Max	11.0	11.0	13.0	15.0	10.0	11.0	8.0	9.0	13.0	12.0	10.0	11.0	10.0	7.0	7.0	9.0	9.0	7.0	9.0	11.0	10.0	8.0	7.0	9.0	--	15.0	--
Min	-2.0	-1.0	-2.0	-1.0	-2.0	-2.0	-2.0	-2.0	-1.0	-2.0	-3.0	-2.0	-2.0	-2.0	-3.0	-3.0	-2.0	-2.0	-1.0	-2.0	-4.0	-2.0	-3.0	--	--	--	-4.0

-- Indicates Invalid Data

SAROAD for Resolution, West_Plant
"Component, Channel: Table125, conc_PM10_μg/m³ STP"
Month: Oct 2014

Hour of day																												
Day	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Avg	Max	Min	
1	8.8	5.5	3.3	6.6	8.8	5.5	20.8	2.2	4.4	7.8	10.1	12.4	20.3	16.9	50.8	10.2	7.9	7.9	19.0	14.5	22.1	16.6	9.9	8.8	12.5	50.8	2.2	
2	8.8	8.8	6.6	6.6	9.9	8.7	9.9	15.3	14.4	8.9	6.7	5.6	4.5	7.9	6.8	4.5	6.8	9.0	7.8	10.0	10.0	3.3	1.1	1.1	7.6	15.3	1.1	
3	2.2	2.2	0.0	-3.3	-2.2	-1.1	23.0	23.0	12.2	6.7	2.2	3.4	4.5	5.7	3.4	1.1	1.1	3.4	3.4	0.0	-1.1	3.4	6.7	5.6	4.4	23.0	-3.3	
4	6.7	3.3	1.1	-1.1	0.0	1.1	16.6	18.9	6.7	3.4	3.4	6.8	5.7	6.9	8.0	4.6	6.9	6.8	5.6	6.7	30.1	14.5	10.0	5.5	7.4	30.1	-1.1	
5	8.9	8.8	6.6	11.0	13.2	17.6	16.5	12.1	10.0	7.8	9.0	9.0	7.9	6.8	10.2	10.2	11.3	9.0	40.4	6.7	11.1	34.4	6.6	6.6	12.2	40.4	6.6	
6	5.5	3.3	3.3	7.7	23.1	38.4	67.9	30.9	12.2	11.2	12.3	18.0	16.9	13.6	20.3	11.3	9.0	9.0	23.5	20.0	21.1	17.7	26.5	13.3	18.2	67.9	3.3	
7	11.0	24.3	6.6	6.6	5.5	4.4	60.4	16.5	11.1	7.8	7.8	10.1	9.0	10.2	9.0	7.9	12.4	15.7	24.6	21.2	20.0	23.3	29.9	34.3	16.2	60.4	4.4	
8	38.7	34.3	34.2	28.7	22.0	12.1	10.9	9.9	4.4	2.2	2.2	2.2	0.0	0.0	3.3	1.1	2.2	3.3	4.4	5.5	5.4	3.3	1.1	1.1	9.7	38.7	0.0	
9	0.0	0.0	2.2	4.4	5.4	6.5	7.6	7.6	5.4	6.5	9.8	8.7	8.7	7.7	2.2	0.0	0.0	1.1	4.4	2.2	3.3	4.4	4.4	7.6	4.6	9.8	0.0	
10	7.6	7.6	7.6	7.6	7.6	6.5	5.4	7.6	7.7	5.5	6.6	5.5	3.3	3.3	6.7	11.1	10.0	10.0	11.0	12.1	13.2	14.2	14.2	10.9	8.5	14.2	3.3	
11	10.9	8.7	8.8	8.8	8.8	9.8	8.7	8.7	8.8	6.6	8.9	12.3	9.0	9.0	11.2	18.0	13.5	21.3	14.5	15.5	18.8	13.2	14.3	13.2	11.7	21.3	6.6	
12	11.0	12.1	11.0	9.9	11.0	16.4	24.0	21.9	12.1	14.4	15.6	17.9	11.2	12.4	24.8	16.9	20.3	39.3	58.1	39.0	18.8	13.3	26.5	48.6	21.1	58.1	9.9	
13	25.4	19.8	38.5	31.9	18.7	12.0	21.9	6.6	8.8	12.1	12.1	11.1	5.6	2.2	6.7	6.7	5.6	6.7	7.7	8.8	8.8	6.6	1.1	0.0	11.9	38.5	0.0	
14	1.1	3.3	5.5	3.3	2.2	4.4	7.6	8.7	5.5	3.3	4.5	5.6	4.5	6.8	6.8	2.3	-3.4	-2.3	2.2	1.1	3.4	6.7	7.8	10.0	4.2	10.0	-3.4	
15	6.7	5.6	5.6	5.6	7.8	5.5	25.5	11.1	53.3	7.8	--	--	--	--	3.4	6.8	15.8	14.6	19.0	8.9	11.1	12.2	10.0	7.7	12.2	53.3	3.4	
16	7.7	7.7	5.5	5.5	16.5	7.7	36.1	12.1	19.9	17.8	13.5	7.9	3.4	6.8	13.6	12.4	9.0	12.3	22.3	16.7	23.2	31.9	19.8	16.5	14.4	36.1	3.4	
17	14.3	13.2	11.0	6.6	--	15.4	15.3	18.6	8.8	9.9	23.1	13.2	11.1	11.2	6.8	1.1	0.0	16.8	31.1	13.3	12.2	11.1	7.7	4.4	12.0	31.1	0.0	
18	2.2	3.3	2.2	2.2	2.2	1.1	8.8	8.8	6.6	6.7	6.8	4.5	-1.1	4.6	8.0	5.7	7.9	24.7	29.1	24.5	13.4	3.3	1.1	8.9	7.7	29.1	-1.1	
19	6.7	4.4	5.6	11.1	15.6	22.1	22.0	29.8	31.0	23.5	24.7	29.3	18.1	27.0	15.7	13.3	24.0	6.5	5.4	4.4	1.1	-1.1	1.1	3.3	14.4	31.0	-1.1	
20	3.3	1.1	3.3	3.3	1.1	3.3	6.5	5.5	3.3	1.1	--	--	--	--	6.7	4.5	2.3	4.5	4.5	4.4	5.5	2.2	-1.1	-1.1	3.2	6.7	-1.1	
21	2.2	2.2	2.2	2.2	0.0	2.2	4.4	2.2	0.0	2.2	2.2	3.3	2.2	1.1	0.0	-1.1	0.0	1.1	2.2	4.4	6.6	8.8	8.8	6.6	2.8	8.8	-1.1	
22	3.3	1.1	2.2	4.4	4.4	2.2	4.4	6.6	5.5	6.7	5.6	4.5	3.4	2.3	5.6	6.8	7.9	5.6	5.6	5.5	4.4	7.7	7.7	4.4	4.9	7.9	1.1	
23	5.5	5.5	4.4	2.2	1.1	1.1	4.4	8.8	6.6	4.4	7.8	9.0	6.8	1.1	1.1	3.4	2.3	6.7	18.9	8.9	7.7	6.6	4.4	5.5	5.6	18.9	1.1	
24	4.4	2.2	5.5	4.4	2.2	2.2	1.1	4.4	6.7	6.7	9.0	6.8	6.8	5.7	4.5	4.5	2.3	6.8	10.1	7.8	8.9	10.0	9.9	5.5	5.8	10.1	1.1	
25	5.5	6.7	6.7	6.6	5.5	7.7	17.6	17.7	7.8	6.7	3.4	3.4	5.7	6.8	4.5	6.8	8.0	9.0	27.0	21.2	16.8	17.9	22.3	17.8	10.8	27.0	3.4	
26	12.2	14.4	12.2	12.1	9.9	9.9	18.7	19.8	12.2	12.2	11.2	12.4	14.6	13.5	12.4	20.3	13.5	10.1	23.4	15.6	32.2	18.9	18.8	19.9	15.4	32.2	9.9	
27	16.6	18.7	12.1	11.0	11.0	25.2	30.6	19.7	15.4	10.0	8.9	11.2	17.9	11.2	22.4	16.8	11.2	10.0	19.9	17.6	23.1	17.5	17.5	14.2	16.2	30.6	8.9	
28	14.2	17.4	17.4	18.5	14.1	17.4	20.6	21.7	15.3	14.3	10.0	7.8	11.2	11.2	10.1	12.3	12.3	20.0	17.7	27.4	13.1	27.3	14.2	14.2	15.8	27.4	7.8	
29	15.2	10.9	9.8	25.0	18.4	18.5	17.4	17.4	8.8	6.6	7.8	6.7	3.4	6.8	10.1	11.3	7.9	6.7	7.8	6.6	6.6	6.6	2.2	3.3	10.1	25.0	2.2	
30	8.8	7.7	5.5	6.6	5.5	7.7	7.7	7.7	8.9	8.9	7.8	3.4	5.7	5.7	1.1	2.3	4.5	5.6	6.7	5.6	6.7	6.7	6.7	8.9	6.4	8.9	1.1	
31	6.7	5.6	8.9	17.8	10.0	25.5	24.4	29.9	22.2	34.5	63.7	37.1	29.4	24.9	29.5	24.9	35.1	37.2	30.4	24.7	26.9	17.9	19.0	17.8	25.2	63.7	5.6	
Avg	9.1	8.7	8.2	8.8	8.6	10.2	18.3	13.9	11.5	9.2	10.9	10.0	8.6	8.6	10.5	8.3	8.6	10.9	16.4	12.3	13.0	12.3	10.7	10.5	10.7	--	--	
Max	38.7	34.3	38.5	31.9	23.1	38.4	67.9	30.9	53.3	34.5	63.7	37.1	29.4	27.0	50.8	24.9	35.1	39.3	58.1	39.0	32.2	34.4	29.9	48.6	--	67.9	--	
Min	0.0	0.0	0.0	-3.3	-2.2	-1.1	1.1	2.2	0.0	1.1	2.2	2.2	-1.1	0.0	0.0	-1.1	-3.4	-2.3	2.2	0.0	-1.1	-1.1	-1.1	-1.1	--	--	-3.4	

-- Indicates Invalid Data

SAROAD for Resolution, West_Plant
"Component, Channel: Table125, conc_PM10_μg/m³ STP"
Month: Nov 2014

Hour of day																												
Day	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Avg	Max	Min	
1	14.4	36.5	45.3	43.0	38.5	37.3	37.2	--	--	--	--	--	--	--	--	--	--	--	26.4	27.5	19.7	12.0	10.9	7.7	--	45.3	7.7	
2	5.5	28.1	32.4	34.6	50.7	39.9	40.9	44.2	41.1	33.6	38.9	22.8	23.8	13.1	10.9	17.4	20.6	11.9	29.1	21.4	23.5	10.7	7.5	6.4	25.4	50.7	5.5	
3	8.5	6.4	2.1	2.1	5.3	9.5	11.6	13.7	23.5	10.7	8.6	4.3	8.7	14.1	20.7	8.7	7.6	6.5	8.6	10.7	11.7	16.0	7.5	8.5	9.8	23.5	2.1	
4	9.6	9.6	8.6	8.6	12.9	28.9	28.9	35.3	31.1	12.9	10.8	8.7	9.8	6.6	3.3	2.2	0.0	1.1	1.1	3.3	3.3	3.3	6.5	4.3	10.4	35.3	0.0	
5	2.2	1.1	2.2	4.3	1.1	0.0	5.4	6.4	8.6	9.7	3.3	0.0	4.4	4.4	1.1	-1.1	1.1	2.2	1.1	2.2	3.3	5.4	6.5	2.2	3.2	9.7	-1.1	
6	1.1	3.3	3.2	1.1	2.2	2.1	0.0	2.1	2.2	2.2	3.3	4.4	3.3	3.3	3.3	0.0	0.0	2.2	2.2	3.3	2.2	1.1	1.1	2.2	2.1	4.4	0.0	
7	2.2	4.3	5.3	26.7	5.3	4.3	2.1	3.2	4.3	6.5	5.4	2.2	0.0	2.2	6.7	8.9	8.9	9.9	13.1	13.0	11.9	8.7	8.7	9.7	7.2	26.7	0.0	
8	9.7	8.7	3.3	3.2	3.2	4.3	5.4	8.7	11.0	25.3	15.5	13.3	8.9	7.8	6.7	8.9	11.1	8.9	12.1	13.2	18.7	10.9	12.0	10.9	10.1	25.3	3.2	
9	9.8	20.7	15.2	14.2	14.2	10.9	10.9	19.6	10.9	12.1	15.4	15.5	12.2	11.2	14.6	13.5	9.0	11.2	55.3	11.0	24.2	5.5	7.7	18.6	15.1	55.3	5.5	
10	19.7	19.6	20.8	16.3	16.3	13.0	20.6	25.0	18.6	3.3	4.4	10.0	14.5	13.4	11.2	10.1	13.4	16.7	13.3	14.3	22.0	20.9	19.7	14.2	15.5	25.0	3.3	
11	12.0	16.3	5.4	4.3	6.5	10.8	11.9	9.7	7.7	8.8	8.8	7.8	3.3	3.3	10.0	8.9	10.0	17.7	18.7	12.1	9.9	9.8	13.1	13.1	10.0	18.7	3.3	
12	12.0	10.9	8.7	9.8	8.7	7.6	10.8	18.4	18.5	11.0	11.0	6.6	6.6	12.1	14.3	12.1	11.0	21.9	7.7	8.7	9.8	10.8	7.6	6.5	11.0	21.9	6.5	
13	8.6	10.8	10.8	10.8	10.8	7.6	6.5	8.7	9.8	7.6	8.7	6.6	5.5	3.3	4.4	6.6	8.8	18.6	15.3	18.5	23.9	10.8	11.9	13.0	10.3	23.9	3.3	
14	13.0	13.0	13.0	11.9	9.7	9.7	8.6	8.6	17.3	6.6	8.8	9.9	6.6	6.6	10.9	12.0	13.1	15.2	17.4	18.4	17.3	15.1	12.9	10.8	11.9	18.4	6.6	
15	10.8	9.7	9.7	10.7	11.7	11.7	9.6	7.5	9.7	8.6	10.9	10.9	8.7	9.9	16.5	14.2	16.4	16.3	23.9	17.3	23.8	15.1	15.1	15.1	13.1	23.9	7.5	
16	11.9	11.8	10.7	9.7	10.7	10.7	11.8	16.0	11.7	9.6	11.8	16.2	7.6	6.5	19.4	3.2	2.1	2.1	4.2	2.1	8.5	14.7	77.1	11.6	12.6	77.1	2.1	
17	7.4	4.2	2.1	2.1	63.2	3.2	7.4	12.6	12.6	24.3	22.3	6.4	5.4	5.4	4.3	-1.1	-3.2	-1.1	3.2	4.3	4.3	7.4	5.3	8.5	8.8	63.2	-3.2	
18	11.6	5.3	0.0	6.4	10.6	6.4	5.3	5.3	4.3	5.3	41.6	7.5	6.5	4.3	19.5	9.8	6.5	5.4	4.3	-1.1	1.1	5.3	4.3	3.2	7.4	41.6	-1.1	
19	6.4	5.3	3.2	3.2	0.0	2.1	3.2	3.2	3.2	3.2	5.4	6.5	5.4	5.5	6.6	8.8	9.8	10.8	18.2	9.6	9.6	10.7	11.7	7.5	6.6	18.2	0.0	
20	5.3	5.3	4.2	3.2	5.3	8.5	9.5	11.7	16.0	9.7	8.7	6.5	5.5	19.7	17.5	13.1	10.9	20.6	212.0	33.3	425.0	15.0	11.8	8.6	37.0	425.0	3.2	
21	5.4	3.2	6.5	6.5	7.5	11.8	10.8	9.7	6.4	7.5	6.5	4.3	5.4	--	--	--	--	--	--	--	--	--	--	--	--	--	11.8	3.2
22	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
23	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
24	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
25	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
26	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
27	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
28	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
29	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
30	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Avg	8.9	11.1	10.1	11.1	14.0	11.4	12.3	13.5	13.4	10.9	12.5	8.5	7.6	8.0	10.6	8.2	8.3	10.4	24.4	12.2	33.7	10.5	12.9	9.1	12.0	--	--	
Max	19.7	36.5	45.3	43.0	63.2	39.9	40.9	44.2	41.1	33.6	41.6	22.8	23.8	19.7	20.7	17.4	20.6	21.9	212.0	33.3	425.0	20.9	77.1	18.6	--	425.0	--	
Min	1.1	1.1	0.0	1.1	0.0	0.0	0.0	2.1	2.2	2.2	3.3	0.0	0.0	2.2	1.1	-1.1	-3.2	-1.1	1.1	-1.1	1.1	1.1	1.1	2.2	--	--	-3.2	

-- Indicates Invalid Data

SAROAD for Resolution, West_Plant
"Component, Channel: Table125, conc_PM10_μg/m³ STP"
Month: Dec 2014

Hour of day																											
Day	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Avg	Max	Min
1	--	--	--	--	--	--	--	--	--	--	--	6.5	6.5	7.7	25.2	7.7	7.7	4.3	26.0	5.4	2.2	2.2	6.5	7.6	--	26.0	2.2
2	5.4	4.3	5.4	7.6	20.7	3.3	6.5	11.9	9.8	6.5	6.5	6.6	17.5	12.1	9.9	9.9	13.1	29.4	14.1	13.0	9.7	7.5	8.6	7.5	10.3	29.4	3.3
3	6.4	6.4	2.1	3.2	5.4	5.4	4.3	1.1	3.2	3.3	5.5	5.5	3.3	3.3	4.4	6.6	6.6	6.6	5.5	3.3	2.2	3.3	3.3	0.0	4.2	6.6	0.0
4	-2.2	2.2	4.3	2.2	2.2	4.3	4.3	3.2	0.0	-1.1	1.1	1.1	1.1	1.1	0.0	2.2	2.2	0.0	3.2	8.6	8.5	8.5	9.6	9.6	3.2	9.6	-2.2
5	7.5	6.4	6.4	4.3	0.0	0.0	3.2	4.3	4.3	2.2	0.0	0.0	0.0	0.0	3.3	6.5	6.5	1.1	-1.1	0.0	1.1	1.1	1.1	3.2	2.5	7.5	-1.1
6	4.3	3.2	1.1	1.1	2.2	0.0	2.2	-1.1	0.0	5.4	4.3	3.2	3.2	4.3	1.1	-3.2	0.0	3.2	3.2	3.2	1.1	1.1	0.0	-3.2	1.7	5.4	-3.2
7	-1.1	1.1	-2.1	0.0	0.0	0.0	5.3	4.3	0.0	1.1	5.4	19.6	2.2	1.1	2.2	4.4	6.6	5.5	1.1	1.1	3.2	5.4	5.4	5.4	3.2	19.6	-2.1
8	4.3	5.4	6.5	8.7	6.5	4.3	6.5	5.4	3.3	7.6	9.8	4.4	1.1	4.4	6.6	3.3	5.5	6.6	1.1	0.0	5.5	5.5	6.5	6.5	5.2	9.8	0.0
9	7.6	9.8	7.6	5.4	6.5	5.4	18.3	18.4	20.7	13.1	13.1	9.9	5.5	5.5	7.8	44.1	60.3	15.3	14.1	11.9	11.9	17.2	17.2	14.0	15.0	60.3	5.4
10	15.0	14.0	7.5	9.7	11.8	9.7	10.8	12.9	19.4	20.7	52.5	19.8	12.1	11.1	25.4	17.6	15.4	18.6	17.4	20.6	17.3	15.2	17.3	15.1	16.9	52.5	7.5
11	12.9	11.8	15.0	12.9	9.6	5.4	5.4	8.6	8.6	10.8	13.0	12.0	9.9	6.6	--	8.8	18.6	8.7	10.8	13.0	11.9	10.8	8.7	7.6	10.5	18.6	5.4
12	6.5	6.5	4.3	5.4	7.6	6.5	6.5	6.4	8.6	10.8	7.6	6.6	6.6	3.3	2.2	5.5	7.7	7.7	9.8	8.7	7.6	10.8	11.8	11.8	7.4	11.8	2.2
13	12.9	11.8	8.6	8.6	10.7	6.4	4.3	2.1	3.2	0.0	-1.1	0.0	-2.1	-1.1	-1.1	0.0	1.1	1.1	1.1	0.0	2.1	2.1	-1.1	0.0	2.9	12.9	-2.1
14	2.1	4.2	7.3	5.2	4.2	6.2	6.2	5.2	4.2	4.2	2.1	2.1	2.1	1.1	-2.1	-3.2	0.0	1.1	-1.1	-3.2	1.1	4.2	5.2	5.2	2.7	7.3	-3.2
15	4.2	4.2	4.2	2.1	1.1	2.1	1.1	1.0	2.1	4.2	2.1	-1.1	0.0	3.2	4.3	2.2	1.1	-1.1	0.0	0.0	1.1	3.2	3.2	4.3	2.0	4.3	-1.1
16	2.1	-1.1	0.0	1.1	1.1	2.1	3.2	9.5	8.5	3.2	3.2	2.2	4.3	6.5	4.3	4.3	6.4	8.6	7.5	8.5	10.6	10.6	11.6	11.6	5.4	11.6	-1.1
17	12.7	20.1	23.3	15.8	17.8	13.6	13.6	13.6	10.5	6.3	2.1	0.0	2.1	4.2	2.1	0.0	0.0	1.1	5.3	4.2	0.0	2.1	3.1	3.1	7.4	23.3	0.0
18	1.1	-2.1	-1.0	1.1	1.1	0.0	-2.1	0.0	5.3	6.3	10.6	8.5	3.2	3.2	4.3	1.1	0.0	2.1	2.1	4.2	5.2	5.2	4.2	2.1	2.7	10.6	-2.1
19	3.1	4.2	0.0	-2.1	0.0	0.0	1.0	-1.0	2.1	5.2	4.2	2.1	0.0	0.0	3.2	-1.1	-3.2	3.2	5.3	5.3	5.2	4.2	2.1	2.1	1.9	5.3	-3.2
20	3.2	2.1	0.0	1.1	1.1	0.0	3.1	2.1	-2.1	-2.1	2.1	1.1	-1.1	1.1	4.3	3.2	1.1	4.3	6.3	2.1	1.1	4.2	4.2	4.2	1.9	6.3	-2.1
21	2.1	3.1	6.3	4.2	0.0	2.1	4.2	1.1	0.0	2.1	2.1	2.1	7.5	7.5	3.2	4.3	5.3	6.4	9.5	10.6	12.7	12.6	9.5	6.3	5.2	12.7	0.0
22	6.3	7.4	6.3	6.3	9.4	15.7	14.7	12.6	11.6	14.8	17.0	7.5	8.6	9.7	50.5	6.5	7.5	8.6	11.7	11.7	9.5	11.6	11.6	11.6	12.0	50.5	6.3
23	11.6	12.6	16.9	20.0	13.7	12.7	8.5	3.2	4.2	4.2	5.3	6.4	6.4	4.3	1.1	1.1	1.1	1.1	-1.1	-1.1	-1.1	-1.1	-3.1	0.0	5.3	20.0	-3.1
24	7.3	8.4	16.7	9.4	6.3	0.0	1.1	4.2	2.1	-2.1	-3.2	-2.1	0.0	1.1	3.2	6.5	2.1	2.1	3.2	2.1	3.2	2.1	3.2	3.2	3.3	16.7	-3.2
25	3.2	3.2	3.2	2.1	1.1	5.3	3.2	2.1	0.0	0.0	2.2	4.3	4.3	1.1	5.4	8.6	8.6	10.7	15.9	16.9	17.9	13.6	11.5	9.4	6.4	17.9	0.0
26	9.4	9.4	6.2	6.2	8.2	10.3	9.3	10.3	10.3	5.2	2.1	0.0	-1.1	2.1	4.2	2.1	3.1	3.1	4.2	6.2	8.3	8.2	7.2	4.1	5.8	10.3	-1.1
27	2.1	1.0	0.0	2.1	5.1	4.1	5.1	4.1	6.2	7.3	2.1	0.0	0.0	2.1	1.1	2.1	4.2	7.3	5.2	8.3	11.3	5.2	3.1	5.2	3.9	11.3	0.0
28	6.2	6.2	4.1	-1.0	-1.0	-1.0	-2.1	-1.0	1.0	1.0	-1.1	-1.1	-1.1	-1.1	1.1	5.3	7.4	9.5	15.7	5.2	6.2	9.3	7.2	5.2	3.3	15.7	-2.1
29	5.2	2.1	0.0	1.0	1.0	1.0	7.2	10.3	25.9	8.4	5.3	3.2	3.2	1.1	1.1	3.2	9.6	18.0	8.4	8.4	6.3	6.3	3.2	-1.1	5.8	25.9	-1.1
30	1.1	4.2	2.1	3.1	4.2	6.3	5.2	4.2	3.2	7.4	7.6	3.3	--	--	43.4	7.6	7.6	7.5	5.3	4.2	5.3	6.3	9.5	8.4	7.1	43.4	1.1
31	6.3	10.6	13.8	11.6	8.5	7.4	4.2	5.3	7.4	8.5	7.4	6.3	4.1	-1.0	-1.0	1.0	-1.0	0.0	2.1	1.0	0.0	1.0	0.0	-1.0	4.3	13.8	-1.0
Avg	5.6	6.1	5.9	5.3	5.5	4.6	5.5	5.5	6.1	5.5	6.4	4.5	3.7	3.5	7.3	5.4	6.8	6.5	6.8	5.9	6.1	6.4	6.2	5.5	5.7	--	--
Max	15.0	20.1	23.3	20.0	20.7	15.7	18.3	18.4	25.9	20.7	52.5	19.8	17.5	12.1	50.5	44.1	60.3	29.4	26.0	20.6	17.9	17.2	17.3	15.1	--	60.3	--
Min	-2.2	-2.1	-2.1	-2.1	-1.0	-1.0	-2.1	-1.1	-2.1	-2.1	-3.2	-2.1	-2.1	-1.1	-2.1	-3.2	-3.2	-1.1	-1.1	-3.2	-1.1	-1.1	-3.1	-3.2	--	--	-3.2

-- Indicates Invalid Data

SAROAD for Resolution, West_Plant
"Component, Channel: Table126, conc_PM2.5_μg/m³ Actual"
Month: Oct 2014

Hour of day

Day	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Avg	Max	Min
1	2.0	4.0	7.0	4.0	2.0	1.0	1.0	4.0	5.0	5.0	4.0	2.0	3.0	4.0	3.0	1.0	-2.0	0.0	4.0	4.0	4.0	4.0	6.0	5.0	3.2	7.0	-2.0
2	3.0	5.0	6.0	2.0	0.0	3.0	5.0	4.0	4.0	1.0	-2.0	-2.0	0.0	1.0	-2.0	0.0	0.0	-1.0	3.0	6.0	6.0	5.0	4.0	4.0	2.3	6.0	-2.0
3	2.0	1.0	2.0	3.0	4.0	5.0	3.0	2.0	1.0	-2.0	-2.0	1.0	-1.0	-2.0	0.0	0.0	-1.0	0.0	2.0	4.0	4.0	4.0	2.0	-2.0	1.3	5.0	-2.0
4	-3.0	1.0	2.0	0.0	-2.0	-2.0	1.0	2.0	3.0	3.0	-2.0	-2.0	1.0	0.0	0.0	0.0	2.0	2.0	-1.0	0.0	3.0	6.0	6.0	5.0	1.0	6.0	-3.0
5	4.0	4.0	5.0	5.0	6.0	6.0	4.0	7.0	4.0	-1.0	0.0	0.0	-1.0	-1.0	-2.0	-1.0	-2.0	0.0	5.0	5.0	3.0	1.0	0.0	-1.0	2.1	7.0	-2.0
6	0.0	1.0	1.0	3.0	4.0	1.0	4.0	6.0	4.0	1.0	1.0	5.0	6.0	3.0	6.0	6.0	4.0	5.0	5.0	4.0	4.0	3.0	3.0	4.0	3.5	6.0	0.0
7	4.0	4.0	2.0	1.0	0.0	3.0	3.0	2.0	2.0	3.0	6.0	2.0	-3.0	-2.0	-2.0	-3.0	-1.0	7.0	10.0	6.0	7.0	7.0	7.0	10.0	3.1	10.0	-3.0
8	11.0	11.0	10.0	9.0	6.0	5.0	6.0	4.0	1.0	2.0	1.0	0.0	3.0	1.0	-1.0	3.0	1.0	-2.0	-3.0	-1.0	2.0	0.0	-1.0	-3.0	2.7	11.0	-3.0
9	-2.0	1.0	-2.0	-2.0	3.0	6.0	5.0	5.0	6.0	5.0	6.0	5.0	4.0	3.0	2.0	1.0	2.0	3.0	2.0	1.0	3.0	3.0	3.0	4.0	2.8	6.0	-2.0
10	2.0	2.0	4.0	4.0	3.0	3.0	4.0	6.0	3.0	1.0	3.0	4.0	1.0	-1.0	0.0	0.0	1.0	4.0	5.0	6.0	5.0	5.0	6.0	7.0	3.3	7.0	-1.0
11	5.0	4.0	4.0	2.0	2.0	5.0	5.0	5.0	5.0	5.0	6.0	6.0	3.0	2.0	4.0	5.0	7.0	9.0	7.0	4.0	4.0	7.0	7.0	6.0	5.0	9.0	2.0
12	3.0	5.0	7.0	7.0	9.0	7.0	4.0	7.0	7.0	4.0	4.0	4.0	4.0	3.0	0.0	-1.0	2.0	4.0	4.0	3.0	5.0	4.0	2.0	1.0	4.1	9.0	-1.0
13	1.0	1.0	1.0	2.0	3.0	3.0	3.0	3.0	0.0	-1.0	2.0	3.0	1.0	0.0	-1.0	0.0	2.0	2.0	1.0	2.0	2.0	2.0	3.0	3.0	1.6	3.0	-1.0
14	0.0	-2.0	0.0	2.0	4.0	3.0	1.0	0.0	-2.0	0.0	1.0	-1.0	-1.0	0.0	0.0	-1.0	-2.0	--	--	--	--	--	--	--	--	4.0	-2.0
15	--	--	--	--	--	--	--	--	--	--	--	--	--	--	-1.0	0.0	0.0	1.0	18.0	2.0	5.0	4.0	1.0	2.0	--	18.0	-1.0
16	5.0	5.0	2.0	1.0	2.0	4.0	5.0	4.0	2.0	-2.0	-2.0	1.0	1.0	1.0	4.0	5.0	3.0	3.0	5.0	6.0	5.0	4.0	6.0	6.0	3.2	6.0	-2.0
17	3.0	3.0	4.0	3.0	187.0	4.0	2.0	3.0	6.0	5.0	4.0	4.0	2.0	-2.0	-3.0	-1.0	--	3.0	6.0	7.0	5.0	4.0	3.0	1.0	11.0	187.0	-3.0
18	2.0	2.0	3.0	3.0	3.0	4.0	1.0	0.0	0.0	-2.0	-2.0	0.0	1.0	-1.0	-2.0	0.0	4.0	5.0	5.0	4.0	4.0	3.0	3.0	4.0	1.8	5.0	-2.0
19	4.0	3.0	3.0	4.0	0.0	-1.0	4.0	7.0	8.0	7.0	6.0	4.0	4.0	6.0	7.0	6.0	8.0	9.0	6.0	5.0	5.0	2.0	1.0	1.0	4.5	9.0	-1.0
20	-1.0	0.0	3.0	1.0	2.0	2.0	0.0	3.0	2.0	0.0	--	--	--	-1.0	-1.0	0.0	2.0	2.0	0.0	-2.0	0.0	2.0	2.0	4.0	1.0	4.0	-2.0
21	3.0	0.0	-2.0	-3.0	-2.0	1.0	1.0	0.0	1.0	2.0	2.0	2.0	0.0	-1.0	--	--	--	--	--	--	--	--	--	--	--	3.0	-3.0
22	--	--	--	--	--	--	--	--	--	--	--	0.0	-1.0	-1.0	1.0	0.0	0.0	1.0	0.0	2.0	1.0	1.0	1.0	2.0	--	2.0	-1.0
23	5.0	4.0	2.0	2.0	2.0	3.0	5.0	3.0	2.0	3.0	2.0	3.0	1.0	-3.0	-1.0	0.0	1.0	2.0	3.0	4.0	5.0	4.0	1.0	3.0	2.3	5.0	-3.0
24	3.0	2.0	1.0	1.0	1.0	2.0	3.0	0.0	0.0	1.0	0.0	-1.0	-3.0	-4.0	-3.0	-2.0	0.0	2.0	5.0	6.0	2.0	1.0	3.0	4.0	1.0	6.0	-4.0
25	3.0	1.0	1.0	2.0	2.0	1.0	1.0	2.0	2.0	1.0	0.0	0.0	2.0	4.0	6.0	4.0	1.0	4.0	8.0	9.0	10.0	9.0	7.0	7.0	3.6	10.0	0.0
26	7.0	7.0	7.0	5.0	4.0	6.0	8.0	5.0	5.0	4.0	2.0	3.0	3.0	4.0	4.0	4.0	4.0	5.0	6.0	5.0	5.0	6.0	7.0	6.0	5.1	8.0	2.0
27	7.0	5.0	4.0	5.0	5.0	3.0	2.0	6.0	7.0	2.0	1.0	1.0	1.0	2.0	2.0	2.0	1.0	2.0	4.0	5.0	5.0	7.0	9.0	5.0	3.9	9.0	1.0
28	4.0	4.0	4.0	6.0	7.0	6.0	5.0	5.0	3.0	4.0	1.0	-1.0	2.0	3.0	3.0	3.0	5.0	6.0	6.0	5.0	6.0	5.0	5.0	7.0	4.3	7.0	-1.0
29	6.0	6.0	3.0	0.0	6.0	8.0	6.0	3.0	2.0	1.0	1.0	0.0	0.0	0.0	0.0	1.0	2.0	1.0	0.0	1.0	0.0	-1.0	0.0	1.0	2.0	8.0	-1.0
30	1.0	2.0	3.0	0.0	0.0	2.0	3.0	3.0	2.0	2.0	2.0	2.0	1.0	-2.0	0.0	2.0	1.0	3.0	3.0	1.0	1.0	2.0	2.0	2.0	1.6	3.0	-2.0
31	1.0	1.0	2.0	2.0	2.0	1.0	-1.0	2.0	6.0	6.0	6.0	3.0	2.0	2.0	4.0	5.0	5.0	6.0	7.0	7.0	6.0	6.0	5.0	4.0	3.8	7.0	-1.0
Avg	2.9	3.0	3.1	2.6	9.1	3.3	3.2	3.6	3.1	2.1	1.8	1.7	1.2	0.6	0.9	1.3	1.7	3.0	4.3	3.8	4.0	3.8	3.6	3.5	3.2	--	--
Max	11.0	11.0	10.0	9.0	187.0	8.0	8.0	7.0	8.0	7.0	6.0	6.0	6.0	6.0	7.0	6.0	8.0	9.0	18.0	9.0	10.0	9.0	9.0	10.0	--	187.0	--
Min	-3.0	-2.0	-2.0	-3.0	-2.0	-2.0	-1.0	0.0	-2.0	-2.0	-2.0	-2.0	-3.0	-4.0	-3.0	-3.0	-2.0	-2.0	-3.0	-2.0	0.0	-1.0	-1.0	-3.0	--	--	-4.0

-- Indicates Invalid Data

SAROAD for Resolution, West_Plant
"Component, Channel: Table126, conc_PM2.5_μg/m³ Actual"
Month: Nov 2014

Hour of day

Day	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Avg	Max	Min
1	4.0	6.0	9.0	8.0	10.0	12.0	11.0	--	--	--	--	--	--	--	--	--	--	--	-2.0	-2.0	-1.0	-1.0	-1.0	0.0	--	12.0	-2.0
2	-1.0	2.0	7.0	9.0	11.0	11.0	10.0	9.0	7.0	7.0	7.0	6.0	5.0	5.0	3.0	1.0	0.0	2.0	3.0	6.0	5.0	4.0	2.0	0.0	5.0	11.0	-1.0
3	1.0	1.0	2.0	2.0	4.0	7.0	4.0	2.0	3.0	2.0	-2.0	-2.0	-2.0	-1.0	-1.0	1.0	2.0	3.0	4.0	5.0	6.0	5.0	2.0	2.0	2.1	7.0	-2.0
4	1.0	-2.0	0.0	1.0	2.0	2.0	1.0	3.0	3.0	4.0	0.0	-1.0	3.0	1.0	-1.0	-2.0	-2.0	3.0	2.0	1.0	3.0	2.0	2.0	5.0	1.3	5.0	-2.0
5	4.0	3.0	4.0	2.0	1.0	2.0	2.0	0.0	3.0	3.0	1.0	1.0	-1.0	-3.0	-1.0	3.0	3.0	4.0	3.0	2.0	1.0	0.0	-1.0	0.0	1.5	4.0	-3.0
6	1.0	0.0	1.0	3.0	2.0	2.0	4.0	4.0	0.0	0.0	1.0	-1.0	1.0	3.0	0.0	0.0	-1.0	0.0	1.0	1.0	2.0	4.0	3.0	2.0	1.4	4.0	-1.0
7	2.0	-1.0	0.0	5.0	3.0	1.0	2.0	2.0	0.0	-2.0	0.0	1.0	-2.0	-3.0	0.0	0.0	-2.0	2.0	5.0	4.0	0.0	4.0	5.0	1.0	1.1	5.0	-3.0
8	1.0	3.0	2.0	2.0	5.0	6.0	4.0	2.0	1.0	1.0	0.0	-3.0	-2.0	-1.0	-1.0	0.0	2.0	2.0	0.0	0.0	2.0	3.0	1.0	1.0	1.3	6.0	-3.0
9	-1.0	0.0	4.0	0.0	-1.0	1.0	1.0	0.0	2.0	0.0	-1.0	0.0	-1.0	0.0	-1.0	-1.0	1.0	2.0	3.0	4.0	3.0	3.0	3.0	5.0	1.1	5.0	-1.0
10	4.0	4.0	4.0	3.0	5.0	4.0	4.0	4.0	3.0	5.0	4.0	0.0	-1.0	2.0	4.0	4.0	3.0	2.0	2.0	2.0	3.0	6.0	5.0	2.0	3.3	6.0	-1.0
11	2.0	3.0	4.0	5.0	6.0	5.0	4.0	3.0	5.0	5.0	-2.0	-3.0	-2.0	-1.0	1.0	0.0	-3.0	-1.0	3.0	6.0	5.0	3.0	5.0	4.0	2.4	6.0	-3.0
12	2.0	3.0	3.0	3.0	1.0	0.0	3.0	4.0	3.0	4.0	2.0	0.0	0.0	-1.0	2.0	4.0	5.0	4.0	4.0	3.0	4.0	3.0	4.0	5.0	2.7	5.0	-1.0
13	1.0	2.0	4.0	4.0	3.0	5.0	6.0	2.0	-1.0	1.0	3.0	1.0	1.0	0.0	0.0	1.0	1.0	4.0	5.0	4.0	4.0	4.0	2.0	2.0	2.5	6.0	-1.0
14	4.0	4.0	4.0	3.0	3.0	3.0	3.0	3.0	2.0	1.0	0.0	1.0	1.0	3.0	6.0	6.0	3.0	2.0	3.0	4.0	4.0	5.0	5.0	5.0	3.3	6.0	0.0
15	3.0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	3.0	3.0
16	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
17	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
18	4.0	2.0	2.0	5.0	6.0	3.0	1.0	1.0	3.0	1.0	3.0	3.0	1.0	-1.0	1.0	0.0	-1.0	0.0	2.0	1.0	3.0	3.0	1.0	0.0	1.8	6.0	-1.0
19	-1.0	2.0	5.0	5.0	5.0	4.0	3.0	2.0	5.0	5.0	2.0	-1.0	0.0	-1.0	0.0	0.0	1.0	3.0	6.0	7.0	5.0	4.0	4.0	3.0	2.8	7.0	-1.0
20	4.0	6.0	6.0	5.0	5.0	6.0	3.0	1.0	1.0	1.0	1.0	-3.0	-4.0	-1.0	2.0	2.0	3.0	3.0	23.0	7.0	48.0	5.0	2.0	1.0	5.3	48.0	-4.0
21	1.0	-1.0	0.0	3.0	3.0	3.0	3.0	2.0	2.0	1.0	0.0	0.0	-1.0	1.0	0.0	0.0	4.0	5.0	7.0	7.0	5.0	4.0	4.0	6.0	2.5	7.0	-1.0
22	6.0	7.0	9.0	8.0	6.0	6.0	7.0	6.0	5.0	4.0	3.0	0.0	1.0	2.0	0.0	1.0	4.0	5.0	6.0	8.0	6.0	5.0	5.0	4.0	4.8	9.0	0.0
23	6.0	5.0	4.0	3.0	3.0	6.0	9.0	8.0	5.0	2.0	4.0	10.0	11.0	7.0	3.0	-1.0	-1.0	1.0	1.0	2.0	2.0	3.0	2.0	5.0	4.2	11.0	-1.0
24	9.0	7.0	6.0	5.0	5.0	7.0	7.0	8.0	3.0	2.0	3.0	0.0	0.0	1.0	3.0	3.0	3.0	3.0	5.0	8.0	5.0	2.0	2.0	2.0	4.1	9.0	0.0
25	1.0	2.0	5.0	6.0	3.0	0.0	3.0	5.0	3.0	0.0	0.0	0.0	-4.0	-4.0	-2.0	-1.0	-2.0	0.0	2.0	2.0	2.0	6.0	4.0	-1.0	1.3	6.0	-4.0
26	0.0	0.0	0.0	2.0	4.0	4.0	4.0	4.0	1.0	-2.0	0.0	1.0	0.0	0.0	1.0	3.0	5.0	7.0	8.0	5.0	4.0	2.0	2.0	2.0	2.4	8.0	-2.0
27	3.0	1.0	0.0	1.0	0.0	1.0	3.0	1.0	0.0	0.0	-1.0	0.0	-1.0	-3.0	-3.0	1.0	0.0	-1.0	0.0	3.0	5.0	2.0	1.0	2.0	0.6	5.0	-3.0
28	1.0	0.0	0.0	1.0	2.0	1.0	1.0	0.0	2.0	2.0	0.0	-2.0	-3.0	-1.0	1.0	0.0	-1.0	1.0	5.0	4.0	1.0	1.0	1.0	2.0	0.8	5.0	-3.0
29	3.0	3.0	1.0	4.0	5.0	4.0	5.0	6.0	5.0	3.0	0.0	-3.0	-2.0	0.0	0.0	-2.0	0.0	3.0	3.0	3.0	3.0	2.0	4.0	4.0	2.3	6.0	-3.0
30	2.0	2.0	3.0	3.0	2.0	2.0	2.0	3.0	3.0	3.0	5.0	5.0	3.0	1.0	-1.0	-3.0	-3.0	2.0	5.0	4.0	3.0	4.0	4.0	5.0	2.5	5.0	-3.0
Avg	2.4	2.4	3.3	3.7	3.9	4.0	4.1	3.3	2.7	2.0	1.3	0.4	0.0	0.2	0.6	0.7	0.8	2.2	3.9	3.7	4.8	3.3	2.8	2.6	2.5	--	--
Max	9.0	7.0	9.0	9.0	11.0	12.0	11.0	9.0	7.0	7.0	7.0	10.0	11.0	7.0	6.0	6.0	5.0	7.0	23.0	8.0	48.0	6.0	6.0	6.0	--	48.0	--
Min	-1.0	-2.0	0.0	0.0	-1.0	0.0	1.0	0.0	-1.0	-2.0	-2.0	-3.0	-4.0	-4.0	-3.0	-3.0	-3.0	-1.0	-2.0	-2.0	-1.0	-1.0	-1.0	-1.0	--	--	-4.0

-- Indicates Invalid Data

SAROAD for Resolution, West_Plant
"Component, Channel: Table126, conc_PM2.5_μg/m³ Actual"
Month: Dec 2014

Hour of day

Day	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Avg	Max	Min
1	5.0	4.0	3.0	3.0	4.0	4.0	4.0	3.0	3.0	4.0	0.0	-3.0	-1.0	-2.0	-1.0	3.0	4.0	3.0	5.0	5.0	1.0	-1.0	1.0	0.0	2.1	5.0	-3.0
2	1.0	5.0	5.0	4.0	2.0	2.0	5.0	3.0	4.0	3.0	1.0	3.0	4.0	4.0	0.0	2.0	7.0	6.0	6.0	5.0	3.0	5.0	6.0	8.0	3.9	8.0	0.0
3	7.0	6.0	6.0	4.0	3.0	3.0	2.0	0.0	1.0	0.0	1.0	3.0	1.0	-1.0	0.0	3.0	2.0	4.0	3.0	0.0	1.0	3.0	4.0	3.0	2.5	7.0	-1.0
4	2.0	3.0	4.0	2.0	0.0	1.0	3.0	5.0	5.0	0.0	-2.0	0.0	1.0	1.0	1.0	1.0	3.0	4.0	5.0	4.0	6.0	8.0	8.0	4.0	2.9	8.0	-2.0
5	3.0	6.0	5.0	5.0	6.0	4.0	2.0	3.0	3.0	0.0	-1.0	2.0	1.0	1.0	3.0	2.0	1.0	2.0	4.0	4.0	1.0	2.0	3.0	2.0	2.7	6.0	-1.0
6	2.0	3.0	2.0	6.0	7.0	4.0	5.0	3.0	0.0	1.0	3.0	4.0	0.0	0.0	3.0	3.0	5.0	2.0	1.0	5.0	5.0	2.0	2.0	3.0	3.0	7.0	0.0
7	4.0	4.0	1.0	1.0	2.0	1.0	2.0	0.0	2.0	1.0	0.0	1.0	-1.0	-2.0	-1.0	1.0	3.0	2.0	4.0	5.0	4.0	5.0	6.0	5.0	2.1	6.0	-2.0
8	5.0	5.0	3.0	2.0	0.0	-1.0	-1.0	2.0	3.0	2.0	3.0	2.0	1.0	1.0	-1.0	0.0	2.0	2.0	1.0	-3.0	1.0	--	--	--	1.4	5.0	-3.0
9	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
10	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
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12	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
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16	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
17	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
18	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
19	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
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24	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
25	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
26	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
27	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
28	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
29	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
30	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
31	3.0	8.0	18.0	9.0	6.0	3.0	3.0	5.0	3.0	3.0	5.0	7.0	6.0	5.0	6.0	5.0	1.0	6.0	6.0	4.0	6.0	4.0	3.0	4.0	5.4	18.0	1.0
Avg	3.6	4.9	5.2	4.0	3.3	2.3	2.8	2.7	2.7	1.6	1.1	2.1	1.3	0.8	1.6	2.3	3.0	3.6	3.9	3.1	3.1	3.8	4.2	3.7	2.9	--	--
Max	7.0	8.0	18.0	9.0	7.0	4.0	5.0	5.0	5.0	4.0	5.0	7.0	6.0	5.0	6.0	5.0	7.0	6.0	6.0	5.0	6.0	8.0	8.0	8.0	--	18.0	--
Min	1.0	3.0	1.0	1.0	0.0	-1.0	-1.0	0.0	0.0	0.0	-2.0	-3.0	-1.0	-2.0	-1.0	0.0	1.0	2.0	1.0	-3.0	1.0	-1.0	1.0	0.0	--	--	-3.0

-- Indicates Invalid Data

Appendix C: NO₂, SO₂, O₃ Data – East Plant – Hourly

SAROAD for Resolution, East_Plant
"Component, Channel: TableAmbient_Hourly, NO2_ppb"
Month: Oct 2014

Hour of day																											
Day	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Avg	Max	Min
1	-1.6	-2.0	-2.0	-2.3	-2.2	2.2	-0.5	-0.5	0.0	-1.8	-1.8	-1.9	-2.0	-2.0	-2.3	-2.3	-2.5	-2.3	-1.9	-1.6	-1.9	-1.8	-2.0	-2.5	-1.7	2.2	-2.5
2	-2.6	-1.7	-0.9	-1.5	-1.3	-2.5	-2.3	-2.2	-2.1	-2.4	-2.1	-1.7	-0.8	-1.2	-0.5	-1.5	-0.3	-1.8	-2.0	-1.3	-1.6	-2.6	-2.3	-2.5	-1.7	-0.3	-2.6
3	-2.6	-2.1	-2.0	-2.2	-2.1	-1.6	-0.7	--	--	0.2	1.0	1.1	0.7	3.3	0.1	-0.6	-0.5	-0.6	0.2	0.7	1.4	5.0	0.8	0.0	0.0	5.0	-2.6
4	-0.3	-0.6	-0.5	-0.4	-0.2	0.0	-0.2	-0.1	0.5	0.1	1.3	1.8	0.0	-0.6	-0.9	-1.0	-1.0	-0.8	-0.8	-0.2	-0.3	-0.7	-0.5	-0.4	-0.2	1.8	-1.0
5	-0.4	0.0	0.3	0.2	0.1	1.3	1.2	3.7	12.4	-0.4	-0.2	-0.2	-0.7	-1.0	-1.0	-1.1	-1.1	-1.1	-0.6	-0.4	-0.1	5.4	0.8	-0.5	0.7	12.4	-1.1
6	-0.8	-1.0	-1.0	-0.3	2.1	-0.2	-0.4	1.9	5.9	1.7	4.2	3.1	0.4	-0.4	-0.6	-0.7	-0.9	-1.0	-0.5	-0.1	0.9	-0.1	-0.4	-1.0	0.4	5.9	-1.0
7	-1.1	-0.6	-1.2	-0.9	-1.2	-1.4	-1.3	3.8	3.0	6.1	4.3	2.4	0.5	0.0	-0.9	-0.8	0.0	0.4	0.7	1.3	0.7	1.1	4.1	7.5	1.1	7.5	-1.4
8	3.3	9.2	9.5	9.9	8.4	4.8	0.7	0.6	0.8	1.6	1.4	1.9	2.2	1.5	1.8	1.4	1.3	0.9	1.8	4.0	0.7	-0.2	-0.1	-0.2	2.8	9.9	-0.2
9	-0.5	-0.6	-0.9	-0.9	-0.7	-0.4	-0.1	-0.5	0.2	0.5	0.3	0.5	0.6	0.4	0.3	2.0	0.8	0.2	0.2	1.4	0.2	2.0	1.3	2.0	0.3	2.0	-0.9
10	1.6	3.6	1.3	2.2	1.3	0.5	0.6	2.5	3.7	1.7	1.2	1.2	1.0	1.2	--	0.4	0.1	-0.1	0.2	0.4	0.1	0.9	0.5	0.7	1.2	3.7	-0.1
11	-0.2	-0.1	0.1	0.7	2.0	2.0	1.8	1.6	1.5	1.9	1.6	0.9	1.0	1.0	0.6	0.1	-0.2	-0.5	-0.4	-0.3	2.1	2.3	3.4	3.0	1.1	3.4	-0.5
12	2.6	-0.3	0.9	0.9	0.1	1.0	1.2	3.8	4.4	0.4	0.8	0.3	0.1	0.0	-0.3	-0.4	-0.6	-0.7	-0.8	-0.6	-0.8	-0.9	0.5	-0.7	0.5	4.4	-0.9
13	-0.1	-0.1	0.0	-0.7	-0.9	-0.8	-1.1	-0.2	-0.5	-0.4	0.6	0.3	-0.1	0.2	0.0	-0.3	-0.6	0.9	0.1	1.3	0.0	2.2	2.6	0.5	0.1	2.6	-1.1
14	-0.3	0.9	0.5	-0.3	-0.5	0.0	-0.1	0.5	1.7	2.7	1.3	0.3	0.1	0.1	-0.3	-0.7	-0.6	-0.5	-0.5	-0.1	0.0	0.3	1.9	1.6	0.3	2.7	-0.7
15	2.1	0.9	0.6	1.2	1.1	0.5	0.8	1.1	2.1	2.1	1.2	-0.7	1.4	0.1	-0.3	1.1	3.0	-0.8	-0.2	1.2	1.3	5.9	4.5	1.0	1.3	5.9	-0.8
16	-0.2	2.6	-0.1	2.6	8.7	2.0	-0.1	1.7	3.1	4.1	0.6	0.5	-0.2	-0.4	-0.4	-0.5	-0.4	-0.5	-0.2	0.3	1.9	0.3	0.7	-0.5	1.1	8.7	-0.5
17	-0.6	-0.9	-1.0	-1.1	0.0	-0.7	-0.8	1.1	4.0	3.7	--	1.7	-0.4	1.2	0.8	-1.7	-0.9	0.5	-0.7	-0.1	-1.8	-1.1	-1.8	-1.1	-0.1	4.0	-1.8
18	-1.3	-2.0	-2.2	-2.1	-1.6	-2.4	-2.2	-1.9	-2.5	-1.9	0.3	-1.3	-2.6	-2.7	-2.4	-2.9	-2.6	-2.5	-1.9	-1.2	-2.7	-2.5	-3.2	-3.3	-2.2	0.3	-3.3
19	-1.5	-1.7	-1.1	-0.2	1.8	-0.4	0.5	-0.9	-0.8	-1.1	-1.3	-1.3	-1.4	-1.8	-2.0	-1.9	-2.3	-1.9	-2.5	-1.6	-1.7	-1.6	-1.8	-1.1	-1.2	1.8	-2.5
20	0.1	-0.4	-1.3	-1.7	-2.1	-1.9	-1.9	6.1	-1.6	-1.2	-1.2	-1.6	-1.3	-2.1	0.8	-2.3	-1.9	-1.6	-2.4	-2.1	-2.1	-0.9	-0.6	-1.2	-1.1	6.1	-2.4
21	-1.2	-1.1	-0.8	-1.4	-0.1	0.2	-0.5	-0.6	-1.4	-0.1	-1.5	-1.4	-1.7	-2.5	-2.2	-2.5	-1.9	-0.8	-1.5	-1.5	-1.1	-0.8	-2.1	-2.3	-1.3	0.2	-2.5
22	-2.6	-2.1	-1.6	-1.4	-1.0	-0.7	-2.0	-0.4	-0.1	0.3	0.5	-1.8	-1.8	-2.1	-2.1	-2.7	-2.7	-3.0	-3.0	-2.4	-2.7	-2.9	-2.9	-2.8	-1.8	0.5	-3.0
23	-2.3	-1.3	-2.5	-2.0	-2.3	-2.0	-1.0	-1.3	-0.5	0.3	0.5	0.7	-1.8	-2.1	-2.0	-2.6	-0.7	-2.6	-2.8	-1.2	-2.0	-1.0	-1.6	-2.0	-1.5	0.7	-2.8
24	-2.0	-2.0	-2.2	-2.3	-2.3	-2.0	-1.9	-1.6	-1.5	-0.6	0.1	-0.9	-2.4	-1.8	-1.9	-1.7	-1.5	-2.8	-2.7	2.7	-2.4	-2.8	-2.7	-2.1	-1.7	2.7	-2.8
25	-2.1	-1.1	-2.6	-2.5	-2.5	-2.3	-2.5	-1.8	-2.1	-1.1	-1.4	-2.5	-2.8	-2.2	-2.7	-3.0	-3.2	-3.4	-3.2	-3.1	-1.9	-2.7	-2.8	-2.8	-2.4	-1.1	-3.4
26	-2.1	-2.4	-2.6	-2.7	-2.5	-2.3	-2.2	-1.7	2.3	-0.7	-1.7	-1.3	-0.8	-2.5	-2.8	-3.0	-3.0	-3.3	-3.0	-2.9	0.2	-0.5	-1.7	-1.4	-1.9	2.3	-3.3
27	-2.0	-2.0	-1.2	1.6	-0.8	-1.7	1.5	4.7	3.0	-1.9	-2.0	-2.5	-0.7	-2.7	-2.2	-3.1	-3.1	-3.0	-2.4	-1.8	-1.2	-0.8	-0.7	-0.1	-1.1	4.7	-3.1
28	-1.6	-0.8	-1.7	-2.2	-2.0	-2.1	-1.7	1.5	3.8	1.9	-1.9	-1.5	-0.4	-1.8	-1.5	-2.7	-2.9	-2.8	-2.4	-1.1	-1.7	-2.6	-2.4	-2.6	-1.4	3.8	-2.9
29	-2.8	-2.4	-2.5	-2.4	-2.8	-2.1	-1.5	-1.3	-2.0	-1.5	0.0	-0.7	-0.4	-0.3	-1.8	-2.5	-2.5	-2.2	-2.2	-2.3	-2.4	-1.7	-1.4	-2.3	-1.8	0.0	-2.8
30	-1.8	-2.0	-2.1	-2.6	-2.3	-1.8	-1.2	-1.5	-0.6	--	1.5	-0.7	-1.9	--	-1.6	-1.1	-0.7	-0.9	-0.5	-0.2	0.4	0.6	1.9	1.7	-0.8	1.9	-2.6
31	2.0	0.9	1.7	1.9	1.0	0.7	0.4	-0.3	-0.5	-0.6	-1.2	-1.0	-0.6	-0.6	0.1	-1.0	-1.1	-1.0	-1.2	0.8	1.8	0.0	0.8	-1.2	0.1	2.0	-1.2
Avg	-0.7	-0.4	-0.6	-0.4	-0.2	-0.5	-0.6	0.6	1.2	0.5	0.2	-0.2	-0.5	-0.7	-0.9	-1.3	-1.1	-1.3	-1.2	-0.4	-0.5	-0.1	-0.2	-0.5	-0.4	--	--
Max	3.3	9.2	9.5	9.9	8.7	4.8	1.8	6.1	12.4	6.1	4.3	3.1	2.2	3.3	1.8	2.0	3.0	0.9	1.8	4.0	2.1	5.9	4.5	7.5	--	12.4	--
Min	-2.8	-2.4	-2.6	-2.7	-2.8	-2.5	-2.5	-2.2	-2.5	-2.4	-2.1	-2.5	-2.8	-2.7	-2.8	-3.1	-3.2	-3.4	-3.2	-3.1	-2.7	-2.9	-3.2	-3.3	--	--	-3.4

-- Indicates Invalid Data

SAROAD for Resolution, East_Plant
"Component, Channel: TableAmbient_Hourly, NO2_ppb"
Month: Nov 2014

Hour of day																											
Day	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Avg	Max	Min
1	1.4	2.5	2.5	7.1	-0.4	-0.8	1.7	2.2	-1.0	-0.9	-1.3	-1.4	-1.7	-1.6	-1.1	-1.8	-2.0	-2.2	-2.2	-2.3	-2.4	-2.3	-2.3	-2.3	-0.5	7.1	-2.4
2	-2.3	-2.1	-2.1	-1.9	-1.7	-1.8	-1.9	-1.8	-1.9	-1.6	-1.6	-1.8	-1.9	-1.7	-1.8	-2.0	-2.0	-2.1	-2.1	-2.1	-0.6	4.0	3.7	-1.6	-1.4	4.0	-2.3
3	-1.5	-0.4	-0.9	2.6	5.7	3.6	1.6	1.6	-1.1	-1.1	-0.9	-0.9	-1.5	-1.1	-1.0	-1.4	-0.1	1.3	0.9	0.5	-0.1	-0.8	2.7	1.0	0.4	5.7	-1.5
4	2.4	-1.3	-2.2	-2.1	-2.0	-1.8	-2.0	-1.6	-1.7	-1.7	-1.5	-1.5	-1.3	-0.8	-0.8	-0.8	-1.9	-1.9	-0.8	-0.5	0.1	-0.2	0.6	0.4	-1.0	2.4	-2.2
5	-1.1	-1.6	-0.7	-1.8	-0.7	-1.6	-0.9	--	--	0.8	0.2	--	--	0.2	0.5	0.3	0.1	0.5	3.1	1.9	2.8	1.4	1.8	2.2	0.4	3.1	-1.8
6	0.6	0.4	0.4	1.4	2.3	2.3	1.5	1.5	1.7	1.2	1.3	0.4	0.5	-0.3	0.7	-0.4	-0.3	1.8	1.7	0.8	1.2	1.2	0.5	0.3	0.9	2.3	-0.4
7	0.2	0.8	0.2	0.7	1.0	1.4	1.5	1.6	1.8	1.9	1.0	1.1	1.2	1.0	1.1	0.5	0.2	0.1	0.5	2.7	1.8	1.1	0.2	-0.1	1.0	2.7	-0.1
8	-0.2	1.3	1.2	0.9	0.5	1.5	1.3	0.7	1.1	1.2	1.7	1.1	0.9	0.0	0.5	0.1	0.1	0.7	2.4	3.3	2.6	2.0	1.5	1.8	1.2	3.3	-0.2
9	1.6	1.0	0.7	0.3	0.6	0.5	6.2	8.0	0.7	0.7	0.5	0.6	0.6	0.1	0.5	0.5	-0.1	-0.4	-0.4	-0.1	1.7	0.3	0.2	0.2	1.0	8.0	-0.4
10	0.3	-0.2	1.2	1.0	1.4	1.0	1.3	2.9	8.4	0.0	0.3	0.0	-0.2	-0.2	-0.2	-0.3	-0.3	-0.3	-0.5	-0.4	-0.3	0.1	-0.1	-0.3	0.6	8.4	-0.5
11	-0.3	-0.2	-0.7	-0.2	-0.6	-0.1	1.9	2.5	8.0	0.4	0.3	0.3	0.1	0.0	0.7	0.1	-0.3	-0.1	-0.5	-0.5	-0.5	-0.4	-0.4	-0.4	0.4	8.0	-0.7
12	0.0	1.2	3.7	2.9	0.1	5.2	3.2	0.3	0.8	0.5	0.3	0.3	0.2	0.1	0.1	-0.1	-0.1	-0.1	0.4	2.2	0.6	1.1	6.3	0.9	1.3	6.3	-0.1
13	0.2	-0.1	-0.1	-0.2	1.1	9.5	12.8	7.6	8.3	2.8	2.1	0.5	0.3	0.2	0.4	--	0.5	0.1	0.0	-0.1	-0.4	1.0	4.0	7.7	2.5	12.8	-0.4
14	3.8	1.7	1.6	10.4	1.4	1.4	2.1	7.8	6.4	1.4	0.4	0.3	-0.1	0.1	0.0	-0.1	0.1	0.2	1.0	2.3	1.2	1.3	1.2	1.1	2.0	10.4	-0.1
15	0.7	0.3	0.1	0.2	6.7	6.5	6.8	6.5	7.0	1.5	0.7	0.6	1.0	0.7	0.2	0.2	0.2	-0.1	-0.2	-0.3	-0.2	0.6	-0.2	-0.2	1.6	7.0	-0.3
16	-0.2	-0.4	-0.2	-0.2	0.0	-0.1	-0.1	0.3	0.4	0.5	0.2	0.3	-0.1	-0.2	-0.3	-0.1	0.0	0.4	0.5	-0.1	-0.2	-0.4	-0.5	-0.6	0.0	0.5	-0.6
17	-0.6	0.2	-0.3	-0.5	5.1	6.8	-0.6	0.0	0.9	0.9	0.5	0.4	0.2	0.3	0.2	0.0	-0.1	0.5	1.0	1.7	2.2	2.0	1.8	0.7	1.0	6.8	-0.6
18	0.3	0.1	0.3	0.3	0.9	1.1	0.6	0.8	1.0	2.0	1.2	1.0	1.0	0.9	0.8	0.8	1.3	2.3	2.6	2.6	1.3	0.9	1.5	1.3	1.1	2.6	0.1
19	1.1	0.5	0.9	0.9	0.8	0.9	1.0	1.0	1.3	2.0	2.7	2.7	1.8	0.9	2.2	0.5	0.1	0.2	5.3	0.8	0.0	0.1	-0.1	-0.2	1.1	5.3	-0.2
20	-0.3	-0.3	-0.4	-0.4	-0.3	-0.3	-0.3	1.5	--	--	--	1.7	2.6	0.5	0.0	-0.3	-0.3	0.0	0.1	2.3	0.9	1.5	0.2	0.3	0.4	2.6	-0.4
21	0.5	-0.4	1.1	1.6	0.4	4.2	3.8	2.9	3.1	5.2	4.7	6.4	3.2	1.0	0.5	2.2	3.5	0.8	4.7	4.6	1.1	3.3	1.4	1.8	2.6	6.4	-0.4
22	0.4	0.6	0.1	0.0	1.0	0.6	0.2	0.5	1.6	0.4	1.5	1.8	0.7	1.1	0.5	0.3	0.4	1.6	1.6	6.4	6.0	4.4	3.0	0.4	1.5	6.4	0.0
23	0.2	0.1	0.5	0.6	0.8	1.0	1.0	1.8	2.1	0.6	1.0	1.3	1.3	0.9	0.4	-0.7	-0.8	-0.6	-0.3	-0.7	0.5	1.4	1.7	1.0	0.6	2.1	-0.8
24	3.0	2.3	3.1	1.8	-0.3	0.7	1.3	1.0	0.3	0.5	2.3	0.2	-0.3	-0.5	-0.3	0.1	1.0	5.4	9.3	2.9	-0.6	-0.5	1.1	0.5	1.4	9.3	-0.6
25	0.5	0.9	0.5	0.8	0.6	0.4	1.0	0.0	1.0	1.8	2.2	1.3	1.5	1.8	0.4	-0.4	-0.6	-0.1	0.7	1.4	1.3	2.7	0.2	0.9	0.9	2.7	-0.6
26	1.4	0.2	-0.1	-0.1	0.1	0.7	2.9	2.1	0.3	5.0	4.6	2.5	2.0	0.4	1.4	1.2	1.8	1.7	2.4	0.8	0.1	-0.2	-0.4	-0.3	1.3	5.0	-0.4
27	0.4	0.2	-0.5	-0.7	-0.5	-0.5	-0.2	0.9	1.6	1.0	1.1	0.4	0.1	0.0	0.2	0.2	-0.2	-0.4	0.4	1.3	0.6	2.0	2.3	1.1	0.5	2.3	-0.7
28	1.5	-0.1	-0.4	-0.4	-0.1	-0.2	-0.1	0.2	0.5	1.0	1.0	1.3	0.6	-0.1	0.1	0.7	0.5	-0.1	4.1	1.6	0.1	-0.3	-0.3	-0.4	0.4	4.1	-0.4
29	-0.3	-0.4	0.0	4.1	1.2	0.1	-0.6	0.6	1.9	6.7	1.1	1.1	-0.3	-0.3	-0.7	-0.7	-0.9	-0.7	1.0	0.1	0.5	-0.2	0.9	2.0	0.7	6.7	-0.9
30	0.6	5.9	2.7	0.0	0.4	1.4	0.9	0.9	0.9	7.5	0.0	-0.1	-0.2	-0.3	-0.6	-0.5	-0.6	-0.6	-0.8	-0.8	-0.8	0.5	0.5	1.5	0.8	7.5	-0.8
Avg	0.5	0.4	0.4	1.0	0.8	1.5	1.6	1.9	2.0	1.5	1.0	0.8	0.4	0.1	0.2	-0.1	0.0	0.3	1.2	1.1	0.7	0.9	1.1	0.7	0.8	--	--
Max	3.8	5.9	3.7	10.4	6.7	9.5	12.8	8.0	8.4	7.5	4.7	6.4	3.2	1.8	2.2	2.2	3.5	5.4	9.3	6.4	6.0	4.4	6.3	7.7	--	12.8	--
Min	-2.3	-2.1	-2.2	-2.1	-2.0	-1.8	-2.0	-1.8	-1.9	-1.7	-1.6	-1.8	-1.9	-1.7	-1.8	-2.0	-2.0	-2.2	-2.2	-2.3	-2.4	-2.3	-2.3	-2.3	--	--	-2.4

-- Indicates Invalid Data

SAROAD for Resolution, East_Plant
"Component, Channel: TableAmbient_Hourly, NO2_ppb"
Month: Dec 2014

Hour of day																											
Day	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Avg	Max	Min
1	0.7	1.9	0.8	0.8	1.3	1.7	1.6	2.5	2.7	0.9	2.5	3.1	2.5	2.6	0.9	0.4	1.7	2.6	3.1	1.6	-0.1	1.1	2.4	2.6	1.7	3.1	-0.1
2	1.2	0.3	0.1	0.1	1.1	0.3	0.3	1.3	1.9	1.7	--	--	--	3.0	1.4	2.0	0.1	2.2	0.0	0.8	0.8	0.9	0.9	2.0	1.1	3.0	0.0
3	2.2	1.7	3.2	2.6	2.5	2.7	2.4	2.2	3.0	2.1	3.0	1.1	1.4	1.8	0.3	0.2	0.3	3.3	4.2	2.1	2.4	3.0	3.5	3.4	2.3	4.2	0.2
4	0.9	0.8	0.3	0.8	-0.2	0.1	0.2	0.4	0.4	0.9	1.1	0.3	0.5	0.6	0.3	0.0	0.1	0.9	1.3	1.2	1.5	1.4	1.5	2.8	0.7	2.8	-0.2
5	2.1	2.0	1.4	1.7	2.5	1.4	1.5	1.8	1.0	1.7	1.7	2.2	1.5	1.7	1.7	1.5	1.3	1.6	1.7	1.2	1.3	1.4	0.9	1.5	1.6	2.5	0.9
6	1.7	1.3	1.2	0.9	0.6	0.8	1.0	0.9	9.3	0.8	0.7	1.5	1.2	1.8	1.1	0.1	1.3	1.9	1.7	1.3	0.7	0.5	0.5	0.8	1.4	9.3	0.1
7	1.7	1.3	1.4	0.5	-0.2	-0.5	0.6	1.4	0.1	0.5	1.0	1.4	1.5	0.8	0.6	0.6	0.8	0.9	1.2	0.9	0.7	0.8	0.5	0.7	0.8	1.7	-0.5
8	0.8	0.4	0.5	0.9	1.4	1.7	2.3	1.6	1.7	1.9	1.1	1.7	1.5	1.1	0.5	1.2	1.7	1.1	0.5	0.3	0.6	1.2	1.7	1.2	1.2	2.3	0.3
9	1.0	0.9	1.2	1.6	1.5	2.2	1.8	1.6	1.6	1.8	2.2	2.0	1.8	--	--	--	1.7	3.6	3.3	0.8	-0.1	0.7	0.3	0.6	1.5	3.6	-0.1
10	0.7	0.4	0.4	0.3	1.4	1.1	1.3	0.8	1.3	1.1	4.0	5.7	2.2	2.0	2.2	3.0	2.8	3.6	2.6	2.5	4.0	0.1	0.2	0.5	1.8	5.7	0.1
11	1.3	1.8	6.5	3.8	1.7	2.5	4.2	2.6	1.0	0.4	0.0	-0.2	0.5	1.0	0.2	-0.5	-0.3	-0.5	1.8	2.6	0.3	-0.3	-0.7	-0.9	1.2	6.5	-0.9
12	-0.9	-1.1	-1.1	-1.3	-1.2	-1.0	-1.1	1.1	1.9	2.1	0.1	-0.3	--	0.9	-0.5	0.0	1.4	0.4	-1.1	-1.0	-1.0	0.3	8.1	7.9	0.5	8.1	-1.3
13	1.3	-1.4	-1.6	-1.7	-1.6	-1.7	-1.8	-1.8	-1.9	-1.9	-1.5	-1.5	-1.5	-1.6	-1.4	-1.4	-1.3	-1.2	-1.1	-0.8	-1.2	-1.2	-1.0	-1.2	-1.3	1.3	-1.9
14	-1.0	-1.1	-1.0	1.9	4.3	5.2	4.1	3.4	5.5	2.4	0.1	-0.5	-0.6	-1.0	-1.0	-1.2	-1.0	-1.0	-1.0	-0.3	2.6	1.0	0.1	0.4	0.8	5.5	-1.2
15	0.5	0.4	-0.5	-0.1	-0.1	-0.3	0.2	0.4	0.5	0.2	1.1	0.2	0.0	-0.3	-0.7	-0.4	-0.2	0.5	0.1	1.1	0.7	2.2	0.2	-0.1	0.2	2.2	-0.7
16	1.0	0.3	0.6	-0.5	0.3	1.1	2.9	1.6	1.4	0.5	0.2	-0.4	-0.4	-0.1	-0.1	0.6	0.7	0.8	1.5	2.0	0.6	-0.5	0.9	7.3	0.9	7.3	-0.5
17	9.4	9.7	16.4	17.0	4.6	3.8	3.7	1.7	0.1	-0.6	-0.8	-1.0	-1.1	-1.1	-0.9	-0.8	-1.3	-1.4	-0.9	0.7	1.0	0.1	1.2	2.7	2.6	17.0	-1.4
18	-1.1	-1.3	-0.5	-0.7	-1.2	-1.4	-1.2	-1.0	-0.2	0.8	-1.1	-0.7	-1.3	-1.1	-0.9	-0.9	-1.1	-0.6	-0.6	-0.9	-0.2	0.0	-0.3	3.1	-0.6	3.1	-1.4
19	-0.4	-0.8	0.2	1.2	-0.5	-0.8	-0.5	-0.7	-0.5	--	--	-1.2	-1.6	-2.4	-2.4	-2.8	-3.0	-2.2	-1.3	-1.4	-1.2	-2.1	-2.4	-2.1	-1.3	1.2	-3.0
20	-3.1	-1.8	-2.0	-2.4	-3.0	-2.9	-2.3	-3.0	-2.6	-2.8	-2.3	-1.4	-1.7	-2.5	-2.6	-2.3	-2.4	-2.3	-2.3	-1.3	-2.2	-2.5	0.0	-0.8	-2.2	0.0	-3.1
21	-1.8	-2.6	-2.7	-3.0	-2.7	-2.6	-2.4	-2.5	0.9	-1.0	-1.0	-0.8	-0.2	0.3	-0.8	-1.2	-0.9	-1.1	-0.7	-0.6	-0.3	-1.2	-1.1	-0.8	-1.3	0.9	-3.0
22	-0.8	-0.3	-0.6	-0.7	-0.3	-0.3	-0.7	0.1	1.3	1.4	0.9	1.1	1.2	0.8	0.1	0.0	-0.2	-0.2	-0.3	-0.3	-0.3	-0.3	-0.4	0.5	0.1	1.4	-0.8
23	1.1	0.8	0.0	-1.1	-2.2	-2.5	-1.4	2.3	2.0	-2.5	-2.6	-2.8	-2.8	-3.0	-2.9	-3.3	-3.4	-3.5	-3.7	-3.0	-2.0	-2.7	-2.4	-2.9	-1.9	2.3	-3.7
24	-2.7	-3.2	-3.4	-3.3	-3.7	-3.7	-3.6	-3.6	-3.4	-3.6	-2.9	-3.1	-3.1	-3.1	-3.3	-3.0	-1.5	-0.1	-0.9	-1.5	-2.8	-3.4	-3.4	-3.5	-2.9	-0.1	-3.7
25	-3.6	-3.4	-3.5	-3.3	-3.3	-3.1	-3.5	-3.5	-3.3	-3.4	-3.4	-3.5	-3.4	-3.2	-2.4	-1.0	-1.4	-1.2	-1.8	-1.2	-2.1	-2.4	-1.7	-1.2	-2.7	-1.0	-3.6
26	-1.3	-1.6	-1.7	-1.5	-1.0	-2.3	-3.0	-3.1	-2.8	-3.6	-3.3	-2.9	-3.3	-3.5	-3.7	-3.7	-3.3	-3.1	-1.8	-0.2	-0.4	-0.6	-1.3	-1.7	-2.3	-0.2	-3.7
27	-2.6	-2.5	-2.3	-2.1	-2.2	-3.2	-3.6	-3.7	-3.5	-3.5	-3.1	-2.8	-3.0	-3.0	-3.1	-3.3	-3.1	-2.8	-2.9	-2.1	-2.8	-3.2	-2.9	-1.3	-2.9	-1.3	-3.7
28	-3.2	-3.6	-3.6	-3.5	-3.6	-3.2	-3.4	-3.3	-3.3	-3.0	-2.7	-2.8	-2.9	-2.9	-2.4	-2.9	-3.1	-2.9	-2.2	-2.2	-2.1	-2.7	-3.2	-3.3	-3.0	-2.1	-3.6
29	-3.6	-3.6	-3.8	-3.6	-3.5	-3.1	-3.4	-3.3	-2.6	-1.7	-3.3	-3.3	-1.9	-2.1	-2.8	-3.2	-2.5	-2.6	-2.5	-2.6	-2.9	-3.3	-3.2	-3.5	-3.0	-1.7	-3.8
30	-3.6	-3.7	-3.6	-3.6	-3.5	-3.3	-2.5	-0.8	-2.0	-3.1	--	-3.6	-3.4	-3.7	-3.8	-3.7	-3.6	-3.5	-3.8	-3.3	-3.3	-3.1	-2.9	-2.8	-3.2	-0.8	-3.8
31	-1.6	-2.2	-2.3	-3.0	-3.2	-3.2	-3.0	-0.3	0.4	0.1	-2.3	-1.6	-2.2	-2.7	-3.4	-3.5	-3.4	-3.3	-3.4	-3.3	-3.4	-3.4	-3.4	-3.4	-2.5	0.4	-3.5
Avg	-0.1	-0.3	0.0	0.0	-0.5	-0.5	-0.3	-0.1	0.4	-0.3	-0.4	-0.5	-0.6	-0.6	-1.0	-1.0	-0.7	-0.3	-0.3	-0.2	-0.4	-0.6	-0.2	0.3	-0.3	--	--
Max	9.4	9.7	16.4	17.0	4.6	5.2	4.2	3.4	9.3	2.4	4.0	5.7	2.5	3.0	2.2	3.0	2.8	3.6	4.2	2.6	4.0	3.0	8.1	7.9	--	17.0	--
Min	-3.6	-3.7	-3.8	-3.6	-3.7	-3.7	-3.6	-3.7	-3.5	-3.6	-3.4	-3.6	-3.4	-3.7	-3.8	-3.7	-3.6	-3.5	-3.8	-3.3	-3.4	-3.4	-3.4	-3.5	--	--	-3.8

-- Indicates Invalid Data

SAROAD for Resolution, East_Plant
"Component, Channel: TableAmbient_Hourly, SO2_ppb"
Month: Oct 2014

Hour of day																											
Day	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Avg	Max	Min
1	0.2	0.1	0.2	0.2	0.1	0.2	0.2	0.2	1.3	2.0	1.1	0.3	0.6	0.4	0.3	0.3	0.4	0.3	0.3	0.2	0.3	0.2	0.2	0.2	0.4	2.0	0.1
2	0.2	0.2	0.1	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.1	0.0	0.1	0.9	0.5	0.0	-0.1	0.0	0.0	0.1	0.0	0.1	0.1	0.9	-0.1
3	0.0	0.1	0.1	0.1	0.0	0.0	0.1	0.1	0.0	0.1	0.4	1.0	0.3	0.1	0.0	-0.4	-0.6	0.0	-0.1	0.1	0.3	0.6	1.0	1.9	0.2	1.9	-0.6
4	0.9	0.3	0.1	0.1	0.0	0.0	0.0	0.1	0.3	0.4	0.8	0.9	0.8	0.4	0.1	0.1	0.1	0.1	0.2	0.1	0.1	0.0	0.1	0.1	0.3	0.9	0.0
5	0.1	0.1	0.2	0.2	0.1	0.2	0.2	0.1	0.2	0.2	0.9	1.1	0.7	0.3	0.2	0.1	0.0	0.2	0.2	0.2	0.1	0.2	0.1	0.0	0.2	1.1	0.0
6	0.1	0.1	0.1	0.1	0.1	0.1	-0.2	0.0	0.1	0.0	0.1	0.1	0.2	0.6	1.6	1.5	0.7	0.3	0.3	0.2	0.2	0.2	0.2	0.1	0.3	1.6	-0.2
7	0.1	0.1	0.0	0.0	0.1	0.1	0.0	--	--	4.1	4.0	3.2	3.4	3.7	1.7	1.3	1.2	1.1	1.1	1.0	0.9	0.8	0.8	0.8	1.3	4.1	0.0
8	0.7	0.8	0.7	0.6	0.6	0.6	0.5	0.5	0.5	0.5	0.4	0.4	0.5	0.4	0.5	0.6	0.6	0.6	0.5	0.7	0.6	0.5	0.4	0.1	0.5	0.8	0.1
9	0.4	0.4	0.4	0.4	0.5	0.5	0.5	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.5	0.4	0.4	0.5	0.4	0.3	0.4	0.4	0.4	0.5	0.3
10	0.4	0.4	0.4	0.4	0.3	0.3	0.4	0.2	0.3	0.4	0.5	0.4	0.4	0.5	--	0.1	0.6	0.6	0.5	0.7	0.6	0.5	0.5	0.5	0.4	0.7	0.1
11	0.5	0.4	0.4	0.4	0.4	0.5	0.5	0.5	1.8	5.0	3.9	1.9	1.3	1.1	1.3	1.2	1.0	0.9	0.8	0.7	0.3	0.4	0.5	0.5	1.1	5.0	0.3
12	0.6	0.6	0.6	0.6	0.5	0.5	0.6	0.5	0.6	1.6	3.2	1.7	1.0	0.7	0.6	0.6	0.5	0.5	0.6	0.6	0.6	0.7	0.6	0.4	0.8	3.2	0.4
13	0.4	0.4	0.4	0.4	0.3	0.3	0.6	1.1	1.1	0.6	1.0	0.9	0.7	0.7	0.7	0.6	0.7	0.7	0.7	0.5	0.5	0.7	0.7	0.5	0.6	1.1	0.3
14	0.5	0.6	1.2	1.6	1.1	2.4	2.4	1.3	1.6	1.7	0.5	0.5	0.5	0.4	0.4	0.4	0.4	0.4	0.4	0.2	0.3	0.3	0.7	0.6	0.9	2.4	0.2
15	0.5	0.4	0.5	2.9	1.0	0.5	0.5	0.4	0.4	0.4	0.2	0.4	0.5	0.5	0.5	0.6	0.7	0.6	0.6	0.5	0.5	0.5	0.6	0.6	0.6	2.9	0.2
16	0.5	0.5	0.5	0.6	0.7	0.4	0.5	0.5	0.7	1.2	0.8	1.1	4.1	3.0	1.4	0.7	0.6	0.5	0.5	0.6	0.6	0.5	0.5	0.5	0.9	4.1	0.4
17	0.5	0.5	0.6	0.5	0.5	0.5	0.5	0.5	0.5	0.6	--	--	--	--	0.3	0.5	0.6	0.5	0.8	0.5	0.4	0.5	0.5	0.5	0.5	0.8	0.3
18	0.5	0.4	0.3	0.4	0.5	0.3	0.3	0.5	0.5	0.5	0.5	0.4	0.4	0.5	0.8	0.8	0.6	0.5	0.5	0.5	0.4	0.4	0.3	0.4	0.5	0.8	0.3
19	0.4	0.4	0.4	0.5	0.5	0.5	0.7	0.7	0.7	0.7	0.7	0.6	0.6	0.5	0.6	0.5	0.2	0.2	0.2	0.3	0.3	0.3	0.3	0.3	0.5	0.7	0.2
20	0.4	0.3	0.2	0.3	0.3	0.3	0.2	0.4	0.3	0.2	0.2	0.2	0.3	0.3	0.4	0.3	0.3	0.1	0.3	0.3	0.3	0.3	0.2	0.3	0.3	0.4	0.1
21	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.2	0.2	0.3	0.2	0.3	0.2	0.3	0.3	0.2	0.3	0.4	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.4	0.2
22	0.3	0.4	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.2	0.3	0.2	0.3	0.2	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.2	0.3	0.4	0.2
23	0.2	0.2	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.3	0.2	0.3	0.2	0.2	0.3	0.3	0.3	0.3	0.3	0.2	0.4	0.3	0.3	0.2	0.3	0.4	0.2
24	0.1	0.2	0.2	0.2	0.2	0.1	0.2	0.3	0.3	0.3	0.2	0.2	0.2	0.3	0.3	0.4	0.5	0.4	0.3	0.2	0.3	0.2	0.2	0.3	0.3	0.5	0.1
25	0.3	0.2	0.3	0.3	0.5	0.3	0.3	0.2	0.3	0.3	0.4	0.5	0.6	0.7	0.8	1.1	1.0	1.0	1.0	0.8	0.6	0.8	0.7	0.5	0.6	1.1	0.2
26	0.5	0.5	0.5	0.5	0.5	0.4	0.4	0.4	1.3	1.7	2.1	1.9	0.9	0.6	0.4	0.5	0.5	0.4	0.5	0.5	0.5	0.5	0.5	0.4	0.7	2.1	0.4
27	0.4	0.4	0.4	0.4	0.3	0.3	0.3	0.3	0.4	0.4	0.4	0.3	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.3	0.3	0.4	0.4	0.4	0.3
28	0.3	0.4	0.3	0.3	0.3	0.4	0.3	0.4	0.4	0.3	0.3	0.5	0.8	0.8	0.8	0.8	0.9	1.0	1.0	0.8	0.6	0.6	0.3	0.2	0.5	1.0	0.2
29	0.3	0.3	0.3	0.3	0.3	0.2	0.2	0.3	0.3	0.2	0.3	0.3	0.3	0.3	0.4	0.3	0.3	0.3	0.3	0.2	0.3	0.3	0.3	0.3	0.3	0.4	0.2
30	0.3	0.3	0.3	0.2	0.3	0.3	0.2	0.3	0.2	0.2	0.4	0.4	0.3	0.4	--	0.6	0.6	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.6	0.2
31	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.3	0.2	0.4	0.5	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.5	0.6	0.8	0.8	0.8	0.5	0.8	0.2
Avg	0.4	0.3	0.4	0.4	0.4	0.4	0.4	0.4	0.5	0.8	0.8	0.7	0.7	0.6	0.6	0.5	0.5	0.5	0.5	0.4	0.4	0.4	0.4	0.4	0.5	--	--
Max	0.9	0.8	1.2	2.9	1.1	2.4	2.4	1.3	1.8	5.0	4.0	3.2	4.1	3.7	1.7	1.5	1.2	1.1	1.1	1.0	0.9	0.8	1.0	1.9	--	5.0	--
Min	0.0	0.1	0.0	0.0	0.0	0.0	-0.2	0.0	0.0	0.0	0.0	0.0	-0.1	0.0	0.0	-0.4	-0.6	0.0	-0.1	0.0	0.0	0.0	0.0	0.0	--	--	-0.6

-- Indicates Invalid Data

SAROAD for Resolution, East_Plant
"Component, Channel: TableAmbient_Hourly, SO2_ppb"
Month: Nov 2014

Hour of day																												
Day	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Avg	Max	Min	
1	0.8	0.8	0.6	1.3	2.6	3.7	4.3	5.3	1.2	0.9	0.7	0.7	0.7	0.7	0.7	0.6	0.5	0.5	0.4	0.4	0.4	0.4	0.4	0.5	1.2	5.3	0.4	
2	0.5	0.4	0.5	0.5	0.5	0.5	0.5	0.4	0.4	0.4	0.4	0.4	0.5	0.5	0.4	0.5	0.5	0.5	0.5	0.4	0.5	0.4	0.4	0.3	0.4	0.5	0.3	
3	0.4	0.4	0.3	0.3	0.3	0.4	0.3	0.4	0.3	0.3	0.2	0.2	0.4	0.5	0.3	0.3	0.5	0.4	0.4	0.4	0.5	0.4	0.3	0.4	0.4	0.5	0.2	
4	0.4	0.3	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.5	0.3	0.3	0.3	0.3	0.3	0.4	0.5	0.3	
5	0.3	0.3	0.4	0.3	0.3	0.3	0.3	0.3	0.3	--	--	0.2	--	--	0.2	0.4	0.0	1.1	0.4	0.1	0.1	0.3	0.4	0.3	0.3	1.1	0.0	
6	0.3	-0.5	0.2	0.3	0.3	0.3	0.2	0.1	0.1	0.0	0.3	0.2	0.2	0.3	0.1	0.2	0.2	0.3	0.3	0.2	0.2	0.3	0.2	0.2	0.2	0.3	-0.5	
7	0.3	0.1	0.2	0.2	0.3	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.3	0.4	0.4	0.4	0.3	0.3	0.4	0.3	0.4	0.3	0.3	0.3	0.3	0.4	0.1	
8	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.2	0.1	0.3	0.3	0.4	0.3	0.3	0.3	0.4	0.3	0.4	0.3	0.4	0.3	0.3	0.2	0.3	0.4	0.1	
9	0.3	0.3	0.3	0.3	0.3	0.4	0.5	0.5	0.3	0.3	0.1	0.3	0.4	0.4	0.4	0.4	0.6	0.8	0.9	0.8	0.7	0.7	0.7	0.6	0.5	0.9	0.1	
10	0.6	0.6	0.5	0.5	0.7	1.2	2.9	3.7	1.9	0.6	0.7	1.0	1.2	0.8	0.6	0.5	0.5	0.5	0.5	0.4	0.5	0.5	0.5	0.4	0.9	3.7	0.4	
11	0.5	0.5	0.5	0.4	0.5	0.6	0.4	0.5	0.6	0.4	0.4	0.7	0.6	0.5	0.4	0.2	0.3	0.5	0.5	0.4	0.4	0.3	0.4	0.4	0.5	0.7	0.2	
12	0.4	0.4	0.4	0.4	0.5	0.4	0.3	0.5	1.0	1.5	1.1	0.8	0.5	0.5	0.4	0.4	0.4	0.4	0.3	0.3	0.3	0.4	0.3	0.3	0.5	1.5	0.3	
13	0.4	0.4	0.3	0.3	0.6	0.8	0.6	1.5	1.5	1.0	1.3	0.8	1.0	1.1	0.8	--	--	0.4	0.4	0.4	0.3	0.4	0.4	0.4	0.7	1.5	0.3	
14	0.4	0.3	0.4	0.4	0.5	0.5	0.5	0.6	1.0	1.0	0.7	0.8	1.0	1.0	0.9	0.6	0.6	0.5	0.6	0.5	0.4	0.4	0.5	0.5	0.6	1.0	0.3	
15	0.5	0.5	0.5	0.4	0.5	0.4	0.4	0.4	0.4	0.3	0.3	0.3	0.4	0.5	0.5	0.4	0.4	0.4	0.4	0.4	0.5	0.4	0.4	0.4	0.4	0.5	0.3	
16	0.5	0.5	0.4	0.3	0.4	0.4	0.4	0.4	0.3	0.4	0.4	0.2	0.1	0.3	0.3	0.3	0.3	0.3	0.4	0.3	0.3	0.4	0.3	0.4	0.3	0.5	0.1	
17	0.3	0.3	0.3	0.4	0.4	0.2	0.2	0.3	0.3	0.2	0.3	0.2	0.2	0.3	0.3	0.2	0.2	0.3	0.2	0.3	0.4	0.3	0.3	0.5	0.3	0.5	0.2	
18	0.6	0.4	0.4	0.4	0.4	0.3	0.3	0.4	0.4	0.3	0.3	0.4	0.4	0.4	0.4	0.4	0.4	0.3	0.3	0.3	0.3	0.3	0.2	0.3	0.4	0.6	0.2	
19	0.4	0.3	0.3	0.3	0.3	0.3	0.3	0.2	0.1	0.3	0.3	0.3	0.3	0.3	0.4	0.4	0.3	0.3	0.4	0.5	0.5	0.5	0.5	0.6	0.3	0.6	0.1	
20	0.6	0.6	0.5	0.5	0.5	0.6	0.6	0.5	--	--	--	1.9	1.6	2.7	4.6	2.9	2.2	3.3	3.3	2.5	2.5	2.2	2.0	1.5	1.8	4.6	0.5	
21	1.1	0.8	0.9	1.0	1.8	2.2	3.7	3.6	2.3	1.1	1.0	1.0	1.0	0.8	0.6	0.8	0.9	1.6	1.2	0.8	0.8	0.7	1.0	0.7	1.3	3.7	0.6	
22	0.7	0.5	0.7	0.7	0.5	0.4	0.4	0.6	0.6	0.6	0.7	1.0	0.7	1.3	1.6	1.0	0.8	0.8	0.8	0.7	0.7	0.7	0.7	0.7	0.7	1.6	0.4	
23	0.7	0.6	0.7	0.7	0.7	0.7	0.7	0.7	0.6	0.6	0.8	0.6	0.8	0.7	0.6	0.5	0.5	0.5	0.6	0.5	0.5	0.4	0.1	0.1	0.6	0.8	0.1	
24	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.4	0.5	0.5	0.5	0.5	0.4	0.5	0.6	0.5	0.4	0.4	0.4	0.3	0.5	0.6	0.3	
25	0.4	0.4	0.5	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.5	0.5	0.5	0.5	0.4	0.4	0.3	0.4	0.4	0.4	0.4	0.5	0.3	
26	0.4	0.4	0.2	0.4	0.4	0.4	0.4	0.4	0.4	0.5	0.5	0.5	0.4	0.4	0.4	0.5	0.5	0.5	0.5	0.4	0.5	0.3	0.3	0.4	0.4	0.5	0.2	
27	0.4	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.6	0.5	0.4	0.5	0.5	0.5	0.6	0.4	
28	0.5	0.4	0.5	0.5	0.5	0.5	0.5	0.5	0.6	0.6	0.5	0.6	0.6	0.5	0.6	0.6	0.7	1.0	1.1	1.0	0.8	0.9	1.0	2.8	0.7	2.8	0.4	
29	5.3	3.0	1.9	1.7	1.6	2.8	0.8	1.4	1.1	0.8	0.7	1.0	1.1	1.9	1.9	1.3	0.7	0.6	0.6	0.7	0.6	0.7	0.7	0.6	1.4	5.3	0.6	
30	0.9	2.3	2.7	1.3	1.2	1.4	1.5	2.2	4.4	5.4	2.6	1.7	2.0	2.0	1.8	1.0	0.5	0.7	0.6	0.6	0.5	0.5	0.5	0.5	1.6	5.4	0.5	
Avg	0.6	0.6	0.6	0.5	0.6	0.7	0.8	0.9	0.8	0.7	0.6	0.6	0.6	0.7	0.7	0.6	0.5	0.6	0.6	0.5	0.5	0.5	0.5	0.5	0.6	--	--	
Max	5.3	3.0	2.7	1.7	2.6	3.7	4.3	5.3	4.4	5.4	2.6	1.9	2.0	2.7	4.6	2.9	2.2	3.3	3.3	2.5	2.5	2.2	2.0	2.8	--	5.4	--	
Min	0.3	-0.5	0.2	0.2	0.3	0.2	0.2	0.1	0.1	0.0	0.1	0.2	0.1	0.3	0.1	0.2	0.0	0.3	0.2	0.1	0.1	0.3	0.1	0.1	--	--	-0.5	

-- Indicates Invalid Data

SAROAD for Resolution, East_Plant
"Component, Channel: TableAmbient_Hourly, SO2_ppb"
Month: Dec 2014

Hour of day																											
Day	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Avg	Max	Min
1	0.6	0.6	0.6	0.6	0.6	0.5	0.5	0.6	0.5	0.5	0.6	0.8	0.9	1.1	0.9	0.8	0.8	0.7	0.6	0.7	0.7	0.7	0.7	0.8	0.7	1.1	0.5
2	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.7	0.7	0.7	0.7	0.7	--	0.5	0.9	1.2	2.0	2.5	1.6	1.1	0.9	0.8	0.7	0.7	0.9	2.5	0.5
3	0.5	0.6	0.6	0.6	0.7	0.7	0.6	0.8	0.7	0.7	0.6	0.5	0.7	0.7	0.7	0.8	0.8	0.8	0.8	1.0	0.9	0.9	0.9	0.8	0.7	1.0	0.5
4	1.0	0.7	0.6	0.6	0.6	0.7	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.5	0.3	0.5	0.6	0.6	0.6	0.6	0.6	0.5	0.5	0.6	1.0	0.3
5	0.6	0.5	0.6	0.5	0.4	0.5	0.6	0.5	0.4	0.4	0.5	0.6	0.5	0.6	0.6	0.5	0.5	0.5	0.6	0.6	0.6	0.5	0.5	0.5	0.5	0.6	0.4
6	0.5	0.5	0.6	0.6	0.5	0.6	0.6	0.5	0.8	0.4	0.5	0.5	0.5	0.5	0.5	0.5	0.6	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.8	0.4
7	0.5	0.4	0.5	0.5	0.6	0.6	0.5	0.4	0.3	0.5	0.6	0.7	0.9	0.9	0.6	0.6	0.7	0.6	0.8	0.7	1.3	1.0	0.7	0.6	0.7	1.3	0.3
8	1.1	1.3	1.5	1.2	1.5	1.5	1.9	1.9	1.1	0.8	0.5	0.5	0.6	0.5	0.5	0.6	0.5	0.6	0.7	0.6	0.6	0.6	0.9	0.9	0.9	1.9	0.5
9	1.2	0.7	0.7	0.6	0.7	0.9	0.8	1.3	1.1	1.1	0.7	0.6	0.6	0.7	0.7	--	0.6	0.6	0.5	0.6	0.6	0.6	0.6	0.6	0.7	1.3	0.5
10	1.1	1.6	1.2	0.9	0.9	1.0	1.1	1.2	1.0	1.0	1.3	1.5	1.1	0.8	1.1	1.1	1.1	1.6	1.1	1.2	0.8	0.7	0.7	0.7	1.1	1.6	0.7
11	0.5	0.6	0.6	0.6	0.6	0.6	0.9	0.9	1.0	0.9	1.1	0.8	0.9	1.7	1.3	1.4	1.3	1.4	1.2	1.0	1.1	1.1	1.1	1.2	1.0	1.7	0.5
12	1.2	1.4	1.5	1.2	1.2	1.1	0.9	0.7	0.8	0.9	1.0	0.7	--	0.5	1.5	2.0	2.0	3.6	3.2	2.0	0.8	0.7	0.7	0.6	1.3	3.6	0.5
13	0.6	0.6	0.4	0.5	0.5	0.6	0.6	0.6	0.4	0.4	0.5	0.5	0.5	0.6	0.5	0.6	0.6	0.6	0.6	0.6	0.5	0.6	0.6	0.6	0.5	0.6	0.4
14	0.6	0.6	0.5	0.5	0.6	0.5	0.5	0.6	0.6	0.5	0.5	0.6	0.5	0.6	0.6	0.6	0.6	0.6	0.6	0.5	0.6	0.5	0.5	0.5	0.5	0.6	0.5
15	0.6	0.6	0.5	0.6	0.6	0.5	0.6	0.7	1.5	2.0	1.3	0.8	1.2	0.7	0.8	0.7	1.0	1.1	0.9	0.7	0.7	0.7	0.7	0.7	0.8	2.0	0.5
16	0.7	0.7	0.7	0.8	0.8	0.8	0.7	0.8	0.8	0.8	0.8	1.0	0.8	0.8	0.9	0.9	1.3	1.2	1.2	1.1	1.1	0.9	1.0	1.0	0.9	1.3	0.7
17	1.0	1.1	1.0	0.8	0.6	0.7	0.7	0.6	0.6	0.6	0.6	0.5	0.6	0.6	0.6	0.5	0.6	0.6	0.5	0.5	0.5	0.6	0.6	0.6	0.6	1.1	0.5
18	0.6	0.4	0.6	0.6	0.6	0.6	0.6	0.5	0.6	0.6	0.6	0.6	0.6	0.6	0.7	0.7	0.6	0.6	0.6	0.5	0.6	0.6	0.5	0.4	0.6	0.7	0.4
19	0.4	0.5	0.5	0.6	0.5	0.6	0.5	0.5	0.5	0.5	--	--	--	1.1	0.4	0.3	0.3	0.3	0.3	0.7	1.4	1.1	1.9	4.7	0.8	4.7	0.3
20	1.8	1.9	2.0	1.5	1.7	0.9	0.6	0.4	0.4	0.8	1.4	2.7	1.2	0.7	0.7	0.8	0.8	0.7	0.6	0.5	0.2	0.4	0.4	0.4	1.0	2.7	0.2
21	0.5	0.5	0.4	0.4	0.4	0.4	0.4	0.3	1.2	2.5	0.4	0.4	0.4	0.7	0.9	1.1	1.2	0.8	0.6	0.5	0.4	0.4	0.4	0.4	0.7	2.5	0.3
22	0.4	0.4	0.3	0.4	0.3	0.3	0.3	0.3	0.3	0.4	0.4	0.4	0.4	0.5	0.6	0.5	0.5	0.4	0.4	0.4	0.3	0.4	0.4	0.4	0.4	0.6	0.3
23	0.4	0.4	0.4	0.3	0.4	0.3	0.3	0.4	0.4	0.2	0.2	0.3	0.2	0.2	0.2	0.3	0.2	0.2	0.2	0.2	0.2	0.3	-0.1	0.3	0.3	0.4	-0.1
24	0.3	0.3	1.7	0.9	0.3	0.6	0.4	0.3	0.7	0.4	0.5	0.5	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.4	0.4	0.4	0.3	0.4	0.5	1.7	0.3
25	0.4	0.4	0.6	0.8	1.3	1.3	1.3	1.1	1.1	0.8	0.6	0.6	0.6	0.5	0.5	0.5	0.5	0.6	0.5	0.5	0.4	0.4	0.4	0.4	0.7	1.3	0.4
26	0.5	0.4	0.4	0.4	0.4	0.4	0.4	0.3	0.3	0.3	0.1	0.1	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.5	0.1
27	0.2	0.1	0.3	0.3	0.3	0.2	0.3	0.2	0.2	0.2	0.2	0.3	0.2	0.3	0.3	0.2	0.3	0.3	0.2	0.2	0.1	0.2	0.2	0.2	0.2	0.3	0.1
28	0.2	0.2	0.2	0.2	0.2	0.1	0.2	0.2	0.2	0.1	0.2	0.3	0.3	0.3	0.3	0.4	0.4	0.4	0.5	0.4	0.4	0.3	0.3	0.4	0.3	0.5	0.1
29	0.3	0.3	0.4	0.3	0.5	0.5	0.6	0.9	0.8	0.7	1.1	1.0	2.0	3.4	2.2	2.2	3.2	4.2	4.1	3.3	3.3	1.9	2.0	1.0	1.7	4.2	0.3
30	0.7	0.6	0.6	0.7	1.7	2.5	2.8	2.3	2.0	1.3	--	0.3	0.5	0.5	0.6	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.5	0.9	2.8	0.3
31	0.5	0.7	0.6	0.6	1.2	2.7	1.2	1.1	0.7	0.7	0.5	0.4	0.3	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.3	0.2	0.3	0.4	0.6	2.7	0.2
Avg	0.7	0.7	0.7	0.6	0.7	0.8	0.7	0.7	0.7	0.7	0.6	0.7	0.7	0.7	0.7	0.7	0.8	0.9	0.8	0.7	0.7	0.6	0.6	0.7	0.7	--	--
Max	1.8	1.9	2.0	1.5	1.7	2.7	2.8	2.3	2.0	2.5	1.4	2.7	2.0	3.4	2.2	2.2	3.2	4.2	4.1	3.3	3.3	1.9	2.0	4.7	--	4.7	--
Min	0.2	0.1	0.2	0.2	0.2	0.1	0.2	0.2	0.2	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.2	-0.1	0.2	--	--	-0.1

-- Indicates Invalid Data

SAROAD for Resolution, East_Plant, rolling 8-hour average
"Component, Channel: TableAmbient_Hourly, O3_ppm"
Month: Oct 2014

Hour of day																											
Day	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Avg	Max	Min
1	0.053	0.052	0.052	0.052	0.052	0.052	0.053	0.054	0.056	0.057	0.058	0.059	0.060	0.061	0.061	0.062	0.063	0.063	0.063	0.062	0.061	0.059	0.057	0.056	0.057	0.063	0.052
2	0.053	0.051	0.050	0.049	0.048	0.048	0.048	0.049	0.051	0.052	0.053	0.054	0.054	0.054	0.054	0.054	0.053	0.053	0.052	0.052	0.052	0.053	0.052	0.051	0.052	0.054	0.048
3	0.050	0.049	0.049	0.049	0.049	0.050	0.051	0.052	0.054	0.055	0.056	0.057	0.057	0.057	0.056	0.056	0.054	0.053	0.051	0.049	0.048	0.046	0.046	0.044	0.052	0.057	0.044
4	0.043	0.044	0.044	0.045	0.047	0.049	0.051	0.054	0.056	0.058	0.059	0.061	0.062	0.063	0.064	0.064	0.065	0.066	0.066	0.066	0.064	0.063	0.061	0.060	0.057	0.066	0.043
5	0.057	0.054	0.053	0.052	0.052	0.052	0.052	0.053	0.054	0.056	0.057	0.058	0.059	0.059	0.059	0.058	0.058	0.057	0.056	0.055	0.054	0.053	0.053	0.053	0.055	0.059	0.052
6	0.053	0.052	0.051	0.050	0.049	0.050	0.050	0.050	0.051	0.053	0.054	0.055	0.056	0.056	0.055	0.054	0.053	0.053	0.051	0.050	0.049	0.048	0.048	0.048	0.052	0.056	0.048
7	0.048	0.048	0.046	0.045	0.045	0.046	0.046	0.047	0.049	0.051	0.055	0.057	0.059	0.060	0.061	0.060	0.059	0.057	0.053	0.049	0.045	0.041	0.038	0.037	0.050	0.061	0.037
8	0.037	0.037	0.038	0.038	0.039	0.040	0.039	0.038	0.037	0.035	0.034	0.034	0.033	0.032	0.031	0.030	0.029	0.029	0.028	0.028	0.028	0.028	0.029	0.033	0.040	0.028	
9	0.030	0.031	0.033	0.034	0.036	0.037	0.038	0.040	0.041	0.042	0.043	0.044	0.044	0.045	0.043	0.041	0.038	0.036	0.033	0.030	0.028	0.026	0.026	0.026	0.036	0.045	0.026
10	0.027	0.027	0.029	0.031	0.035	0.038	0.041	0.043	0.047	0.051	0.054	0.056	0.058	0.060	0.061	0.060	0.059	0.058	0.056	0.054	0.052	0.049	0.047	0.046	0.047	0.061	0.027
11	0.045	0.044	0.044	0.044	0.044	0.046	0.048	0.050	0.053	0.055	0.057	0.059	0.061	0.060	0.059	0.057	0.056	0.054	0.052	0.051	0.049	0.049	0.050	0.051	0.052	0.061	0.044
12	0.051	0.051	0.052	0.054	0.055	0.055	0.056	0.056	0.058	0.059	0.058	0.057	0.056	0.055	0.054	0.053	0.051	0.049	0.048	0.047	0.046	0.045	0.044	0.043	0.052	0.059	0.043
13	0.043	0.043	0.042	0.042	0.042	0.042	0.042	0.043	0.044	0.045	0.045	0.045	0.045	0.044	0.043	0.042	0.041	0.040	0.040	0.039	0.040	0.040	0.040	0.041	0.042	0.045	0.039
14	0.040	0.040	0.040	0.040	0.041	0.041	0.042	0.043	0.044	0.046	0.047	0.047	0.047	0.047	0.046	0.045	0.044	0.043	0.043	0.042	0.041	0.041	0.041	0.041	0.043	0.047	0.040
15	0.041	0.041	0.041	0.041	0.042	0.042	0.043	0.044	0.045	0.046	0.048	0.048	0.048	0.047	0.046	0.045	0.045	0.044	0.042	0.042	0.042	0.041	0.042	0.043	0.044	0.048	0.041
16	0.042	0.041	0.041	0.042	0.042	0.044	0.045	0.047	0.049	0.052	0.054	0.056	0.057	0.058	0.059	0.058	0.057	0.056	0.054	0.051	0.049	0.047	0.046	0.050	0.059	0.041	
17	0.044	0.042	0.041	0.041	0.040	0.040	0.040	0.040	--	--	--	--	--	--	0.039	0.039	0.038	0.038	0.037	0.036	0.036	0.035	0.034	0.034	0.039	0.044	0.034
18	0.033	0.033	0.033	0.034	0.034	0.035	0.036	0.037	0.039	0.041	0.042	0.043	0.043	0.043	0.042	0.042	0.042	0.039	0.038	0.037	0.036	0.036	0.037	0.038	0.038	0.043	0.033
19	0.038	0.040	0.042	0.045	0.047	0.049	0.051	0.052	0.052	0.052	0.052	0.051	0.050	0.049	0.048	0.047	0.046	0.045	0.044	0.042	0.042	0.042	0.041	0.041	0.046	0.052	0.038
20	0.039	0.039	0.039	0.039	0.039	0.039	0.040	0.040	0.042	0.043	0.044	0.044	0.044	0.044	0.043	0.043	0.042	0.040	0.039	0.038	0.038	0.037	0.036	0.035	0.040	0.044	0.035
21	0.034	0.034	0.034	0.034	0.035	0.036	0.037	0.038	0.039	0.041	0.041	0.041	0.041	0.040	0.040	0.039	0.039	0.038	0.038	0.037	0.037	0.037	0.037	0.036	0.038	0.041	0.034
22	0.035	0.035	0.034	0.035	0.035	0.037	0.038	0.040	0.042	0.044	0.046	0.048	0.048	0.048	0.047	0.046	0.045	0.044	0.043	0.042	0.041	0.040	0.040	0.039	0.041	0.048	0.034
23	0.037	0.037	0.037	0.036	0.037	0.038	0.039	0.041	0.044	0.045	0.047	0.048	0.048	0.048	0.047	0.045	0.044	0.044	0.043	0.041	0.041	0.041	0.041	0.040	0.042	0.048	0.036
24	0.040	0.040	0.039	0.039	0.040	0.041	0.042	0.043	0.045	0.045	0.047	0.049	0.049	0.050	0.049	0.048	0.048	0.047	0.046	0.044	0.043	0.042	0.041	0.041	0.044	0.050	0.039
25	0.040	0.039	0.039	0.039	0.040	0.039	0.040	0.040	0.041	0.041	0.042	0.042	0.041	0.041	0.042	0.043	0.043	0.043	0.042	0.042	0.041	0.041	0.040	0.039	0.041	0.043	0.039
26	0.038	0.037	0.037	0.037	0.037	0.038	0.039	0.039	0.040	0.042	0.043	0.043	0.043	0.042	0.041	0.041	0.042	0.042	0.041	0.040	0.038	0.037	0.037	0.034	0.040	0.043	0.034
27	0.031	0.029	0.029	0.029	0.030	0.031	0.032	0.034	0.036	0.038	0.039	0.041	0.043	0.045	0.046	0.046	0.047	0.047	0.047	0.046	0.045	0.044	0.044	0.044	0.039	0.047	0.029
28	0.043	0.042	0.042	0.042	0.043	0.043	0.045	0.046	0.048	0.050	0.051	0.053	0.054	0.054	0.054	0.053	0.052	0.051	0.049	0.048	0.046	0.045	0.044	0.043	0.048	0.054	0.042
29	0.042	0.042	0.041	0.041	0.041	0.041	0.042	0.044	0.045	0.046	0.047	0.047	0.047	0.047	0.046	0.045	0.044	0.043	0.043	0.042	0.041	0.041	0.040	0.040	0.043	0.047	0.040
30	0.039	0.039	0.039	0.040	0.040	0.041	0.041	0.042	0.042	0.043	0.043	0.043	0.042	0.041	0.040	0.039	0.039	0.037	0.037	0.036	0.035	0.035	0.035	0.035	0.039	0.043	0.035
31	0.036	0.036	0.037	0.038	0.040	0.041	0.042	0.044	0.045	0.046	0.047	0.048	0.047	0.047	0.046	0.045	0.044	0.042	0.040	0.039	0.037	0.036	0.035	0.034	0.041	0.048	0.034
Avg	0.041	0.041	0.041	0.041	0.042	0.043	0.044	0.045	0.046	0.048	0.049	0.050	0.050	0.050	0.049	0.048	0.048	0.047	0.046	0.044	0.043	0.043	0.042	0.042	0.045	--	--
Max	0.057	0.054	0.053	0.054	0.055	0.055	0.056	0.056	0.058	0.059	0.059	0.061	0.062	0.063	0.064	0.064	0.065	0.066	0.066	0.066	0.064	0.063	0.061	0.060	--	0.066	--
Min	0.027	0.027	0.029	0.029	0.030	0.031	0.032	0.034	0.036	0.035	0.034	0.034	0.033	0.032	0.031	0.030	0.029	0.029	0.028	0.028	0.028	0.026	0.026	0.026	--	--	0.026

-- Indicates Invalid Data

SAROAD for Resolution, East_Plant, rolling 8-hour average
"Component, Channel: TableAmbient_Hourly, O3_ppm"
Month: Nov 2014

Hour of day																											
Day	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Avg	Max	Min
1	0.033	0.033	0.034	0.034	0.036	0.036	0.037	0.038	0.039	0.038	0.037	0.036	0.035	0.035	0.034	0.033	0.033	0.033	0.033	0.034	0.035	0.036	0.037	0.038	0.035	0.039	0.033
2	0.039	0.040	0.040	0.040	0.040	0.040	0.040	0.041	0.042	0.043	0.044	0.046	0.047	0.047	0.046	0.045	0.045	0.045	0.044	0.043	0.042	0.041	0.041	0.041	0.043	0.047	0.039
3	0.039	0.039	0.040	0.040	0.042	0.044	0.046	0.048	0.050	0.051	0.051	0.051	0.051	0.050	0.050	0.048	0.046	0.044	0.043	0.042	0.041	0.040	0.039	0.039	0.045	0.051	0.039
4	0.039	0.039	0.039	0.038	0.039	0.039	0.040	0.041	0.042	0.044	0.045	0.045	0.045	0.045	0.044	0.043	0.042	0.041	0.040	0.039	0.039	0.038	0.038	0.038	0.041	0.045	0.038
5	0.037	0.037	0.037	0.037	0.036	0.037	--	--	--	--	--	--	--	--	--	0.040	0.040	0.040	0.040	0.040	0.039	0.039	0.038	0.038	--	--	--
6	0.038	0.037	0.037	0.037	0.038	0.039	0.041	0.042	0.043	0.045	0.045	0.046	0.045	0.045	0.044	0.043	0.042	0.042	0.042	0.042	0.042	0.042	0.042	0.042	0.042	0.046	0.037
7	0.042	0.041	0.041	0.041	0.042	0.043	0.044	0.045	0.047	0.048	0.050	0.051	0.051	0.051	0.051	0.050	0.049	0.048	0.046	0.045	0.044	0.044	0.043	0.042	0.046	0.051	0.041
8	0.041	0.040	0.040	0.040	0.040	0.040	0.041	0.042	0.043	0.043	0.044	0.044	0.044	0.043	0.042	0.041	0.041	0.040	0.039	0.039	0.039	0.040	0.040	0.040	0.041	0.044	0.039
9	0.039	0.039	0.039	0.039	0.040	0.040	0.041	0.042	0.044	0.044	0.045	0.046	0.046	0.046	0.045	0.045	0.044	0.044	0.043	0.043	0.043	0.043	0.043	0.042	0.043	0.046	0.039
10	0.042	0.041	0.041	0.042	0.043	0.044	0.046	0.048	0.049	0.051	0.050	0.049	0.049	0.048	0.047	0.047	0.046	0.046	0.046	0.045	0.045	0.045	0.044	0.043	0.046	0.051	0.041
11	0.041	0.039	0.039	0.039	0.039	0.039	0.039	0.041	0.043	0.044	0.044	0.044	0.043	0.043	0.043	0.042	0.042	0.041	0.041	0.040	0.039	0.039	0.038	0.036	0.041	0.044	0.036
12	0.036	0.035	0.035	0.036	0.037	0.037	0.038	0.039	0.040	0.040	0.041	0.041	0.040	0.040	0.039	0.037	0.036	0.035	0.034	0.033	0.033	0.033	0.031	0.030	0.036	0.041	0.030
13	0.028	0.027	0.027	0.026	0.027	0.027	0.030	0.033	0.035	0.038	0.039	0.040	0.040	0.040	0.039	0.038	0.035	0.033	0.032	0.031	0.029	0.028	0.027	0.027	0.032	0.040	0.026
14	0.026	0.026	0.027	0.027	0.028	0.029	0.030	0.032	0.034	0.036	0.036	0.036	0.036	0.035	0.035	0.035	0.035	0.035	0.035	0.036	0.037	0.036	0.035	0.033	0.033	0.037	0.026
15	0.032	0.030	0.031	0.031	0.031	0.033	0.035	0.038	0.040	0.043	0.044	0.045	0.045	0.046	0.046	0.046	0.046	0.045	0.044	0.043	0.041	0.040	0.039	0.038	0.040	0.046	0.030
16	0.037	0.036	0.035	0.036	0.037	0.039	0.040	0.041	0.043	0.045	0.046	0.046	0.046	0.046	0.046	0.046	0.045	0.045	0.045	0.045	0.045	0.044	0.043	0.043	0.043	0.046	0.035
17	0.043	0.043	0.043	0.042	0.042	0.043	0.044	0.044	0.044	0.045	0.045	0.045	0.045	0.045	0.044	0.043	0.042	0.042	0.041	0.041	0.041	0.041	0.041	0.041	0.043	0.045	0.041
18	0.041	0.041	0.041	0.041	0.042	0.042	0.043	0.043	0.044	0.044	0.044	0.044	0.043	0.043	0.043	0.043	0.043	0.043	0.043	0.044	0.045	0.045	0.044	0.044	0.043	0.045	0.041
19	0.044	0.043	0.043	0.042	0.041	0.041	0.041	0.041	0.041	0.042	0.043	0.043	0.043	0.043	0.043	0.043	0.043	0.042	0.042	0.043	0.043	0.043	0.043	0.043	0.042	0.044	0.041
20	0.042	0.042	0.042	--	--	--	--	--	--	--	0.048	0.048	0.047	0.047	0.047	0.046	0.046	0.045	0.044	0.044	0.043	0.043	0.043	0.042	--	--	--
21	0.042	0.041	0.039	0.038	0.037	0.037	0.038	0.038	0.038	0.039	0.040	0.041	0.041	0.041	0.041	0.040	0.039	0.039	0.038	0.039	0.039	0.039	0.039	0.039	0.039	0.042	0.037
22	0.039	0.039	0.039	0.039	0.039	0.040	0.041	0.042	0.043	0.045	0.046	0.047	0.047	0.047	0.047	0.047	0.047	0.047	0.047	0.047	0.048	0.049	0.050	0.050	0.045	0.050	0.039
23	0.049	0.048	0.048	0.048	0.048	0.049	0.049	0.049	0.049	0.049	0.049	0.048	0.047	0.046	0.045	0.043	0.042	0.042	0.041	0.040	0.039	0.039	0.038	0.038	0.045	0.049	0.038
24	0.039	0.039	0.040	0.040	0.041	0.041	0.041	0.041	0.041	0.042	0.041	0.040	0.040	0.041	0.041	0.041	0.041	0.041	0.042	0.043	0.043	0.042	0.041	0.041	0.041	0.043	0.039
25	0.041	0.041	0.040	0.040	0.040	0.040	0.041	0.041	0.042	0.042	0.043	0.043	0.043	0.043	0.043	0.042	0.042	0.041	0.040	0.040	0.040	0.039	0.039	0.039	0.041	0.043	0.039
26	0.039	0.039	0.038	0.038	0.037	0.037	0.037	0.037	0.037	0.037	0.036	0.036	0.036	0.036	0.035	0.035	0.035	0.035	0.035	0.035	0.035	0.035	0.036	0.036	0.036	0.036	0.035
27	0.036	0.036	0.036	0.036	0.036	0.036	0.036	0.037	0.038	0.039	0.039	0.040	0.040	0.040	0.040	0.040	0.039	0.039	0.038	0.038	0.038	0.038	0.038	0.038	0.038	0.040	0.036
28	0.038	0.038	0.038	0.037	0.037	0.037	0.038	0.038	0.038	0.039	0.039	0.039	0.039	0.039	0.038	0.038	0.038	0.038	0.038	0.038	0.038	0.038	0.038	0.038	0.038	0.039	0.037
29	0.038	0.037	0.036	0.036	0.037	0.038	0.039	0.039	0.040	0.040	0.042	0.041	0.041	0.040	0.039	0.039	0.038	0.037	0.036	0.036	0.036	0.036	0.036	0.036	0.038	0.042	0.036
30	0.037	0.037	0.037	0.039	0.039	0.040	0.041	0.042	0.043	0.044	0.044	0.044	0.043	0.042	0.042	0.041	0.040	0.039	0.039	0.038	0.038	0.037	0.037	0.036	0.040	0.044	0.036
Avg	0.039	0.038	0.038	0.038	0.038	0.039	0.040	0.041	0.042	0.043	0.043	0.044	0.043	0.043	0.043	0.042	0.041	0.041	0.040	0.040	0.040	0.040	0.039	0.039	0.041	--	--
Max	0.049	0.048	0.048	0.048	0.048	0.049	0.049	0.049	0.050	0.051	0.051	0.051	0.051	0.051	0.051	0.050	0.049	0.048	0.047	0.047	0.048	0.049	0.050	0.050	--	0.051	--
Min	0.026	0.026	0.027	0.026	0.027	0.027	0.030	0.032	0.034	0.036	0.036	0.036	0.035	0.035	0.034	0.033	0.033	0.033	0.032	0.031	0.029	0.028	0.027	0.027	--	--	0.026

-- Indicates Invalid Data

SAROAD for Resolution, East_Plant, rolling 8-hour average
"Component, Channel: TableAmbient_Hourly, O3_ppm"
Month: Dec 2014

Hour of day																											
Day	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Avg	Max	Min
1	0.036	0.035	0.036	0.035	0.035	0.035	0.036	0.036	0.037	0.038	0.038	0.038	0.038	0.038	0.039	0.038	0.038	0.038	0.039	0.039	0.040	0.040	0.040	0.040	0.038	0.040	0.035
2	0.040	0.039	0.038	0.038	0.037	0.037	0.036	0.036	0.036	0.037	0.037	0.038	0.039	0.039	0.038	0.038	0.038	0.037	0.036	0.035	0.034	0.032	0.031	0.029	0.036	0.040	0.029
3	0.029	0.028	0.027	0.027	0.027	0.027	0.028	0.028	0.029	0.029	0.028	0.027	0.027	0.026	0.025	0.024	0.022	0.022	0.023	0.024	0.024	0.025	0.026	0.026	0.026	0.029	0.022
4	0.027	0.027	0.027	0.028	0.029	0.030	0.031	0.032	0.033	0.034	0.035	0.035	0.035	0.034	0.034	0.033	0.031	0.029	0.028	0.026	0.025	0.024	0.023	0.023	0.030	0.035	0.023
5	0.023	0.024	0.026	0.027	0.028	0.029	0.029	0.030	0.031	0.031	0.031	0.031	0.032	0.032	0.032	0.032	0.032	0.031	0.031	0.030	0.030	0.030	0.029	0.029	0.030	0.032	0.023
6	0.029	0.029	0.029	0.029	0.029	0.029	0.029	0.029	0.030	0.031	0.031	0.031	0.032	0.032	0.033	0.034	0.035	0.035	0.036	0.037	0.037	0.038	0.038	0.038	0.033	0.038	0.029
7	0.037	0.037	0.037	0.037	0.036	0.036	0.036	0.037	0.039	0.040	0.041	0.041	0.042	0.043	0.043	0.042	0.041	0.040	0.039	0.038	0.036	0.035	0.034	0.033	0.038	0.043	0.033
8	0.033	0.033	0.033	0.033	0.034	0.034	0.035	0.037	0.037	0.038	0.039	0.039	0.040	0.040	0.040	0.039	0.039	0.038	0.038	0.038	0.037	0.037	0.037	0.037	0.037	0.040	0.033
9	0.037	0.037	0.037	0.036	0.037	0.037	0.037	0.038	0.038	--	--	--	--	--	--	0.038	0.038	0.037	0.036	0.035	0.035	0.034	0.034	0.033	0.036	0.038	0.033
10	0.033	0.032	0.032	0.031	0.031	0.032	0.033	0.034	0.035	0.036	0.037	0.038	0.039	0.038	0.037	0.036	0.035	0.034	0.033	0.031	0.030	0.029	0.028	0.027	0.033	0.039	0.027
11	0.026	0.025	0.025	0.027	0.029	0.032	0.034	0.038	0.042	0.045	0.048	0.048	0.048	0.048	0.048	0.048	0.048	0.047	0.046	0.046	0.047	0.047	0.047	0.046	0.041	0.048	0.025
12	0.045	0.044	0.043	0.042	0.041	0.040	0.039	0.037	0.036	0.035	0.034	0.034	0.034	0.034	0.034	0.032	0.031	0.031	0.031	0.031	0.031	0.031	0.031	0.032	0.036	0.045	0.031
13	0.035	0.037	0.039	0.040	0.042	0.044	0.045	0.047	0.047	0.047	0.046	0.046	0.045	0.045	0.045	0.044	0.044	0.044	0.043	0.043	0.041	0.038	0.035	0.032	0.042	0.047	0.032
14	0.030	0.027	0.026	0.026	0.028	0.030	0.033	0.036	0.039	0.042	0.044	0.044	0.043	0.041	0.039	0.038	0.036	0.034	0.033	0.032	0.031	0.031	0.031	0.031	0.034	0.044	0.026
15	0.031	0.031	0.031	0.031	0.031	0.032	0.033	0.034	0.035	0.036	0.036	0.037	0.037	0.037	0.037	0.037	0.036	0.036	0.035	0.034	0.034	0.034	0.033	0.032	0.034	0.037	0.031
16	0.032	0.031	0.031	0.031	0.031	0.032	0.033	0.034	0.036	0.036	0.036	0.036	0.036	0.036	0.036	0.035	0.032	0.031	0.030	0.029	0.027	0.026	0.024	0.023	0.032	0.036	0.023
17	0.025	0.027	0.029	0.032	0.035	0.037	0.039	0.041	0.042	0.043	0.043	0.043	0.042	0.041	0.040	0.040	0.039	0.038	0.038	0.038	0.038	0.039	0.039	0.039	0.038	0.043	0.025
18	0.039	0.039	0.038	0.038	0.038	0.038	0.038	0.039	0.040	0.041	0.042	0.042	0.042	0.040	0.039	0.037	0.034	0.033	0.032	0.032	0.031	0.031	0.032	0.032	0.037	0.042	0.031
19	0.033	0.033	0.033	0.033	0.033	0.033	0.033	--	--	--	--	--	--	--	0.033	0.033	0.033	0.032	0.031	0.032	0.032	0.033	0.033	0.033	--	--	--
20	0.032	0.032	0.032	0.032	0.033	0.033	0.034	0.035	0.036	0.036	0.037	0.037	0.036	0.036	0.035	0.034	0.033	0.033	0.032	0.032	0.032	0.032	0.032	0.032	0.034	0.037	0.032
21	0.032	0.032	0.031	0.032	0.032	0.033	0.034	0.036	0.037	0.039	0.040	0.040	0.041	0.040	0.041	0.040	0.040	0.040	0.039	0.039	0.038	0.038	0.037	0.036	0.037	0.041	0.031
22	0.035	0.034	0.033	0.034	0.034	0.035	0.036	0.037	0.039	0.041	0.042	0.043	0.043	0.043	0.043	0.042	0.042	0.041	0.040	0.038	0.036	0.035	0.035	0.034	0.038	0.043	0.033
23	0.033	0.034	0.034	0.036	0.037	0.038	0.039	0.041	0.042	0.043	0.044	0.044	0.044	0.043	0.043	0.042	0.042	0.041	0.041	0.040	0.040	0.040	0.041	0.041	0.040	0.044	0.033
24	0.041	0.041	0.042	0.042	0.042	0.042	0.042	0.042	0.041	0.041	0.040	0.039	0.038	0.038	0.038	0.037	0.037	0.037	0.038	0.038	0.039	0.039	0.039	0.040	0.040	0.042	0.037
25	0.040	0.040	0.040	0.041	0.041	0.042	0.042	0.043	0.043	0.043	0.043	0.042	0.042	0.041	0.041	0.040	0.039	0.038	0.037	0.036	0.035	0.034	0.034	0.034	0.040	0.043	0.034
26	0.035	0.035	0.035	0.036	0.036	0.037	0.038	0.038	0.038	0.039	0.039	0.039	0.038	0.038	0.037	0.035	0.034	0.034	0.033	0.032	0.032	0.032	0.032	0.032	0.036	0.039	0.032
27	0.033	0.033	0.033	0.033	0.033	0.033	0.034	0.034	0.034	0.035	0.035	0.036	0.036	0.035	0.035	0.035	0.034	0.034	0.033	0.033	0.033	0.034	0.034	0.034	0.034	0.036	0.033
28	0.034	0.034	0.034	0.034	0.034	0.035	0.036	0.036	0.037	0.037	0.038	0.038	0.038	0.037	0.036	0.036	0.035	0.035	0.035	0.036	0.036	0.037	0.037	0.037	0.036	0.038	0.034
29	0.037	0.037	0.036	0.036	0.037	0.037	0.037	0.038	0.039	0.040	0.041	0.040	0.040	0.040	0.040	0.040	0.039	0.040	0.040	0.041	0.042	0.042	0.042	0.042	0.039	0.042	0.036
30	0.041	0.041	0.040	0.040	0.040	0.040	0.040	0.041	0.042	0.043	0.044	0.044	0.043	0.043	0.042	0.042	0.041	0.040	0.040	0.039	0.039	0.039	0.039	0.039	0.041	0.044	0.039
31	0.038	0.037	0.035	0.035	0.034	0.033	0.034	0.035	0.038	0.041	0.043	0.044	0.046	0.048	0.048	0.048	0.046	0.045	0.043	0.041	0.040	0.038	0.037	0.036	0.040	0.048	0.033
Avg	0.034	0.034	0.034	0.034	0.034	0.035	0.036	0.037	0.038	0.038	0.039	0.039	0.039	0.039	0.038	0.038	0.037	0.036	0.036	0.035	0.035	0.035	0.034	0.034	0.036	--	--
Max	0.045	0.044	0.043	0.042	0.042	0.044	0.045	0.047	0.047	0.047	0.048	0.048	0.048	0.048	0.048	0.048	0.048	0.047	0.046	0.046	0.047	0.047	0.047	0.046	--	0.048	--
Min	0.023	0.024	0.025	0.026	0.027	0.027	0.028	0.028	0.029	0.029	0.028	0.027	0.027	0.026	0.025	0.024	0.022	0.022	0.023	0.024	0.024	0.024	0.023	0.023	--	--	0.022

-- Indicates Invalid Data

SAROAD for Resolution, East_Plant
"Component, Channel: TableAmbient_Hourly, O3_ppm"
Month: Oct 2014

Hour of day

Day	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Avg	Max	Min
1	0.059	0.058	0.057	0.055	0.055	0.049	0.049	0.046	0.049	0.055	0.056	0.057	0.059	0.057	0.056	0.057	0.058	0.063	0.066	0.067	0.065	0.060	0.061	0.064	0.057	0.067	0.046
2	0.062	0.060	0.055	0.058	0.051	0.049	0.046	0.045	0.046	0.047	0.048	0.049	0.051	0.053	0.055	0.059	0.057	0.056	0.053	0.048	0.048	0.055	0.055	0.054	0.053	0.062	0.045
3	0.054	0.051	0.051	0.052	0.050	0.048	0.046	0.047	0.050	0.050	0.050	0.053	0.056	0.054	0.058	0.059	0.060	0.061	0.057	0.053	0.053	0.049	0.053	0.049	0.053	0.061	0.046
4	0.045	0.045	0.044	0.044	0.043	0.042	0.042	0.043	0.048	0.050	0.051	0.054	0.061	0.063	0.061	0.060	0.061	0.062	0.064	0.067	0.068	0.065	0.066	0.066	0.055	0.068	0.042
5	0.065	0.065	0.062	0.057	0.057	0.053	0.054	0.045	0.040	0.055	0.057	0.058	0.056	0.056	0.056	0.056	0.058	0.060	0.063	0.064	0.061	0.053	0.053	0.052	0.056	0.065	0.040
6	0.051	0.053	0.055	0.056	0.053	0.053	0.053	0.047	0.043	0.048	0.047	0.051	0.055	0.056	0.057	0.057	0.055	0.055	0.058	0.057	0.052	0.053	0.049	0.048	0.053	0.058	0.043
7	0.048	0.046	0.048	0.048	0.048	0.050	0.048	--	--	0.037	0.042	0.046	0.052	0.052	0.054	0.057	0.065	0.068	0.063	0.060	0.059	0.059	0.053	0.045	0.052	0.068	0.037
8	0.049	0.034	0.033	0.028	0.029	0.038	0.044	0.044	0.044	0.041	0.036	0.035	0.035	0.036	0.035	0.034	0.033	0.032	0.029	0.027	0.030	0.030	0.026	0.027	0.035	0.049	0.026
9	0.029	0.027	0.027	0.029	0.031	0.031	0.032	0.036	0.037	0.039	0.040	0.040	0.042	0.043	0.044	0.044	0.046	0.048	0.048	0.040	0.045	0.028	0.031	0.021	0.037	0.048	0.021
10	0.029	0.021	0.026	0.023	0.025	0.033	0.029	0.026	0.029	0.040	0.046	0.052	0.052	0.053	--	0.056	0.058	0.060	0.064	0.067	0.065	0.059	0.049	0.049	0.044	0.067	0.021
11	0.050	0.048	0.046	0.047	0.045	0.042	0.041	0.039	0.045	0.046	0.048	0.051	0.054	0.057	0.061	0.061	0.062	0.062	0.064	0.065	0.052	0.048	0.045	0.047	0.051	0.065	0.039
12	0.047	0.052	0.049	0.051	0.053	0.052	0.055	0.045	0.050	0.063	0.059	0.060	0.058	0.058	0.058	0.059	0.057	0.055	0.052	0.051	0.051	0.051	0.046	0.045	0.053	0.063	0.045
13	0.043	0.043	0.043	0.044	0.044	0.043	0.043	0.041	0.041	0.041	0.040	0.042	0.045	0.046	0.047	0.048	0.049	0.044	0.042	0.038	0.038	0.038	0.039	0.042	0.043	0.049	0.038
14	0.042	0.039	0.040	0.041	0.041	0.039	0.041	0.040	0.038	0.038	0.042	0.046	0.047	0.048	0.048	0.048	0.047	0.047	0.046	0.045	0.043	0.042	0.041	0.041	0.043	0.048	0.038
15	0.041	0.041	0.041	0.041	0.041	0.042	0.041	0.041	0.039	0.039	0.044	0.047	0.047	0.048	0.047	0.047	0.050	0.052	0.051	0.043	0.042	0.036	0.040	0.043	0.043	0.052	0.036
16	0.045	0.041	0.046	0.043	0.038	0.041	0.044	0.038	0.036	0.044	0.049	0.049	0.051	0.052	0.055	0.058	0.060	0.059	0.063	0.064	0.058	0.055	0.051	0.053	0.050	0.064	0.036
17	0.053	0.052	0.046	0.044	0.040	0.040	0.040	0.040	0.038	0.038	0.045	0.039	0.043	--	--	--	0.040	0.039	0.045	0.035	0.038	0.039	0.038	0.034	0.041	0.053	0.034
18	0.034	0.035	0.035	0.034	0.033	0.032	0.033	0.033	0.034	0.035	0.035	0.039	0.039	0.041	0.040	0.046	0.053	0.047	0.041	0.037	0.038	0.037	0.039	0.040	0.038	0.053	0.032
19	0.035	0.035	0.033	0.034	0.038	0.043	0.044	0.046	0.049	0.052	0.053	0.054	0.053	0.054	0.053	0.050	0.048	0.049	0.050	0.044	0.044	0.044	0.044	0.044	0.046	0.054	0.033
20	0.040	0.039	0.041	0.041	0.041	0.040	0.039	0.033	0.037	0.038	0.041	0.042	0.043	0.045	0.042	0.046	0.046	0.044	0.043	0.042	0.043	0.040	0.038	0.038	0.041	0.046	0.033
21	0.036	0.035	0.037	0.036	0.034	0.032	0.032	0.032	0.034	0.035	0.039	0.039	0.041	0.042	0.043	0.043	0.043	0.040	0.039	0.037	0.037	0.037	0.039	0.038	0.038	0.043	0.032
22	0.038	0.036	0.035	0.037	0.036	0.034	0.035	0.033	0.033	0.034	0.037	0.042	0.045	0.048	0.049	0.050	0.050	0.049	0.050	0.045	0.044	0.041	0.042	0.042	0.041	0.050	0.033
23	0.041	0.039	0.040	0.038	0.038	0.036	0.034	0.033	0.036	0.037	0.038	0.042	0.046	0.049	0.050	0.051	0.049	0.049	0.050	0.042	0.041	0.040	0.042	0.042	0.042	0.051	0.033
24	0.043	0.041	0.040	0.039	0.039	0.040	0.039	0.040	0.040	0.040	0.041	0.044	0.045	0.049	0.049	0.048	0.048	0.049	0.057	0.048	0.049	0.045	0.044	0.042	0.044	0.057	0.039
25	0.043	0.041	0.041	0.041	0.041	0.039	0.039	0.036	0.037	0.040	0.042	0.044	0.040	0.041	0.041	0.042	0.042	0.042	0.041	0.043	0.040	0.046	0.046	0.042	0.041	0.046	0.036
26	0.040	0.039	0.039	0.039	0.039	0.038	0.037	0.034	0.030	0.038	0.040	0.043	0.044	0.044	0.043	0.042	0.043	0.042	0.043	0.043	0.038	0.036	0.043	0.048	0.040	0.048	0.030
27	0.043	0.037	0.034	0.028	0.030	0.030	0.024	0.022	0.026	0.036	0.036	0.037	0.036	0.038	0.039	0.041	0.043	0.045	0.050	0.054	0.048	0.045	0.044	0.044	0.038	0.054	0.022
28	0.047	0.044	0.045	0.044	0.043	0.043	0.042	0.039	0.037	0.045	0.046	0.048	0.049	0.052	0.052	0.054	0.055	0.057	0.060	0.055	0.051	0.050	0.044	0.046	0.048	0.060	0.037
29	0.045	0.044	0.044	0.043	0.044	0.042	0.039	0.038	0.040	0.042	0.041	0.044	0.046	0.048	0.052	0.050	0.049	0.047	0.045	0.043	0.043	0.043	0.043	0.043	0.044	0.052	0.038
30	0.041	0.040	0.039	0.039	0.040	0.040	0.039	0.039	0.039	0.040	0.041	0.044	0.045	0.045	--	--	0.043	0.042	0.040	0.039	0.038	0.037	0.035	0.035	0.040	0.045	0.035
31	0.034	0.035	0.034	0.034	0.037	0.037	0.037	0.037	0.039	0.041	0.044	0.046	0.047	0.048	0.048	0.049	0.049	0.048	0.048	0.044	0.042	0.042	0.039	0.039	0.042	0.049	0.034
Avg	0.044	0.042	0.042	0.042	0.041	0.041	0.041	0.039	0.039	0.043	0.044	0.046	0.048	0.049	0.050	0.051	0.051	0.051	0.051	0.049	0.047	0.045	0.044	0.044	0.045	--	--
Max	0.065	0.065	0.062	0.058	0.057	0.053	0.055	0.047	0.050	0.063	0.059	0.060	0.061	0.063	0.061	0.061	0.065	0.068	0.066	0.067	0.068	0.065	0.066	0.066	--	0.068	--
Min	0.029	0.021	0.026	0.023	0.025	0.030	0.024	0.022	0.026	0.034	0.035	0.035	0.035	0.036	0.035	0.034	0.033	0.032	0.029	0.027	0.030	0.028	0.026	0.021	--	--	0.021

-- Indicates Invalid Data

SAROAD for Resolution, East_Plant
"Component, Channel: TableAmbient_Hourly, O3_ppm"
Month: Nov 2014

Hour of day

Day	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Avg	Max	Min
1	0.034	0.034	0.035	0.029	0.035	0.035	0.031	0.032	0.037	0.038	0.039	0.040	0.039	0.039	0.040	0.038	0.033	0.031	0.031	0.033	0.033	0.033	0.033	0.034	0.035	0.040	0.029
2	0.033	0.034	0.040	0.041	0.042	0.043	0.040	0.040	0.040	0.039	0.038	0.040	0.041	0.044	0.047	0.048	0.048	0.048	0.048	0.048	0.044	0.035	0.040	0.048	0.042	0.048	0.033
3	0.046	0.043	0.042	0.038	0.035	0.036	0.037	0.036	0.045	0.048	0.048	0.051	0.050	0.051	0.053	0.053	0.052	0.050	0.049	0.047	0.047	0.046	0.040	0.038	0.045	0.053	0.035
4	0.037	0.039	0.041	0.040	0.039	0.039	0.038	0.038	0.037	0.038	0.039	0.041	0.044	0.046	0.046	0.046	0.047	0.046	0.044	0.042	0.041	0.039	0.037	0.037	0.041	0.047	0.037
5	0.039	0.038	0.039	0.041	0.038	0.037	0.034	0.033	0.035	0.040	--	--	0.044	--	--	--	--	0.041	0.040	0.041	0.040	0.041	0.039	0.038	0.039	0.044	0.033
6	0.040	0.040	0.039	0.037	0.036	0.037	0.036	0.036	0.037	0.038	0.040	0.044	0.046	0.048	0.047	0.047	0.047	0.044	0.042	0.043	0.041	0.040	0.041	0.043	0.041	0.048	0.036
7	0.044	0.042	0.043	0.042	0.042	0.041	0.040	0.040	0.041	0.042	0.044	0.046	0.047	0.050	0.052	0.053	0.053	0.052	0.053	0.047	0.049	0.046	0.046	0.045	0.046	0.053	0.040
8	0.044	0.042	0.042	0.042	0.042	0.039	0.039	0.039	0.039	0.039	0.039	0.042	0.045	0.046	0.045	0.045	0.045	0.042	0.039	0.038	0.038	0.039	0.040	0.040	0.041	0.046	0.038
9	0.039	0.040	0.040	0.040	0.041	0.041	0.037	0.035	0.040	0.040	0.042	0.042	0.043	0.045	0.047	0.048	0.048	0.047	0.047	0.044	0.039	0.041	0.043	0.044	0.042	0.048	0.035
10	0.044	0.044	0.044	0.043	0.041	0.041	0.039	0.039	0.034	0.049	0.050	0.051	0.052	0.053	0.053	0.050	0.048	0.046	0.044	0.044	0.047	0.047	0.048	0.046	0.046	0.053	0.034
11	0.045	0.044	0.044	0.044	0.043	0.040	0.036	0.034	0.030	0.042	0.043	0.043	0.043	0.045	0.049	0.047	0.043	0.040	0.040	0.040	0.042	0.042	0.042	0.042	0.042	0.049	0.030
12	0.042	0.037	0.033	0.033	0.041	0.031	0.034	0.038	0.037	0.037	0.038	0.040	0.040	0.041	0.042	0.043	0.043	0.041	0.038	0.033	0.036	0.033	0.029	0.034	0.037	0.043	0.029
13	0.034	0.034	0.033	0.033	0.032	0.020	0.017	0.025	0.023	0.030	0.031	0.035	0.038	0.040	0.041	0.043	0.043	0.041	0.039	0.037	0.037	0.034	0.029	0.025	0.033	0.043	0.017
14	0.027	0.029	0.029	0.020	0.030	0.029	0.027	0.021	0.025	0.034	--	--	0.036	0.036	0.037	0.037	0.036	0.036	0.034	0.032	0.035	0.036	0.037	0.036	0.032	0.037	0.020
15	0.037	0.036	0.038	0.040	0.028	0.025	0.025	0.025	0.025	0.040	0.042	0.041	0.041	0.042	0.045	0.047	0.048	0.047	0.046	0.046	0.045	0.044	0.044	0.044	0.039	0.048	0.025
16	0.042	0.039	0.037	0.036	0.035	0.035	0.036	0.034	0.035	0.037	0.043	0.043	0.046	0.046	0.048	0.047	0.047	0.046	0.045	0.045	0.045	0.045	0.045	0.045	0.042	0.048	0.034
17	0.045	0.044	0.045	0.044	0.041	0.040	0.044	0.044	0.042	0.042	0.043	0.045	0.045	0.046	0.046	0.046	0.047	0.045	0.042	0.043	0.042	0.041	0.040	0.041	0.043	0.047	0.040
18	0.041	0.042	0.042	0.041	0.041	0.041	0.042	0.042	0.042	0.041	0.043	0.044	0.044	0.045	0.046	0.045	0.045	0.042	0.040	0.040	0.044	0.045	0.045	0.044	0.043	0.046	0.040
19	0.045	0.046	0.045	0.044	0.044	0.043	0.042	0.042	0.041	0.040	0.039	0.039	0.041	0.043	0.041	0.045	0.047	0.045	0.039	0.041	0.042	0.042	0.043	0.043	0.043	0.047	0.039
20	0.043	0.043	0.043	0.044	0.043	0.042	0.042	0.037	--	--	--	--	0.044	0.047	0.048	0.050	0.050	0.050	0.048	0.043	0.043	0.043	0.045	0.044	0.045	0.050	0.037
21	0.044	0.045	0.042	0.041	0.042	0.038	0.041	0.039	0.037	0.033	0.035	0.033	0.038	0.044	0.045	0.042	0.042	0.044	0.036	0.036	0.042	0.039	0.040	0.036	0.040	0.045	0.033
22	0.039	0.039	0.040	0.040	0.038	0.038	0.039	0.038	0.038	0.040	0.040	0.040	0.045	0.045	0.047	0.050	0.051	0.048	0.047	0.042	0.042	0.044	0.047	0.051	0.043	0.051	0.038
23	0.051	0.051	0.051	0.050	0.049	0.048	0.046	0.045	0.047	0.049	0.051	0.053	0.053	0.051	0.045	0.044	0.044	0.043	0.042	0.045	0.042	0.039	0.037	0.040	0.047	0.053	0.037
24	0.038	0.039	0.036	0.038	0.041	0.040	0.040	0.041	0.041	0.041	0.041	0.042	0.042	0.042	0.042	0.043	0.042	0.038	0.033	0.040	0.045	0.046	0.043	0.043	0.041	0.046	0.033
25	0.042	0.042	0.042	0.041	0.040	0.040	0.040	0.041	0.040	0.039	0.040	0.041	0.042	0.042	0.044	0.045	0.045	0.044	0.044	0.042	0.042	0.039	0.039	0.038	0.041	0.045	0.038
26	0.039	0.040	0.040	0.040	0.039	0.038	0.037	0.038	0.039	0.037	0.036	0.037	0.037	0.038	0.036	0.037	0.036	0.035	0.034	0.035	0.035	0.035	0.036	0.035	0.037	0.040	0.034
27	0.034	0.035	0.036	0.037	0.037	0.037	0.036	0.035	0.034	0.035	0.036	0.038	0.039	0.040	0.040	0.041	0.041	0.041	0.041	0.039	0.039	0.038	0.037	0.037	0.038	0.041	0.034
28	0.037	0.038	0.038	0.038	0.038	0.038	0.038	0.038	0.037	0.036	0.036	0.037	0.039	0.040	0.040	0.041	0.039	0.041	0.034	0.037	0.038	0.038	0.038	0.039	0.038	0.041	0.034
29	0.039	0.039	0.038	0.035	0.037	0.038	0.039	0.037	0.035	0.031	0.039	0.040	0.044	0.044	0.042	0.042	0.041	0.041	0.037	0.038	0.037	0.038	0.037	0.035	0.038	0.044	0.031
30	0.037	0.031	0.034	0.040	0.039	0.038	0.038	0.039	0.038	0.034	0.046	0.046	0.045	0.045	0.045	0.045	0.044	0.040	0.040	0.040	0.041	0.039	0.038	0.036	0.040	0.046	0.031
Avg	0.040	0.040	0.040	0.039	0.039	0.038	0.037	0.037	0.037	0.039	0.041	0.042	0.043	0.044	0.045	0.045	0.045	0.043	0.041	0.041	0.041	0.040	0.040	0.040	0.041	--	--
Max	0.051	0.051	0.051	0.050	0.049	0.048	0.046	0.045	0.047	0.049	0.051	0.053	0.053	0.053	0.053	0.053	0.053	0.052	0.053	0.048	0.049	0.047	0.048	0.051	--	0.053	--
Min	0.027	0.029	0.029	0.020	0.028	0.020	0.017	0.021	0.023	0.030	0.031	0.033	0.036	0.036	0.036	0.037	0.033	0.031	0.031	0.032	0.033	0.033	0.029	0.025	--	--	0.017

-- Indicates Invalid Data

SAROAD for Resolution, East_Plant
"Component, Channel: TableAmbient_Hourly, O3_ppm"
Month: Dec 2014

Hour of day

Day	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Avg	Max	Min
1	0.039	0.036	0.036	0.036	0.036	0.036	0.035	0.034	0.034	0.037	0.036	0.036	0.037	0.038	0.040	0.041	0.039	0.037	0.035	0.037	0.040	0.040	0.039	0.039	0.037	0.041	0.034
2	0.040	0.040	0.041	0.041	0.039	0.040	0.039	0.037	0.036	0.036	0.036	0.033	--	--	0.038	0.038	0.040	0.038	0.040	0.038	0.039	0.038	0.036	0.033	0.038	0.041	0.033
3	0.032	0.032	0.029	0.030	0.028	0.025	0.025	0.027	0.028	0.027	0.028	0.029	0.029	0.029	0.031	0.030	0.028	0.023	0.020	0.024	0.021	0.021	0.022	0.021	0.027	0.032	0.020
4	0.028	0.028	0.027	0.025	0.027	0.027	0.028	0.027	0.028	0.029	0.030	0.036	0.035	0.034	0.034	0.037	0.036	0.034	0.034	0.033	0.030	0.031	0.029	0.021	0.030	0.037	0.021
5	0.021	0.021	0.022	0.023	0.025	0.024	0.024	0.026	0.031	0.032	0.031	0.031	0.030	0.031	0.032	0.033	0.033	0.031	0.032	0.032	0.032	0.031	0.032	0.029	0.029	0.033	0.021
6	0.028	0.028	0.029	0.030	0.030	0.030	0.029	0.029	0.024	0.030	0.031	0.030	0.030	0.030	0.031	0.035	0.032	0.030	0.031	0.033	0.036	0.038	0.039	0.039	0.031	0.039	0.024
7	0.038	0.036	0.036	0.038	0.041	0.042	0.037	0.031	0.034	0.035	0.035	0.036	0.039	0.043	0.044	0.044	0.044	0.042	0.041	0.043	0.043	0.042	0.037	0.035	0.039	0.044	0.031
8	0.035	0.034	0.033	0.032	0.032	0.032	0.032	0.034	0.034	0.034	0.036	0.036	0.037	0.040	0.042	0.041	0.039	0.039	0.041	0.040	0.039	0.038	0.037	0.036	0.036	0.042	0.032
9	0.036	0.037	0.037	0.038	0.038	0.037	0.036	0.036	0.036	0.036	0.037	0.038	0.040	0.041	--	--	--	0.042	0.039	0.037	0.038	0.037	0.037	0.035	0.037	0.042	0.035
10	0.033	0.033	0.033	0.034	0.032	0.032	0.031	0.031	0.031	0.031	0.029	0.030	0.038	0.040	0.040	0.040	0.043	0.037	0.034	0.038	0.032	0.032	0.032	0.032	0.034	0.043	0.029
11	0.031	0.030	0.024	0.025	0.026	0.023	0.023	0.023	0.027	0.031	0.038	0.043	0.045	0.046	0.051	0.052	0.054	0.052	0.044	0.041	0.045	0.048	0.049	0.048	0.038	0.054	0.023
12	0.047	0.047	0.046	0.046	0.045	0.045	0.045	0.041	0.040	0.037	0.037	0.036	--	--	0.034	0.033	0.032	0.034	0.036	0.033	0.034	0.035	0.022	0.022	0.038	0.047	0.022
13	0.032	0.034	0.035	0.035	0.034	0.034	0.034	0.042	0.048	0.049	0.048	0.047	0.047	0.047	0.045	0.044	0.046	0.046	0.044	0.045	0.044	0.044	0.043	0.043	0.042	0.049	0.032
14	0.042	0.041	0.039	0.029	0.023	0.020	0.022	0.023	0.020	0.031	0.041	0.043	0.044	0.044	0.044	0.045	0.044	0.044	0.044	0.036	0.029	0.028	0.031	0.031	0.035	0.045	0.020
15	0.031	0.033	0.033	0.032	0.030	0.029	0.028	0.029	0.033	0.032	0.031	0.035	0.037	0.037	0.038	0.039	0.037	0.038	0.038	0.036	0.037	0.035	0.036	0.034	0.034	0.039	0.028
16	0.034	0.033	0.032	0.035	0.033	0.031	0.028	0.030	0.029	0.030	0.032	0.036	0.036	0.041	0.042	0.041	0.031	0.032	0.031	0.032	0.037	0.041	0.034	0.023	0.033	0.042	0.023
17	0.021	0.025	0.018	0.018	0.027	0.027	0.028	0.035	0.039	0.041	0.042	0.043	0.043	0.043	0.043	0.045	0.044	0.040	0.038	0.035	0.036	0.037	0.036	0.036	0.035	0.045	0.018
18	0.040	0.041	0.039	0.040	0.040	0.038	0.039	0.037	0.035	0.034	0.038	0.040	0.043	0.042	0.044	0.044	0.044	0.040	0.039	0.039	0.031	0.028	0.029	0.024	0.038	0.044	0.024
19	0.034	0.035	0.034	0.032	0.033	0.033	0.031	0.031	0.032	0.034	0.036	0.036	--	--	--	--	0.039	0.037	0.031	0.030	0.030	0.030	0.032	0.033	0.033	0.039	0.030
20	0.034	0.031	0.033	0.033	0.034	0.031	0.031	0.031	0.031	0.035	0.035	0.036	0.037	0.037	0.037	0.037	0.038	0.036	0.036	0.031	0.032	0.032	0.029	0.031	0.034	0.038	0.029
21	0.033	0.033	0.035	0.032	0.032	0.032	0.030	0.030	0.028	0.031	0.038	0.038	0.040	0.039	0.041	0.042	0.040	0.041	0.041	0.041	0.039	0.040	0.039	0.039	0.036	0.042	0.028
22	0.037	0.039	0.035	0.036	0.035	0.032	0.031	0.033	0.030	0.034	0.037	0.040	0.041	0.042	0.044	0.044	0.044	0.043	0.044	0.044	0.042	0.039	0.039	0.038	0.039	0.044	0.030
23	0.036	0.034	0.032	0.031	0.032	0.035	0.031	0.036	0.038	0.041	0.041	0.042	0.044	0.045	0.044	0.045	0.045	0.044	0.042	0.042	0.041	0.041	0.040	0.040	0.039	0.045	0.031
24	0.040	0.041	0.041	0.040	0.041	0.043	0.042	0.042	0.041	0.041	0.041	0.042	0.042	0.042	0.042	0.040	0.038	0.035	0.035	0.034	0.038	0.039	0.039	0.040	0.040	0.043	0.034
25	0.040	0.039	0.039	0.039	0.041	0.039	0.041	0.041	0.042	0.042	0.042	0.044	0.043	0.043	0.043	0.041	0.043	0.041	0.041	0.039	0.039	0.038	0.036	0.035	0.041	0.044	0.035
26	0.034	0.034	0.034	0.033	0.031	0.036	0.037	0.038	0.035	0.039	0.038	0.038	0.039	0.039	0.040	0.040	0.040	0.040	0.037	0.033	0.032	0.031	0.030	0.032	0.036	0.040	0.030
27	0.033	0.033	0.033	0.031	0.031	0.032	0.034	0.034	0.033	0.033	0.033	0.033	0.034	0.035	0.036	0.037	0.037	0.036	0.037	0.033	0.032	0.033	0.034	0.031	0.034	0.037	0.031
28	0.033	0.034	0.034	0.035	0.035	0.034	0.034	0.033	0.034	0.035	0.035	0.036	0.038	0.039	0.039	0.038	0.038	0.038	0.036	0.035	0.033	0.034	0.034	0.036	0.035	0.039	0.033
29	0.038	0.038	0.039	0.037	0.037	0.036	0.037	0.036	0.033	0.033	0.039	0.042	0.040	0.040	0.043	0.044	0.040	0.038	0.037	0.036	0.039	0.042	0.041	0.043	0.039	0.044	0.033
30	0.043	0.043	0.042	0.042	0.041	0.041	0.039	0.037	0.039	0.040	--	--	0.043	0.044	0.045	0.045	0.044	0.042	0.042	0.041	0.041	0.040	0.039	0.039	0.041	0.045	0.037
31	0.037	0.040	0.040	0.040	0.040	0.039	0.039	0.030	0.026	0.027	0.038	0.033	0.035	0.043	0.051	0.051	0.048	0.047	0.048	0.047	0.048	0.047	0.044	0.041	0.041	0.051	0.026
Avg	0.035	0.035	0.034	0.034	0.034	0.033	0.033	0.033	0.033	0.035	0.036	0.037	0.039	0.040	0.041	0.041	0.040	0.039	0.038	0.037	0.036	0.036	0.035	0.034	0.036	--	--
Max	0.047	0.047	0.046	0.046	0.045	0.045	0.045	0.042	0.048	0.049	0.048	0.047	0.047	0.047	0.051	0.052	0.054	0.052	0.048	0.047	0.048	0.048	0.049	0.048	--	0.054	--
Min	0.021	0.021	0.018	0.018	0.023	0.020	0.022	0.023	0.020	0.027	0.028	0.029	0.029	0.029	0.031	0.030	0.028	0.023	0.020	0.024	0.021	0.021	0.022	0.021	--	--	0.018

-- Indicates Invalid Data

Appendix D: West Plant Meteorological Site Check Forms

**WEST PLANT
MET SITE CHECK FORM**
Resolution
PROJECT NO. 262-1

Date: 10/03/2014

Time: 12:27

Operator: K. B. CO.

YES NO **

✓	
✓	
✓	
✓	
✓	
✓	
✓	
✓	
✓	
✓	

1. The tower is intact and upright.
2. The anemometer propeller and the wind direction vane are turning freely.
3. All temperature shields are intact, and the probes are inside their shields.
4. The aspirator fans are operating.
5. The solar radiation sensor is level and has been cleaned.
6. The solar panel is facing south and is clean.
7. The precipitation gauge is clean and free of bugs and dust.
8. The data logger is reading the correct time and day.
9. The site has been visually inspected for unusual wildlife occurrences (dead birds, etc.).
10. Estimate and document the parameters below.

AIR SCIENCES INC.
DENVER • PORTLAND

REVIEWED BY RPA DATE 10-14-14
AUDITED BY SG DATE 10/13/14

Parameter	Estimated	Logger	Audit
Speed 10m (m/s)	<u>6m/s</u>	<u>7.68</u>	<u>4.09</u>
Direction* 10m (deg)	<u>NE</u>	<u>44.98</u>	<u>50.9</u>
Ambient Temperature (°C)	<u>30°</u>	<u>31.49</u>	<u>31.4</u>
Relative Humidity (%)	<u>15%</u>	<u>10.97</u>	<u>11</u>
Aspirated Temp 2m	<u>30°</u>	<u>31.49</u>	<u>31.4</u>
Aspirated Temp 10m	<u>29°</u>	<u>30.00</u>	<u>29.9</u>
Delta Temperature (°C)	<u>N/A</u>	<u>-1.49</u>	<u>-1.18</u>
Solar Radiation (w/m ²)	<u>Sunny</u> Partly cloudy Cloudy	<u>878.75</u>	<u>879</u>
Barometric Pressure (mmHg)	<u>N/A</u>	<u>685.04</u>	<u>685</u>
Battery Voltage (V)	<u>N/A</u>	<u>12.72</u>	<u>12.7</u>
Time (MST)	<u>N/A</u>	<u>12:29</u>	<u>12:30 - L.T.</u>
Date	<u>N/A</u>	<u>10/03/2014</u>	<u>10/03/2014</u>

5.77 - 12:00
5.15 - 12:15
3.6 - 12:45
4.05 - 13:00

* 0.012" of precip. invalidated @ 12:45 hrs! SG

*Direction wind is from

Comments/Unusual Occurrences or Weather: Refilled w/vap. & aspirator gauge ✓ SG

When form is completed, please fax to Air Sciences Inc. @ 303-279-3796 (no cover sheet is necessary).

Site Operator Signature: K. B. CO.

**WEST PLANT
MET SITE CHECK FORM
Resolution
PROJECT NO. 262-1**

Date: 10/10/2014

Time: 1:29

Operator: K. B. C. O. d

YES NO **

✓	
✓	
✓	
✓	
✓	
✓	
✓	
✓	
✓	
✓	

1. The tower is intact and upright.
2. The anemometer propeller and the wind direction vane are turning freely.
3. All temperature shields are intact, and the probes are inside their shields.
4. The aspirator fans are operating.
5. The solar radiation sensor is level and has been cleaned.
6. The solar panel is facing south and is clean.
7. The precipitation gauge is clean and free of bugs and dust.
8. The data logger is reading the correct time and day.
9. The site has been visually inspected for unusual wildlife occurrences (dead birds, etc.).
10. Estimate and document the parameters below.



AIR SCIENCES INC.
DENVER • PORTLAND

REVIEWED BY RPA 10-17-14

AUDITED BY EG 10/13/14

Parameter	Estimated	Logger	Audit	
Speed 10m (m/s)	<u>2ms</u>	<u>1.84</u>	<u>2.28</u>	+
Direction* 10m (deg)	<u>W</u>	<u>245.14</u>	<u>255</u>	+
Ambient Temperature (°C)	<u>27°</u>	<u>25.22</u>	<u>25.3</u>	+
Relative Humidity (%)	<u>50%</u>	<u>55.43</u>	<u>56</u>	+
Aspirated Temp 2m	<u>27°</u>	<u>24.40</u>	<u>24.5</u>	+
Aspirated Temp 10m	<u>24°</u>	<u>23.62</u>	<u>23.8</u>	+
Delta Temperature (°C)	N/A	<u>-0.78</u>	<u>-0.703</u>	+
Solar Radiation (w/m²)	<u>Sunny</u> Partly cloudy Cloudy	<u>781.32</u>	<u>806</u>	+
Barometric Pressure (mmHg)	N/A	<u>682.98</u>	<u>683</u>	+
Battery Voltage (V)	N/A	<u>12.77</u>	<u>12.8</u>	+
Time (MST)	N/A	<u>1:32</u>	<u>13:30 L.T.</u>	+
Date	N/A	<u>10/10/2014</u>	<u>10/10/2014</u>	+

*Direction wind is from

Comments/Unusual Occurrences or Weather: _____

When form is completed, please fax to Air Sciences Inc. @ 303-279-3796 (no cover sheet is necessary).

Site Operator Signature: K B C O d

**WEST PLANT
MET SITE CHECK FORM
Resolution
PROJECT NO. 262-1**

Date: 10-23-2014

Time: 9:45 am

Operator: Kane Ballou

YES NO **

✓	
✓	
✓	
✓	
✓	
✓	
✓	
✓	
✓	
✓	

1. The tower is intact and upright.
2. The anemometer propeller and the wind direction vane are turning freely.
3. All temperature shields are intact, and the probes are inside their shields.
4. The aspirator fans are operating.
5. The solar radiation sensor is level and has been cleaned.
6. The solar panel is facing south and is clean.
7. The precipitation gauge is clean and free of bugs and dust.
8. The data logger is reading the correct time and day.
9. The site has been visually inspected for unusual wildlife occurrences (dead birds, etc.).
10. Estimate and document the parameters below.

	
AIR SCIENCES INC. DENVER, COLORADO	
REVIEWED BY <u>RPA</u>	DATE <u>4/2/14</u>
EDITED BY <u>GG</u>	DATE <u>11/3/14</u>

Parameter	Estimated	Logger	Audit
Speed 10m (m/s)	<u>5m/s</u>	<u>4.09</u>	<u>2.45</u>
Direction* 10m (deg)	<u>WSW</u>	<u>216.40</u>	<u>232</u>
Ambient Temperature (°C)	<u>28°</u>	<u>26.55</u>	<u>26.5</u>
Relative Humidity (%)	<u>30%</u>	<u>32.79</u>	<u>33</u>
Aspirated Temp 2m	<u>28°</u>	<u>25.41</u>	<u>25.5</u>
Aspirated Temp 10m	<u>27°</u>	<u>25.08</u>	<u>25.1</u>
Delta Temperature (°C)	N/A	<u>-0.33</u>	<u>-0.445</u>
Solar Radiation (w/m²)	<u>Sunny</u> Partly cloudy Cloudy	<u>588.06</u>	<u>569</u>
Barometric Pressure (mmHg)	N/A	<u>685.36</u>	<u>685</u>
Battery Voltage (V)	N/A	<u>12.77</u>	<u>12.8</u>
Time (MST)	N/A	<u>9:47</u>	<u>9:45 - L.T.</u>
Date	N/A	<u>10/23/2014</u>	<u>10/23/2014</u>

* 0.012" of precip. invalidated @ 9:45 hrs! GG-

*Direction wind is from

Comments/Unusual Occurrences or Weather: Noise monitoring performed - right at 85 decibels. ✓ GG-

When form is completed, please fax to Air Sciences Inc. @ 303-279-3796 (no cover sheet is necessary).

Site Operator Signature: Kane Ballou

**WEST PLANT
MET SITE CHECK FORM
Resolution
PROJECT NO. 262-1**

Date: 10/31/2014

Time: 12:23

Operator: Kami Ballard

YES NO **

✓	
✓	
✓	
✓	
✓	
✓	
✓	
✓	
✓	
✓	

1. The tower is intact and upright.
2. The anemometer propeller and the wind direction vane are turning freely.
3. All temperature shields are intact, and the probes are inside their shields.
4. The aspirator fans are operating.
5. The solar radiation sensor is level and has been cleaned.
6. The solar panel is facing south and is clean.
7. The precipitation gauge is clean and free of bugs and dust.
8. The data logger is reading the correct time and day.
9. The site has been visually inspected for unusual wildlife occurrences (dead birds, etc.).
10. Estimate and document the parameters below.

 AIR SCIENCES INC. DENVER • PORTLAND	
REVIEWED BY <u>R.A.A.</u>	DATE <u>11/3/14</u>
AUDITED BY <u>GG-</u>	DATE <u>11/3/14</u>

Parameter	Estimated	Logger	Audit
Speed 10m (m/s)	<u>3 m/s</u>	<u>3.68</u>	<u>3.63</u>
Direction* 10m (deg)	<u>NE</u>	<u>48.26</u>	<u>76.6</u>
Ambient Temperature (°C)	<u>31°</u>	<u>29.89</u>	<u>29.6</u>
Relative Humidity (%)	<u>20%</u>	<u>22.15</u>	<u>22.3</u>
Aspirated Temp 2m	<u>31°</u>	<u>29.73</u>	<u>29.1</u>
Aspirated Temp 10m	<u>30°</u>	<u>28.08</u>	<u>27.8</u>
Delta Temperature (°C)	<u>N/A</u>	<u>-1.65</u>	<u>-1.32</u>
Solar Radiation (w/m²)	<u>Sunny (Partly cloudy) Cloudy</u>	<u>710.42</u>	<u>718</u>
Barometric Pressure (mmHg)	<u>N/A</u>	<u>1081.86</u>	<u>682</u>
Battery Voltage (V)	<u>N/A</u>	<u>12.74</u>	<u>12.7</u>
Time (MST)	<u>N/A</u>	<u>12:25</u>	<u>12:30 - L.T.</u>
Date	<u>N/A</u>	<u>10/31/2014</u>	<u>10/31/2014</u>

GG
 + 62.1 - 12:00
 + 80.8 + 12:15
 + 116 - 12:45
 + 135 - 13:00

*Direction wind is from

Comments/Unusual Occurrences or Weather: _____

When form is completed, please fax to Air Sciences Inc. @ 303-279-3796 (no cover sheet is necessary).

Site Operator Signature: _____

Kami Ballard

**WEST PLANT
MET SITE CHECK FORM
Resolution
PROJECT NO. 262-1**

Date: 11-7-14

Time: 10:00

Operator: K. Baak

YES NO **

✓	
✓	
✓	
✓	
✓	
✓	
✓	
✓	
✓	

1. The tower is intact and upright.
2. The anemometer propeller and the wind direction vane are turning freely.
3. All temperature shields are intact, and the probes are inside their shields.
4. The aspirator fans are operating.
5. The solar radiation sensor is level and has been cleaned.
6. The solar panel is facing south and is clean.
7. The precipitation gauge is clean and free of bugs and dust.
8. The data logger is reading the correct time and day.
9. The site has been visually inspected for unusual wildlife occurrences (dead birds, etc.).
10. Estimate and document the parameters below.

 AIR SCIENCES INC. DESIGN • INSTALL • MAINTENANCE	
REVIEWED BY <u>RPT</u>	DATE <u>11/24/14</u>
AUDITED BY <u>GG-</u>	DATE <u>11/24/14</u>

Parameter	Estimated	Logger	Audit
Speed 10m (m/s)	<u>5 mph</u>	<u>6.38</u>	<u>5.35</u> +
Direction* 10m (deg)	<u>E</u>	<u>71.43</u>	<u>60.8</u> +
Ambient Temperature (°C)	<u>72° F</u>	<u>20.02</u>	<u>19.6</u> +
Relative Humidity (%)	<u>20%</u>	<u>28%</u>	<u>28.9</u> +
Aspirated Temp 2m	<u>72° F</u>	<u>19.46</u>	<u>19</u> +
Aspirated Temp 10m	<u>70° F</u>	<u>18.43</u>	<u>18.3</u> +
Delta Temperature (°C)	<u>N/A</u>	<u>-1.916</u>	<u>-0.711</u> +
Solar Radiation (w/m²)	<u>Sunny</u> Partly cloudy Cloudy	<u>581.52</u>	<u>563</u> +
Barometric Pressure (mmHg)	<u>N/A</u>	<u>687.60</u>	<u>688</u> +
Battery Voltage (V)	<u>N/A</u>	<u>12.85</u>	<u>12.9</u> +
Time (MST)	<u>N/A</u>	<u>10:00</u>	<u>10:00 LIT</u> +
Date	<u>N/A</u>	<u>11-7-14</u>	<u>11/07/2014</u> +

*Direction wind is from

Comments/Unusual Occurrences or Weather: _____

When form is completed, please fax to Air Sciences Inc. @ 303-279-3796 (no cover sheet is necessary).

Site Operator Signature: _____

K. Baak

**WEST PLANT
MET SITE CHECK FORM
Resolution
PROJECT NO. 262-1**

Date: 11/13/2014

Time: 1:30

Operator: K. Balla

YES NO**

✓	
✓	
✓	
✓	
✓	
✓	
✓	
✓	
✓	
✓	

1. The tower is intact and upright.
2. The anemometer propeller and the wind direction vane are turning freely.
3. All temperature shields are intact, and the probes are inside their shields.
4. The aspirator fans are operating.
5. The solar radiation sensor is level and has been cleaned.
6. The solar panel is facing south and is clean.
7. The precipitation gauge is clean and free of bugs and dust.
8. The data logger is reading the correct time and day.
9. The site has been visually inspected for unusual wildlife occurrences (dead birds, etc.).
10. Estimate and document the parameters below.

 AIR SCIENCES INC. DENVER • PORTLAND	
REVIEWED BY <u>RPA</u>	DATE <u>11/24/14</u>
AUDITED BY <u>GG</u>	DATE <u>11/24/14</u>

Parameter	Estimated	Logger	Audit
Speed 10m (m/s)	<u>3m/s</u>	<u>2.94</u>	<u>3.4</u>
Direction* 10m (deg)	<u>E</u>	<u>187.75</u>	<u>161</u>
Ambient Temperature (°C)	<u>25°</u>	<u>23.22</u>	<u>22.5</u>
Relative Humidity (%)	<u>30%</u>	<u>37.52</u>	<u>39.2</u>
Aspirated Temp 2m	<u>25°</u>	<u>22.93</u>	<u>22.3</u>
Aspirated Temp 10m	<u>24°</u>	<u>20.97</u>	<u>20.9</u>
Delta Temperature (°C)	N/A	<u>-1.91</u>	<u>-1.4</u>
Solar Radiation (w/m²)	Sunny <u>Partly cloudy</u> Cloudy	<u>602.59</u>	<u>607</u>
Barometric Pressure (mmHg)	N/A	<u>682.73</u>	<u>683</u>
Battery Voltage (V)	N/A	<u>12.80</u>	<u>12.8</u>
Time (MST)	N/A	<u>11/13/2014</u>	<u>13:30-L.T.</u>
Date	N/A	<u>1:32</u>	<u>11/13/2014</u>

GG
169-13:00
+ 170-13:15
+ 159-13:45
+ 167-14:00
+
+
+
+
+
+
+
+
+

*0.024" of precip. invalidated @ 13:45 hrs! GG
 *Direction wind is from

Comments/Unusual Occurrences or Weather: Heavy snow & tipped gauge ✓ GG

When form is completed, please fax to Air Sciences Inc. @ 303-279-3796 (no cover sheet is necessary).

Site Operator Signature: K. Balla

**WEST PLANT
MET SITE CHECK FORM**
Resolution
PROJECT NO. 262-1

Date: 11/21/2014

Time: 1:37

Operator: Kanu Ballal

YES NO **

✓	
✓	
✓	
✓	
✓	
✓	
✓	
✓	
✓	
✓	

1. The tower is intact and upright.
2. The anemometer propeller and the wind direction vane are turning freely.
3. All temperature shields are intact, and the probes are inside their shields.
4. The aspirator fans are operating.
5. The solar radiation sensor is level and has been cleaned.
6. The solar panel is facing south and is clean.
7. The precipitation gauge is clean and free of bugs and dust.
8. The data logger is reading the correct time and day.
9. The site has been visually inspected for unusual wildlife occurrences (dead birds, etc.).
10. Estimate and document the parameters below.

 AIR SCIENCES INC. DENVER • PORTLAND	
REVIEWED BY <u>KPA</u>	DATE <u>11/29/14</u>
AUDITED BY <u>GG</u>	DATE <u>11/24/14</u>

Parameter	Estimated	Logger	Audit	
Speed 10m (m/s)	<u>2ms</u>	<u>1.94</u>	<u>1.52</u>	+
Direction* 10m (deg)	<u>SW</u>	<u>216.04</u>	<u>227</u>	+
Ambient Temperature (°C)	<u>20°</u>	<u>19.21</u>	<u>19.3</u>	+
Relative Humidity (%)	<u>15%</u>	<u>20.33</u>	<u>20.3</u>	+
Aspirated Temp 2m	<u>20°</u>	<u>18.65</u>	<u>18.5</u>	+
Aspirated Temp 10m	<u>19°</u>	<u>17.61</u>	<u>17.6</u>	+
Delta Temperature (°C)	N/A	<u>-1.04</u>	<u>-0.826</u>	+
Solar Radiation (w/m ²)	<u>Sunny</u> Partly cloudy Cloudy	<u>604.888</u>	<u>559</u>	+
Barometric Pressure (mmHg)	N/A	<u>680.22</u>	<u>680</u>	+
Battery Voltage (V)	N/A	<u>12.87</u>	<u>12.9</u>	+
Time (MST)	N/A	<u>140</u>	<u>13:45-L.T.</u>	+
Date	N/A	<u>11/21/2014</u>	<u>11/21/2014</u>	+

*Direction wind is from

Comments/Unusual Occurrences or Weather: _____

When form is completed, please fax to Air Sciences Inc. @ 303-279-3796 (no cover sheet is necessary).

Site Operator Signature: _____

Kanu Ballal

**WEST PLANT
MET SITE CHECK FORM
Resolution
PROJECT NO. 262-1**

Date: 12/05/2014

Time: 12:44

Operator: Kanu Ballal

YES NO **

✓	
✓	
✓	
✓	
✓	
✓	
✓	
✓	
✓	
✓	

1. The tower is intact and upright.
2. The anemometer propeller and the wind direction vane are turning freely.
3. All temperature shields are intact, and the probes are inside their shields.
4. The aspirator fans are operating.
5. The solar radiation sensor is level and has been cleaned.
6. The solar panel is facing south and is clean.
7. The precipitation gauge is clean and free of bugs and dust.
8. The data logger is reading the correct time and day.
9. The site has been visually inspected for unusual wildlife occurrences (dead birds, etc.).
10. Estimate and document the parameters below.


AIR SCIENCES INC.
RENTON, WASHINGTON

REVIEWED BY: RPA DATE: 12/08/14

AUDITED BY: EG DATE: 12/08/14

Parameter	Estimated	Logger	Audit	
Speed 10m (m/s)	<u>3m/s</u>	<u>4.09</u>	<u>3.59</u>	+
Direction* 10m (deg)	<u>E</u>	<u>94.08</u>	<u>103</u>	+
Ambient Temperature (°C)	<u>16°</u>	<u>17.95</u>	<u>17.7</u>	+
Relative Humidity (%)	<u>50%</u>	<u>54.46</u>	<u>53.7</u>	+
Aspirated Temp 2m	<u>16°</u>	<u>17.97</u>	<u>17.5</u>	+
Aspirated Temp 10m	<u>15°</u>	<u>16.65</u>	<u>16.6</u>	+
Delta Temperature (°C)	<u>N/A</u>	<u>-1.36</u>	<u>-0.837</u>	+
Solar Radiation (w/m ²)	<u>Sunny</u> <u>Partly cloudy</u> <u>Cloudy</u>	<u>478.04</u>	<u>452</u>	+
Barometric Pressure (mmHg)	<u>N/A</u>	<u>6086.26</u>	<u>686</u>	+
Battery Voltage (V)	<u>N/A</u>	<u>12.88</u>	<u>12.9</u>	+
Time (MST)	<u>N/A</u>	<u>12:44</u>	<u>12:45 - L.T.</u>	+
Date	<u>N/A</u>	<u>12/05/2014</u>	<u>12/05/2014</u>	+

*Direction wind is from

Comments/Unusual Occurrences or Weather: Fired wap pan ✓ EG

When form is completed, please fax to Air Sciences Inc. @ 303-279-3796 (no cover sheet is necessary).

Site Operator Signature: Kanu Ballal

**WEST PLANT
MET SITE CHECK FORM
Resolution
PROJECT NO. 262-1**

Date: 12/11/2014

Time: 2:05

Operator: K. Bell

YES NO **

✓	
✓	
✓	
✓	
✓	
✓	
✓	
✓	
✓	
✓	

1. The tower is intact and upright.
2. The anemometer propeller and the wind direction vane are turning freely.
3. All temperature shields are intact, and the probes are inside their shields.
4. The aspirator fans are operating.
5. The solar radiation sensor is level and has been cleaned.
6. The solar panel is facing south and is clean.
7. The precipitation gauge is clean and free of bugs and dust.
8. The data logger is reading the correct time and day.
9. The site has been visually inspected for unusual wildlife occurrences (dead birds, etc.).
10. Estimate and document the parameters below.

 AIR SCIENCES INC. DENVER • PORTLAND	
REVIEWED BY <u>RPA</u>	DATE <u>11/2/14</u>
AUDITED BY <u>GS.</u>	DATE <u>12/15/14</u>

Parameter	Estimated	Logger	Audit	
Speed 10m (m/s)	<u>2 m/s</u>	<u>2.54</u>	<u>2.59</u>	+
Direction* 10m (deg)	<u>8W</u>	<u>198.86</u>	<u>192</u>	+
Ambient Temperature (°C)	<u>23°</u>	<u>22.64</u>	<u>22.2</u>	+
Relative Humidity (%)	<u>90%</u>	<u>28.33</u>	<u>50.5</u>	+
Aspirated Temp 2m	<u>93°</u>	<u>22.10</u>	<u>21.8</u>	+
Aspirated Temp 10m	<u>12°</u>	<u>20.33</u>	<u>20.5</u>	+
Delta Temperature (°C)	<u>N/A</u>	<u>-1.77</u>	<u>-1.44</u>	+
Solar Radiation (w/m²)	<u>Sunny</u> Partly cloudy Cloudy	<u>487.45</u>	<u>499</u>	+
Barometric Pressure (mmHg)	<u>N/A</u>	<u>683.10</u>	<u>683</u>	+
Battery Voltage (V)	<u>N/A</u>	<u>12.81</u>	<u>12.8</u>	+
Time (MST)	<u>N/A</u>		<u>14:00 LT.</u>	+
Date	<u>N/A</u>	<u>12/11/2014</u>	<u>12/11/2014</u>	+

*Direction wind is from

Comments/Unusual Occurrences or Weather: _____

When form is completed, please fax to Air Sciences Inc. @ 303-279-3796 (no cover sheet is necessary).

Site Operator Signature: K. Bell

WEST PLANT
MÉT SITE CHECK FORM
Resolution
PROJECT NO. 262-1

Date: 12/19/2014

Time: 10:14

Operator: James B. C. O. O.

YES NO **

✓	
✓	
✓	
✓	
✓	
✓	
✓	
✓	
✓	
✓	

1. The tower is intact and upright.
2. The anemometer propeller and the wind direction vane are turning freely.
3. All temperature shields are intact, and the probes are inside their shields.
4. The aspirator fans are operating.
5. The solar radiation sensor is level and has been cleaned.
6. The solar panel is facing south and is clean.
7. The precipitation gauge is clean and free of bugs and dust.
8. The data logger is reading the correct time and day.
9. The site has been visually inspected for unusual wildlife occurrences (dead birds, etc.).
10. Estimate and document the parameters below.

 AIR SCIENCES INC. DENVER • PORTLAND	
REVIEWED BY	<u>RPA</u>
AUDITED BY	<u>EEG.</u>
DATE	<u>12/19/14</u>

Parameter	Estimated	Logger	Audit
Speed 10m (m/s)	<u>2 m/s</u>	<u>7 17.32</u>	<u>1.95</u>
Direction* 10m (deg)	<u>ESE</u>	<u>0.92</u>	<u>253</u>
Ambient Temperature (°C)	<u>8°</u>	<u>11.47</u>	<u>10.7</u>
Relative Humidity (%)	<u>50%</u>	<u>44.98</u>	<u>48.2</u>
Aspirated Temp 2m	<u>8°</u>	<u>10.72</u>	<u>9.72</u>
Aspirated Temp 10m	<u>7°</u>	<u>10.13</u>	<u>9.52</u>
Delta Temperature (°C)	N/A	<u>-0.59</u>	<u>-0.206</u>
Solar Radiation (w/m²)	<u>Sunny</u> Partly cloudy Cloudy	<u>429.21</u>	<u>438</u>
Barometric Pressure (mmHg)	N/A	<u>687.91</u>	<u>688</u>
Battery Voltage (V)	N/A	<u>12.99</u>	<u>13</u>
Time (MST)	N/A	<u>10:18</u>	<u>10:15 - L.T.</u>
Date	N/A	<u>12/19/2014</u>	<u>12/19/2014</u>

EEG.
 232 - 9:45
 + 257 - 10:00
 + 214 - 10:30
 + 244 - 10:45

*Direction wind is from

Comments/Unusual Occurrences or Weather: _____

When form is completed, please fax to Air Sciences Inc. @ 303-279-3796 (no cover sheet is necessary).

Site Operator Signature: James B. C. O. O.

**WEST PLANT
MET SITE CHECK FORM
Resolution
PROJECT NO. 262-1**

Date: 12/30/2014

Time: 12:38

Operator: Kanu Balchand

YES NO **

✓	
✓	
✓	
✓	
✓	
✓	
✓	
✓	
✓	
✓	

1. The tower is intact and upright.
2. The anemometer propeller and the wind direction vane are turning freely.
3. All temperature shields are intact, and the probes are inside their shields.
4. The aspirator fans are operating.
5. The solar radiation sensor is level and has been cleaned.
6. The solar panel is facing south and is clean.
7. The precipitation gauge is clean and free of bugs and dust.
8. The data logger is reading the correct time and day.
9. The site has been visually inspected for unusual wildlife occurrences (dead birds, etc.).
10. Estimate and document the parameters below.



AIR SCIENCES INC.
NEW YORK, NEW YORK

REVIEWED BY RPA DATE 1/5/15

AUDITED BY GG- DATE 1/5/15

Parameter	Estimated	Logger	Audit	
Speed 10m (m/s)	3ms	3.89	3.55	+
Direction* 10m (deg)	8°	183.18	186	+
Ambient Temperature (°C)	20°	18.04	17.8	+
Relative Humidity (%)	15%	13.35	14.1	+
Aspirated Temp 2m	20°	17.41	17.1	+
Aspirated Temp 10m	19°	15.04	15.1	+
Delta Temperature (°C)	N/A	-2.34	-1.95	+
Solar Radiation (w/m²)	Sunny Partly cloudy Cloudy	618.31	619	+
Barometric Pressure (mmHg)	N/A	680.77	681	+
Battery Voltage (V)	N/A	12.89	12.9	+
Time (MST)	N/A	12:31	12:30 L.T.	+
Date	N/A	12/30/2014	12/30/2014	+

* 0.004" of precip. invalidated @ 12:45 hrs! GG.

*Direction wind is from

Comments/Unusual Occurrences or Weather: ipped precip. gauges. ✓ GG.

When form is completed, please fax to Air Sciences Inc. @ 303-279-3796 (no cover sheet is necessary).

Site Operator Signature: Kanu Balchand

**Appendix E: West Plant PM₁₀ and PM_{2.5} Site Check
Forms and Flow Audits**

WEST PLANT
BAM PM10 WEEKLY SITE CHECK FORM
RESOLUTION MONITORING PROJECT
PROJECT NO. 262-1



Date: 10/03/2014 Time: 12:30 Operator: H. Ballou

I. BAM SAMPLER – Weekly Checks.

YES NO

☒	☐
☒	☐
☒	☐
☒	☐
☒	☐
☒	☐
☒	☐

1. The sampler is intact and the inlet head is unobstructed.
2. The vacuum pump is running and sounds normal.
3. The temperature shield is intact, and the sensor is inside of it.
4. The BAM is reading the correct time and day.
5. The tape is in the proper position and does not need to be changed (tape should be changed every 2 months).
6. Error log was checked (F3), and errors followed up on (see manual). 9/24-10/3 → BAM cal 5%
7. Climate control appears operational (If it's cold out the shelter should feel warm, if it's hot out the shelter should feel cool)

II. BAM SAMPLER – Routine Maintenance (monthly). Check yes if maintenance was performed during this visit. See page 56 of BAM manual.

YES NO

☐	☒
☐	☒
☐	☒
☐	☒
☐	☒

1. Inlet Flow check Performed
2. Visual inspection and dust removal
3. Leak check performed
4. PM10 particle trap cleaned
5. Inlet nozzle and nozzle are cleaned

 AIR SCIENCES INC. DENVER • PORTLAND	
REVIEWED BY	<u>RPA</u> DATE <u>10-14-14</u>
AUDITED BY	<u>GG</u> DATE <u>10/13/14</u>

III. BAM SAMPLER – Routine Maintenance (every 2 months). Check yes if maintenance was performed during this visit. See page 56 of BAM manual.

YES NO

☐	☒
☐	☒

1. Filter tape replaced
2. Ran the Self-Test function

III. BAM SAMPLER – Routine Maintenance (semiannual). Check yes if maintenance was performed during this visit. See page 56 of BAM manual.

YES NO

☐	☒
☐	☒

1. Replaced muffler on the pump (*Work performed by Air Sciences)
2. Complete calibration of flow system (*Work performed by Air Sciences)

IV. BAM SAMPLER – Routine Maintenance (annual). Check yes if maintenance was performed during this visit. See page 56 of BAM manual.

YES NO

☐	☒
☐	☒

1. Carbon vanes in pump checked/replaced (*Work performed by Air Sciences)
2. Inlet system cleaned (*Work performed by Air Sciences)

**Comments/Unusual Occurrences: _____

Signature: H. Ballou

WEST PLANT
BAM PM10 WEEKLY SITE CHECK FORM
RESOLUTION MONITORING PROJECT
PROJECT NO. 262-1



Date: 10/10/2014 Time: 1:33 Operator: K Bell

I. BAM SAMPLER – Weekly Checks.

YES	NO
☒	☐
☒	☐
☒	☐
☒	☐
☒	☐
☒	☐
☒	☐

1. The sampler is intact and the inlet head is unobstructed.
2. The vacuum pump is running and sounds normal.
3. The temperature shield is intact, and the sensor is inside of it.
4. The BAM is reading the correct time and day.
5. The tape is in the proper position and does not need to be changed (tape should be changed every 2 months).
6. Error log was checked (F3), and errors followed up on (see manual). 10/06-10/10 → BAM Cal Mon-b. 66
7. Climate control appears operational (If it's cold out the shelter should feel warm, if it's hot out the shelter should feel cool) 66

II. BAM SAMPLER – Routine Maintenance (monthly). Check yes if maintenance was performed during this visit. See page 56 of BAM manual.

YES NO 66

☐	☒
☐	☒
☐	☒
☐	☒
☐	☒

1. Inlet Flow check Performed
2. Visual inspection and dust removal
3. Leak check performed
4. PM10 particle trap cleaned
5. Inlet nozzle and nozzle are cleaned

 AIR SCIENCES INC. DENVER • PORTLAND	
REVIEWED BY <u>RPA</u>	DATE <u>10-17-14</u>
AUDITED BY <u>66</u>	DATE <u>10/13/14</u>

III. BAM SAMPLER – Routine Maintenance (every 2 months). Check yes if maintenance was performed during this visit. See page 56 of BAM manual.

YES NO 66

☐	☒
☐	☒

1. Filter tape replaced
2. Ran the Self-Test function

III. BAM SAMPLER – Routine Maintenance (semiannual). Check yes if maintenance was performed during this visit. See page 56 of BAM manual.

YES NO 66

☐	☒
☐	☒

1. Replaced muffler on the pump (*Work performed by Air Sciences)
2. Complete calibration of flow system (*Work performed by Air Sciences)

IV. BAM SAMPLER – Routine Maintenance (annual). Check yes if maintenance was performed during this visit. See page 56 of BAM manual.

YES NO 66

☐	☒
☐	☒

1. Carbon vanes in pump checked/replaced (*Work performed by Air Sciences)
2. Inlet system cleaned (*Work performed by Air Sciences)

**Comments/Unusual Occurrences: _____

Signature: Kam Bell

WEST PLANT
BAM PM10 WEEKLY SITE CHECK FORM
RESOLUTION MONITORING PROJECT
PROJECT NO. 262-1



Date: 10/23/2014 Time: 9:49

Operator: Heidi Bell

I. BAM SAMPLER – Weekly Checks.

YES NO

☒	☐
☒	☐
☒	☐
☒	☐
☒	☐
☒	☐
☒	☐

1. The sampler is intact and the inlet head is unobstructed.
2. The vacuum pump is running and sounds normal.
3. The temperature shield is intact, and the sensor is inside of it.
4. The BAM is reading the correct time and day.
5. The tape is in the proper position and does not need to be changed (tape should be changed every 2 months).
6. Error log was checked (F3), and errors followed up on (see manual). 10-18 → 10-23 → BAM Cal Men. 5% ✓
7. Climate control appears operational (If it's cold out the shelter should feel warm, if it's hot out the shelter should feel cool)

II. BAM SAMPLER – Routine Maintenance (monthly). Check yes if maintenance was performed during this visit. See page 56 of BAM manual.

YES NO 66-

☐	☒
☐	☒
☐	☒
☐	☒
☐	☒

1. Inlet Flow check Performed
2. Visual inspection and dust removal
3. Leak check performed
4. PM10 particle trap cleaned
5. Inlet nozzle and nozzle are cleaned

 AIR SCIENCES INC. DEVELOP • FORTIFY	
<u>RPA</u> REVIEWED BY	<u>11/9/14</u> DATE
AUDITED BY <u>66-</u>	DATE <u>11/3/14</u>

III. BAM SAMPLER – Routine Maintenance (every 2 months). Check yes if maintenance was performed during this visit. See page 56 of BAM manual.

YES NO 66-

☐	☒
☐	☒

1. Filter tape replaced
2. Ran the Self-Test function

III. BAM SAMPLER – Routine Maintenance (semiannual). Check yes if maintenance was performed during this visit. See page 56 of BAM manual.

YES NO 66-

☐	☒
☐	☒

1. Replaced muffler on the pump (*Work performed by Air Sciences)
2. Complete calibration of flow system (*Work performed by Air Sciences)

IV. BAM SAMPLER – Routine Maintenance (annual). Check yes if maintenance was performed during this visit. See page 56 of BAM manual.

YES NO 66-

☐	☒
☐	☒

1. Carbon vanes in pump checked/replaced (*Work performed by Air Sciences)
2. Inlet system cleaned (*Work performed by Air Sciences)

**Comments/Unusual Occurrences: _____

Signature: Heidi Bell

WEST PLANT
BAM PM10 WEEKLY SITE CHECK FORM
RESOLUTION MONITORING PROJECT
PROJECT NO. 262-1



Date: 10/31/2014 Time: 12:28 Operator: H. Bell

I. BAM SAMPLER – Weekly Checks.

YES NO

☒	☐
☒	☐
☒	☐
☒	☐
☒	☐
☒	☐
☒	☐

- The sampler is intact and the inlet head is unobstructed.
- The vacuum pump is running and sounds normal.
- The temperature shield is intact, and the sensor is inside of it.
- The BAM is reading the correct time and day.
- The tape is in the proper position and does not need to be changed (tape should be changed every 2 months).
- Error log was checked (F3), and errors followed up on (see manual). 10/27-10/31 -> BAM Cal membrane Sp
- Climate control appears operational (If it's cold out the shelter should feel warm, if it's hot out the shelter should feel cool)

II. BAM SAMPLER – Routine Maintenance (monthly). Check yes if maintenance was performed during this visit. See page 56 of BAM manual.

YES NO

☐	☒
☐	☒
☐	☒
☐	☒
☐	☒

- Inlet Flow check Performed
- Visual inspection and dust removal
- Leak check performed
- PM10 particle trap cleaned
- Inlet nozzle and nozzle are cleaned

 AIR SCIENCES INC. DENVER • FORTLAUD	
<u>RPA</u> REVIEWED BY	<u>11/4/14</u> DATE
<u>GG</u> REVIEWED BY	<u>11/3/14</u> DATE

II. BAM SAMPLER – Routine Maintenance (every 2 months). Check yes if maintenance was performed during this visit. See page 56 of BAM manual.

YES NO

☐	☒
☐	☒

- Filter tape replaced
- Ran the Self-Test function

III. BAM SAMPLER – Routine Maintenance (semiannual). Check yes if maintenance was performed during this visit. See page 56 of BAM manual.

YES NO

☐	☒
☐	☒

- Replaced muffler on the pump (*Work performed by Air Sciences)
- Complete calibration of flow system (*Work performed by Air Sciences)

IV. BAM SAMPLER – Routine Maintenance (annual). Check yes if maintenance was performed during this visit. See page 56 of BAM manual.

YES NO

☐	☒
☐	☒

- Carbon vanes in pump checked/replaced (*Work performed by Air Sciences)
- Inlet system cleaned (*Work performed by Air Sciences)

**Comments/Unusual Occurrences: _____

Signature: Karen Bell

WEST PLANT
BAM PM10 WEEKLY SITE CHECK FORM
RESOLUTION MONITORING PROJECT
PROJECT NO. 262-1



Date: 11-7-14 Time: 10:05 Operator: K. Baak

I. BAM SAMPLER – Weekly Checks.

YES NO

☒	☐
☒	☐
☒	☐
☒	☐
☒	☐
☒	☐
☒	☐

1. The sampler is intact and the inlet head is unobstructed.
2. The vacuum pump is running and sounds normal.
3. The temperature shield is intact, and the sensor is inside of it.
4. The BAM is reading the correct time and day.
5. The tape is in the proper position and does not need to be changed (tape should be changed every 2 months).
6. Error log was checked (F3), and errors followed up on (see manual). 11/7, 11/6, 11/5, 11/4, 11/3
BAM Cal Membrane Str.
7. Climate control appears operational (If it's cold out the shelter should feel warm, if it's hot out the shelter should feel cool)

II. BAM SAMPLER – Routine Maintenance (monthly). Check yes if maintenance was performed during this visit. See page 56 of BAM manual.

YES NO GG

☐	☒
☐	☒
☐	☒
☐	☒
☐	☒

1. Inlet Flow check Performed
2. Visual inspection and dust removal
3. Leak check performed
4. PM10 particle trap cleaned
5. Inlet nozzle and nozzle are cleaned

 AIR SCIENCES INC. DENVER • PORTLAND	
REVIEWED BY <u>RAA</u> AUDITED BY <u>GG</u>	DATE <u>11/29/14</u> DATE <u>11/24/14</u>

III. BAM SAMPLER – Routine Maintenance (every 2 months). Check yes if maintenance was performed during this visit. See page 56 of BAM manual.

YES NO GG

☐	☒
☐	☒

1. Filter tape replaced
2. Ran the Self-Test function

IV. BAM SAMPLER – Routine Maintenance (semiannual). Check yes if maintenance was performed during this visit. See page 56 of BAM manual.

YES NO GG

☐	☒
☐	☒

1. Replaced muffler on the pump (*Work performed by Air Sciences)
2. Complete calibration of flow system (*Work performed by Air Sciences)

V. BAM SAMPLER – Routine Maintenance (annual). Check yes if maintenance was performed during this visit. See page 56 of BAM manual.

YES NO GG

☐	☒
☐	☒

1. Carbon vanes in pump checked/replaced (*Work performed by Air Sciences)
2. Inlet system cleaned (*Work performed by Air Sciences)

**Comments/Unusual Occurrences: _____

Signature: K. Baak

WEST PLANT
BAM PM10 WEEKLY SITE CHECK FORM
RESOLUTION MONITORING PROJECT
PROJECT NO. 262-1



Date: 11/13/2014

Time: 1:33

Operator: Kane B. O'Connell

I. BAM SAMPLER – Weekly Checks.

YES NO

☒	☐
☒	☐
☒	☐
☒	☐
☒	☐
☒	☐
☒	☐

1. The sampler is intact and the inlet head is unobstructed.
2. The vacuum pump is running and sounds normal.
3. The temperature shield is intact, and the sensor is inside of it.
4. The BAM is reading the correct time and day.
5. The tape is in the proper position and does not need to be changed (tape should be changed every 2 months).
6. Error log was checked (F3), and errors followed up on (see manual). 11/9-11/13 → BAM Cal Membrane
7. Climate control appears operational (If it's cold out the shelter should feel warm, if it's hot out the shelter should feel cool)

II. BAM SAMPLER – Routine Maintenance (monthly). Check yes if maintenance was performed during this visit. See page 56 of BAM manual.

YES NO

☐	☒
☐	☒
☐	☒
☐	☒
☐	☒

1. Inlet Flow check Performed
2. Visual inspection and dust removal
3. Leak check performed
4. PM10 particle trap cleaned
5. Inlet nozzle and nozzle are cleaned

 AIR SCIENCES INC. DENVER • PORTLAND	
KPA REVIEWED BY	11/24/14 DATE
G6- AUDITED BY	11/24/14 DATE

III. BAM SAMPLER – Routine Maintenance (every 2 months). Check yes if maintenance was performed during this visit. See page 56 of BAM manual.

YES NO

☐	☒
☐	☒

1. Filter tape replaced
2. Ran the Self-Test function

III. BAM SAMPLER – Routine Maintenance (semiannual). Check yes if maintenance was performed during this visit. See page 56 of BAM manual.

YES NO

☐	☒
☐	☒

1. Replaced muffler on the pump (*Work performed by Air Sciences)
2. Complete calibration of flow system (*Work performed by Air Sciences)

IV. BAM SAMPLER – Routine Maintenance (annual). Check yes if maintenance was performed during this visit. See page 56 of BAM manual.

YES NO

☐	☒
☐	☒

1. Carbon vanes in pump checked/replaced (*Work performed by Air Sciences)
2. Inlet system cleaned (*Work performed by Air Sciences)

**Comments/Unusual Occurrences:

Signature:

Kane B. O'Connell

WEST PLANT
BAM PM10 WEEKLY SITE CHECK FORM
RESOLUTION MONITORING PROJECT
PROJECT NO. 262-1



Date: 11/21/2014 Time: 1:42 Operator: K. Ballard

I. BAM SAMPLER – Weekly Checks.

YES NO

☒	☐
☒	☐
☒	☐
☒	☐
☒	☐
☒	☐
☒	☐

- The sampler is intact and the inlet head is unobstructed.
- The vacuum pump is running and sounds normal.
- The temperature shield is intact, and the sensor is inside of it.
- The BAM is reading the correct time and day.
- The tape is in the proper position and does not need to be changed (tape should be changed every 2 months).
- Error log was checked (F3), and errors followed up on (see manual). *Bam Cal Membrans 5% 11/17 → 11/21*
- Cilmate control appears operational (If it's cold out the shelter should feel warm, if it's hot out the shelter should feel cool)

II. BAM SAMPLER – Routine Maintenance (monthly). Check yes if maintenance was performed during this visit. See page 56 of BAM manual.

YES NO

☐	☒
☐	☒
☐	☒
☐	☒
☐	☒

- Inlet Flow check Performed
- Visual inspection and dust removal
- Leak check performed
- PM10 particle trap cleaned
- Inlet nozzle and nozzle are cleaned

 AIR SCIENCES INC. DENVER • FORTLAUD	
<i>KPA</i> REVIEWED BY	11/21/14 DATE
<i>GB</i> AUDITED BY	11/25/14 DATE

II. BAM SAMPLER – Routine Maintenance (every 2 months). Check yes if maintenance was performed during this visit. See page 56 of BAM manual.

YES NO

☐	☒
☐	☒

- Filter tape replaced
- Ran the Self-Test function

III. BAM SAMPLER – Routine Maintenance (semiannual). Check yes if maintenance was performed during this visit. See page 56 of BAM manual.

YES NO

☐	☒
☐	☒

- Replaced muffler on the pump (*Work performed by Air Sciences)
- Complete calibration of flow system (*Work performed by Air Sciences)

IV. BAM SAMPLER – Routine Maintenance (annual). Check yes if maintenance was performed during this visit. See page 56 of BAM manual.

YES NO

☐	☒
☐	☒

- Carbon vanes in pump checked/replaced (*Work performed by Air Sciences)
- Inlet system cleaned (*Work performed by Air Sciences)

**Comments/Unusual Occurrences: _____

Signature: K. Ballard

WEST PLANT
BAM PM10 WEEKLY SITE CHECK FORM
RESOLUTION MONITORING PROJECT
PROJECT NO. 262-1



Date: 12/05/2014

Time: 12:49

Operator: K. Balla

I. BAM SAMPLER – Weekly Checks.

YES NO

☒	☐
☒	☐
☒	☐
☒	☐
☒	☐
☒	☐
☒	☐

1. The sampler is intact and the inlet head is unobstructed.
2. The vacuum pump is running and sounds normal.
3. The temperature shield is intact, and the sensor is inside of it.
4. The BAM is reading the correct time and day.
5. The tape is in the proper position and does not need to be changed (tape should be changed every 2 months).
6. Error log was checked (F3), and errors followed up on (see manual). 12/01-12/05 → BAM cal
7. Climate control appears operational (If it's cold out the shelter should feel warm, if it's hot out the shelter should feel cool) Memorize 5% 66

II. BAM SAMPLER – Routine Maintenance (monthly). Check yes if maintenance was performed during this visit. See page 56 of BAM manual.

YES NO 66

☐	☒
☐	☒
☐	☒
☐	☒
☐	☒

1. Inlet Flow check Performed
2. Visual inspection and dust removal
3. Leak check performed
4. PM10 particle trap cleaned
5. Inlet nozzle and nozzle are cleaned

 AIR SCIENCES INC. DENVER • PORTLAND	
REVIEWED BY <u>RPA</u>	DATE <u>11/29/14</u>
AUDITED BY <u>66</u>	DATE <u>12/08/14</u>

III. BAM SAMPLER – Routine Maintenance (every 2 months). Check yes if maintenance was performed during this visit. See page 56 of BAM manual.

YES NO 66

☐	☒
☐	☒

1. Filter tape replaced
2. Ran the Self-Test function

IV. BAM SAMPLER – Routine Maintenance (semiannual). Check yes if maintenance was performed during this visit. See page 56 of BAM manual.

YES NO 66

☐	☒
☐	☒

1. Replaced muffler on the pump (*Work performed by Air Sciences)
2. Complete calibration of flow system (*Work performed by Air Sciences)

IV. BAM SAMPLER – Routine Maintenance (annual). Check yes if maintenance was performed during this visit. See page 56 of BAM manual.

YES NO 66

☐	☒
☐	☒

1. Carbon vanes in pump checked/replaced (*Work performed by Air Sciences)
2. Inlet system cleaned (*Work performed by Air Sciences)

**Comments/Unusual Occurrences:

Signature: K. Balla

WEST PLANT
BAM PM10 WEEKLY SITE CHECK FORM
RESOLUTION MONITORING PROJECT
PROJECT NO. 262-1



Date: 12/11/2014 Time: 2:10 Operator: J Bell

I. BAM SAMPLER – Weekly Checks.

YES NO

☒	☐
☒	☐
☒	☐
☒	☐
☒	☐
☒	☐
☒	☐

1. The sampler is intact and the inlet head is unobstructed.
2. The vacuum pump is running and sounds normal.
3. The temperature shield is intact, and the sensor is inside of it.
4. The BAM is reading the correct time and day.
5. The tape is in the proper position and does not need to be changed (tape should be changed every 2 months).
6. Error log was checked (F3), and errors followed up on (see manual). *BAM Cal Membrane 5% → 12/02-12/11*
7. Climate control appears operational (If it's cold out the shelter should feel warm, if it's hot out the shelter should feel cool)

II. BAM SAMPLER – Routine Maintenance (monthly). Check yes if maintenance was performed during this visit. See page 56 of BAM manual.

YES NO *GG*

☐	☒
☐	☒
☐	☒
☐	☒
☐	☒

1. Inlet Flow check Performed
2. Visual inspection and dust removal
3. Leak check performed
4. PM10 particle trap cleaned
5. Inlet nozzle and nozzle are cleaned

 AIR SCIENCES INC. MINNEAPOLIS • PORTLAND	
REVIEWED: <i>RPA</i> DATE: <i>1/2/14</i>	DATE: <i>12/15/14</i>

II. BAM SAMPLER – Routine Maintenance (every 2 months). Check yes if maintenance was performed during this visit. See page 56 of BAM manual.

YES NO *GG*

☐	☒
☐	☒

1. Filter tape replaced
2. Ran the Self-Test function

III. BAM SAMPLER – Routine Maintenance (semiannual). Check yes if maintenance was performed during this visit. See page 56 of BAM manual.

YES NO *GG*

☐	☒
☐	☒

1. Replaced muffler on the pump (*Work performed by Air Sciences)
2. Complete calibration of flow system (*Work performed by Air Sciences)

IV. BAM SAMPLER – Routine Maintenance (annual). Check yes if maintenance was performed during this visit. See page 56 of BAM manual.

YES NO *GG*

☐	☒
☐	☒

1. Carbon vanes in pump checked/replaced (*Work performed by Air Sciences)
2. Inlet system cleaned (*Work performed by Air Sciences)

**Comments/Unusual Occurrences:

** PM10 conc + flow invalidated @ 15:00 hrs! GG*

Signature: *Jane Bell*

WEST PLANT
BAM PM10 WEEKLY SITE CHECK FORM
RESOLUTION MONITORING PROJECT
PROJECT NO. 262-1



Date: 12/19/2014 Time: 10:22

Operator: James Bell

I. BAM SAMPLER – Weekly Checks.

YES	NO
☒	☐
☒	☐
☒	☐
☒	☐
☒	☐
☒	☐
☒	☐

1. The sampler is intact and the inlet head is unobstructed.
2. The vacuum pump is running and sounds normal.
3. The temperature shield is intact, and the sensor is inside of it.
4. The BAM is reading the correct time and day.
5. The tape is in the proper position and does not need to be changed (tape should be changed every 2 months).
6. Error log was checked (F3), and errors followed up on (see manual). 12/15 → 12/19 Bam Cal Membrane 506
7. Climate control appears operational (If it's cold out the shelter should feel warm, if it's hot out the shelter should feel cool)

II. BAM SAMPLER – Routine Maintenance (monthly). Check yes if maintenance was performed during this visit. See page 56 of BAM manual.

YES	NO
☐	☒
☐	☒
☐	☒
☐	☒
☐	☒

1. Inlet Flow check Performed
2. Visual inspection and dust removal
3. Leak check performed
4. PM10 particle trap cleaned
5. Inlet nozzle and nozzle are cleaned


AIR SCIENCES INC.
DENVER • PORTLAND

REVIEWED BY	<u>RPA</u>	DATE	<u>1/2/14</u>
AUDITED BY	<u>GB.</u>	DATE	<u>12/30/14</u>

II. BAM SAMPLER – Routine Maintenance (every 2 months). Check yes if maintenance was performed during this visit. See page 56 of BAM manual.

YES	NO
☐	☒
☐	☒

1. Filter tape replaced
2. Ran the Self-Test function

III. BAM SAMPLER – Routine Maintenance (semiannual). Check yes if maintenance was performed during this visit. See page 56 of BAM manual.

YES	NO
☐	☒
☐	☒

1. Replaced muffler on the pump (*Work performed by Air Sciences)
2. Complete calibration of flow system (*Work performed by Air Sciences)

IV. BAM SAMPLER – Routine Maintenance (annual). Check yes if maintenance was performed during this visit. See page 56 of BAM manual.

YES	NO
☐	☒
☐	☒

1. Carbon vanes in pump checked/replaced (*Work performed by Air Sciences)
2. Inlet system cleaned (*Work performed by Air Sciences)

Comments/Unusual Occurrences: _____

Signature: James Bell

WEST PLANT

BAM PM10 WEEKLY SITE CHECK FORM
RESOLUTION MONITORING PROJECT
PROJECT NO. 262-1



Date: 12/30/2014 Time: 12:34 Operator: Karen Ballard

I. BAM SAMPLER – Weekly Checks.

YES NO

✓	
✓	
✓	
✓	
✓	
✓	
✓	

1. The sampler is intact and the inlet head is unobstructed.
2. The vacuum pump is running and sounds normal.
3. The temperature shield is intact, and the sensor is inside of it.
4. The BAM is reading the correct time and day.
5. The tape is in the proper position and does not need to be changed (tape should be changed every 2 months).
6. Error log was checked (F3), and errors followed up on (see manual). 12/26-12/30 → BAM Cal Membrane 5%
7. Climate control appears operational (If it's cold out the shelter should feel warm, if it's hot out the shelter should feel cool)

II. BAM SAMPLER – Routine Maintenance (monthly). Check yes if maintenance was performed during this visit. See page 56 of BAM manual.

YES NO

✓	
✓	
✓	
	✓
✓	

1. Inlet Flow check Performed
2. Visual inspection and dust removal
3. Leak check performed
4. PM10 particle trap cleaned
5. Inlet nozzle and nozzle are cleaned

 AIR SCIENCES INC. DENVER • PORTLAND	
REVIEWED BY <u>RPA</u>	DATE <u>1/5/15</u>
AUDITED BY <u>CB</u>	DATE <u>1/5/15</u>

III. BAM SAMPLER – Routine Maintenance (every 2 months). Check yes if maintenance was performed during this visit. See page 56 of BAM manual.

YES NO

	✓
✓	

1. Filter tape replaced
2. Ran the Self-Test function

IV. BAM SAMPLER – Routine Maintenance (semiannual). Check yes if maintenance was performed during this visit. See page 56 of BAM manual.

YES NO

	✓
	✓

1. Replaced muffler on the pump (*Work performed by Air Sciences)
2. Complete calibration of flow system (*Work performed by Air Sciences)

IV. BAM SAMPLER – Routine Maintenance (annual). Check yes if maintenance was performed during this visit. See page 56 of BAM manual.

YES NO

	✓
	✓

1. Carbon vanes in pump checked/replaced (*Work performed by Air Sciences)
2. Inlet system cleaned (*Work performed by Air Sciences)

Comments/Unusual Occurrences: _____

Signature: Karen Ballard



Monthly Flow Verification PM₁₀

West Plant
PARTICULATE MONITORING PROJECT
PROJECT NO. 262-1

Met One BAM 1020
Firmware:
Calibrator:

PM₁₀: S/N: N8712
Delta Cal S/N:



REVIEWED BY

DATE

Date of Flow Audit: 12/30/2014
Time of Flow Audit: 12:35

AUDITED BY

DATE

	BAM	STD
Ambient Temperature (AT) °C	18.1	19.2
Barometric Pressure mmHg	682	680.5

	Set Point (lpm)	BAM	% Diff (1)	STD Flow Meter	% Diff (2)
(1) Actual Flow Acceptable Differential	15	15.0 14.700 - 15.300	0 ✓ +/- 2%	15.08 14.250 - 15.750	-0.53 ✓ +/- 5%
(2) Actual Flow Acceptable Differential	18.4	18.4 18.032 - 18.768	0 ✓ +/- 2%	18.61 17.480 - 19.320	-1.13 ✓ +/- 5%
(3) Actual Flow Acceptable Differential	16.7	16.7 16.336 - 17.034	0 ✓ +/- 2%	16.82 15.865 - 17.535	-0.71 ✓ +/- 5%

Calculations:

- (1) % Diff = [(BAM - Set Point)/Set Point]*100 (+/- 2%)
(2) % Diff = [(BAM - Calibrator)/Calibrator]*100 (+/- 5%)

(2) Leak Test BAM 0.1 Should be < 1.0 LPM ✓

Comments/Abnormalities: Self Test "Passed"

Signature: [Signature]

Upon completion of this form, fax to Air Sciences at 303-279-3796

WEST PLANT
BAM PM 2.5 WEEKLY SITE CHECK FORM
RESOLUTION MONITORING PROJECT
PROJECT NO. 262-1



Date: 10/03/2014 Time: 12:29

Operator: Kenn B. C. of

I. BAM SAMPLER – Weekly Checks.

YES NO

☒	☐
☒	☐
☒	☐
☒	☐
☒	☐
☒	☐
☒	☐

1. The sampler is intact and the inlet head is unobstructed.
2. The vacuum pump is running and sounds normal.
3. The temperature shield is intact, and the sensor is inside of it.
4. The BAM is reading the correct time and day.
5. The tape is in the proper position and does not need to be changed (tape should be changed every 2 months).
6. Error log was checked (F3), and errors followed up on (see manual). 9/29 → Pressure Delta-Pressure
7. Climate control appears operational (If it's cold out the shelter should feel warm, if it's hot out the shelter should feel cool) 66

II. BAM SAMPLER – Routine Maintenance (monthly). Check yes if maintenance was performed during this visit. See page 56 of BAM manual.

YES NO

☐	☒
☐	☒
☐	☒
☐	☒
☐	☒

1. Inlet Flow check Performed
2. Visual inspection and dust removal
3. Leak check performed
4. PM10 and 2.5 cyclone particle trap cleaned
5. Inlet nozzle and nozzle are cleaned



II. BAM SAMPLER – Routine Maintenance (every 2 months). Check yes if maintenance was performed during this visit. See page 56 of BAM manual.

YES NO

☐	☒
☐	☒

1. Filter tape replaced
2. Ran the Self-Test function

III. BAM SAMPLER – Routine Maintenance (semiannual). Check yes if maintenance was performed during this visit. See page 56 of BAM manual.

YES NO

☐	☒
☐	☒

1. Replaced muffler on the pump (*Work performed by Air Sciences)
2. Complete calibration of flow system (*Work performed by Air Sciences)

IV. BAM SAMPLER – Routine Maintenance (annual). Check yes if maintenance was performed during this visit. See page 56 of BAM manual.

YES NO

☐	☒
☐	☒

1. Carbon vanes in pump checked/replaced (*Work performed by Air Sciences)
2. Inlet system cleaned (*Work performed by Air Sciences)

Comments/Unusual Occurrences: _____

Signature: K. BAWARD

WEST PLANT
BAM PM 2.5 WEEKLY SITE CHECK FORM
RESOLUTION MONITORING PROJECT
PROJECT NO. 262-1



Date: 10/10/2014 Time: 1:35 Operator: K BLOD

I. BAM SAMPLER – Weekly Checks.

YES NO

☒	☒
☒	☒
☒	☒
☒	☒
☒	☒
☒	☒
☒	☒

1. The sampler is intact and the inlet head is unobstructed.
2. The vacuum pump is running and sounds normal.
3. The temperature shield is intact, and the sensor is inside of it.
4. The BAM is reading the correct time and day.
5. The tape is in the proper position and does not need to be changed (tape should be changed every 2 months).
6. Error log was checked (F3), and errors followed up on (see manual). 9/29 → Pressure ✓ GG
7. Climate control appears operational (If it's cold out the shelter should feel warm, if it's hot out the shelter should feel cool)

II. BAM SAMPLER – Routine Maintenance (monthly). Check yes if maintenance was performed during this visit. See page 56 of BAM manual.

YES NO

☐	☒
☐	☒
☐	☒
☐	☒
☐	☒

1. Inlet Flow check Performed
2. Visual inspection and dust removal
3. Leak check performed
4. PM10 and 2.5 cyclone particle trap cleaned
5. Inlet nozzle and nozzle are cleaned

 AIR SCIENCES INC. DENVER • PORTLAND	
REVIEWED BY <u>RPA</u>	DATE <u>10-17-14</u>
AUDITED BY <u>GG</u>	DATE <u>10/13/14</u>

II. BAM SAMPLER – Routine Maintenance (every 2 months). Check yes if maintenance was performed during this visit. See page 56 of BAM manual.

YES NO

☐	☒
☐	☒

1. Filter tape replaced
2. Ran the Self-Test function

III. BAM SAMPLER – Routine Maintenance (semiannual). Check yes if maintenance was performed during this visit. See page 56 of BAM manual.

YES NO

☐	☒
☐	☒

1. Replaced muffler on the pump (*Work performed by Air Sciences)
2. Complete calibration of flow system (*Work performed by Air Sciences)

IV. BAM SAMPLER – Routine Maintenance (annual). Check yes if maintenance was performed during this visit. See page 56 of BAM manual.

YES NO

☐	☒
☐	☒

1. Carbon vanes in pump checked/replaced (*Work performed by Air Sciences)
2. Inlet system cleaned (*Work performed by Air Sciences)

**Comments/Unusual Occurrences: _____

Signature: K. BLOD

WEST PLANT
BAM PM 2.5 WEEKLY SITE CHECK FORM
RESOLUTION MONITORING PROJECT
PROJECT NO. 262-1



Date: 10/23/2014 Time: 9:48

Operator: Kam Bell

I. BAM SAMPLER – Weekly Checks.

YES NO

☒	☐
☒	☐
☒	☐
☒	☐
☒	☐
☒	☐
☒	☐

1. The sampler is intact and the inlet head is unobstructed.
2. The vacuum pump is running and sounds normal.
3. The temperature shield is intact, and the sensor is inside of it.
4. The BAM is reading the correct time and day.
5. The tape is in the proper position and does not need to be changed (tape should be changed every 2 months).
6. Error log was checked (F3), and errors followed up on (see manual). 10/20-10/22 → Tape Sensor
7. Climate control appears operational (If it's cold out the shelter should feel warm, if it's hot out the shelter should feel cool)

II. BAM SAMPLER – Routine Maintenance (monthly). Check yes if maintenance was performed during this visit. See page 56 of BAM manual.

YES NO

☐	☒
☐	☒
☐	☒
☐	☒
☐	☒

1. Inlet Flow check Performed
2. Visual inspection and dust removal
3. Leak check performed
4. PM10 and 2.5 cyclone particle trap cleaned
5. Inlet nozzle and nozzle are cleaned

 AIR SCIENCES INC. DENVER • PORTLAND	
<u>RAK</u> VIEWED BY	<u>11/4/14</u> DATE
<u>CB-</u> AUDITED BY	<u>11/5/14</u> DATE

II. BAM SAMPLER – Routine Maintenance (every 2 months). Check yes if maintenance was performed during this visit. See page 56 of BAM manual.

YES NO

☐	☒
☐	☒

1. Filter tape replaced
2. Ran the Self-Test function

III. BAM SAMPLER – Routine Maintenance (semiannual). Check yes if maintenance was performed during this visit. See page 56 of BAM manual.

YES NO

☐	☒
☐	☒

1. Replaced muffler on the pump (*Work performed by Air Sciences)
2. Complete calibration of flow system (*Work performed by Air Sciences)

IV. BAM SAMPLER – Routine Maintenance (annual). Check yes if maintenance was performed during this visit. See page 56 of BAM manual.

YES NO

☐	☒
☐	☒

1. Carbon vanes in pump checked/replaced (*Work performed by Air Sciences)
2. Inlet system cleaned (*Work performed by Air Sciences)

**Comments/Unusual Occurrences: _____

Signature: K. Bell

WEST PLANT
BAM PM 2.5 WEEKLY SITE CHECK FORM
RESOLUTION MONITORING PROJECT
PROJECT NO. 262-1



Date: 10/31/2014 Time: 12:26 Operator: K. Balle

I. BAM SAMPLER – Weekly Checks.

YES NO

☒	☐
☒	☐
☒	☐
☒	☐
☒	☐
☒	☐
☒	☐

1. The sampler is intact and the inlet head is unobstructed.
2. The vacuum pump is running and sounds normal.
3. The temperature shield is intact, and the sensor is inside of it.
4. The BAM is reading the correct time and day.
5. The tape is in the proper position and does not need to be changed (tape should be changed every 2 months).
6. Error log was checked (F3), and errors followed up on (see manual). 10/26-10/31 → BAM Cal Membrane 50%
7. Climate control appears operational (If it's cold out the shelter should feel warm, if it's hot out the shelter should feel cool)

II. BAM SAMPLER – Routine Maintenance (monthly). Check yes if maintenance was performed during this visit. See page 56 of BAM manual.

YES NO

☐	☒
☐	☒
☐	☒
☐	☒
☐	☒

1. Inlet Flow check Performed
2. Visual inspection and dust removal
3. Leak check performed
4. PM10 and 2.5 cyclone particle trap cleaned
5. Inlet nozzle and nozzle are cleaned



III. BAM SAMPLER – Routine Maintenance (every 2 months). Check yes if maintenance was performed during this visit. See page 56 of BAM manual.

YES NO

☐	☒
☐	☒

1. Filter tape replaced
2. Ran the Self-Test function

III. BAM SAMPLER – Routine Maintenance (semiannual). Check yes if maintenance was performed during this visit. See page 56 of BAM manual.

YES NO

☐	☒
☐	☒

1. Replaced muffler on the pump (*Work performed by Air Sciences)
2. Complete calibration of flow system (*Work performed by Air Sciences)

IV. BAM SAMPLER – Routine Maintenance (annual). Check yes if maintenance was performed during this visit. See page 56 of BAM manual.

YES NO

☐	☒
☐	☒

1. Carbon vanes in pump checked/replaced (*Work performed by Air Sciences)
2. Inlet system cleaned (*Work performed by Air Sciences)

**Comments/Unusual Occurrences: _____

Signature: Kami Balle

WEST PLANT
BAM PM 2.5 WEEKLY SITE CHECK FORM
RESOLUTION MONITORING PROJECT
PROJECT NO. 262-1



Date: 11/7/14 Time: 10:05 Operator: R. Beck

I. BAM SAMPLER – Weekly Checks.

YES NO

☒	☐
☒	☐
☒	☐
☒	☐
☒	☐
☒	☐
☒	☐

1. The sampler is intact and the Inlet head is unobstructed.
2. The vacuum pump is running and sounds normal.
3. The temperature shield is intact, and the sensor is inside of it.
4. The BAM is reading the correct time and day.
5. The tape is in the proper position and does not need to be changed (tape should be changed every 2 months).
6. Error log was checked (F3), and errors followed up on (see manual). 11/7 - 11/2
Bam Cal Man 5%. ✓ 66
7. Climate control appears operational (If it's cold out the shelter should feel warm, if it's hot out the shelter should feel cool)

II. BAM SAMPLER – Routine Maintenance (monthly). Check yes if maintenance was performed during this visit. See page 56 of BAM manual.

YES NO 66

☐	☒
☐	☒
☐	☒
☐	☒
☐	☒

1. Inlet Flow check Performed
2. Visual inspection and dust removal
3. Leak check performed
4. PM10 and 2.5 cyclone particle trap cleaned
5. Inlet nozzle and nozzle are cleaned

 AIR SCIENCES INC. DENVER • FORTLAUD	
REVIEWED BY <u>RPA</u> AUDITED BY <u>66</u>	DATE <u>11/24/14</u> DATE <u>11/24/14</u>

II. BAM SAMPLER – Routine Maintenance (every 2 months). Check yes if maintenance was performed during this visit. See page 56 of BAM manual.

YES NO 66

☐	☒
☐	☒

1. Filter tape replaced
2. Ran the Self-Test function

III. BAM SAMPLER – Routine Maintenance (semiannual). Check yes if maintenance was performed during this visit. See page 56 of BAM manual.

YES NO 66

☐	☒
☐	☒

1. Replaced muffler on the pump (*Work performed by Air Sciences)
2. Complete calibration of flow system (*Work performed by Air Sciences)

IV. BAM SAMPLER – Routine Maintenance (annual). Check yes if maintenance was performed during this visit. See page 56 of BAM manual.

YES NO 66

☐	☒
☐	☒

1. Carbon vanes in pump checked/replaced (*Work performed by Air Sciences)
2. Inlet system cleaned (*Work performed by Air Sciences)

**Comments/Unusual Occurrences: _____

Signature: _____

WEST PLANT
BAM PM 2.5 WEEKLY SITE CHECK FORM
RESOLUTION MONITORING PROJECT
PROJECT NO. 262-1



Date: 11/13/2014 Time: 1:31 Operator: Kam: Balceda

I. BAM SAMPLER – Weekly Checks.

YES NO

☒	☐
☒	☐
☒	☐
☒	☐
☒	☐
☒	☐
☒	☐

1. The sampler is intact and the inlet head is unobstructed.
2. The vacuum pump is running and sounds normal.
3. The temperature shield is intact, and the sensor is inside of it.
4. The BAM is reading the correct time and day.
5. The tape is in the proper position and does not need to be changed (tape should be changed every 2 months).
6. Error log was checked (F3), and errors followed up on (see manual). 11/4-11/13 → BAM Cat membrane
7. Climate control appears operational (If it's cold out the shelter should feel warm, if it's hot out the shelter should feel cool) 66

II. BAM SAMPLER – Routine Maintenance (monthly). Check yes if maintenance was performed during this visit. See page 56 of BAM manual.

YES NO 66

☐	☒
☐	☒
☐	☒
☐	☒
☐	☒

1. Inlet Flow check Performed
2. Visual inspection and dust removal
3. Leak check performed
4. PM10 and 2.5 cyclone particle trap cleaned
5. Inlet nozzle and nozzle are cleaned

 AIR SCIENCES INC. DESIGN • BUILD • MAINTAIN	
<u>RPA</u> REVIEWED BY	<u>11/24/14</u> DATE
<u>66</u> AUDITED BY	<u>11/24/14</u> DATE

III. BAM SAMPLER – Routine Maintenance (every 2 months). Check yes if maintenance was performed during this visit. See page 56 of BAM manual.

YES NO 66

☐	☒
☐	☒

1. Filter tape replaced
2. Ran the Self-Test function

III. BAM SAMPLER – Routine Maintenance (semiannual). Check yes if maintenance was performed during this visit. See page 56 of BAM manual.

YES NO 66

☐	☒
☐	☒

1. Replaced muffler on the pump (*Work performed by Air Sciences)
2. Complete calibration of flow system (*Work performed by Air Sciences)

IV. BAM SAMPLER – Routine Maintenance (annual). Check yes if maintenance was performed during this visit. See page 56 of BAM manual.

YES NO 66

☐	☒
☐	☒

1. Carbon vanes in pump checked/replaced (*Work performed by Air Sciences)
2. Inlet system cleaned (*Work performed by Air Sciences)

Comments/Unusual Occurrences: _____

Signature: Kam Balceda

WEST PLANT
BAM PM 2.5 WEEKLY SITE CHECK FORM
RESOLUTION MONITORING PROJECT
PROJECT NO. 262-1



Date: 11/25/2014

Time: 1:40

Operator: H. Ballad

I. BAM SAMPLER – Weekly Checks.

YES NO

☒	☐
☒	☐
☒	☐
☒	☐
☒	☐
☒	☐
☒	☐

1. The sampler is intact and the inlet head is unobstructed.
2. The vacuum pump is running and sounds normal.
3. The temperature shield is intact, and the sensor is inside of it.
4. The BAM is reading the correct time and day.
5. The tape is in the proper position and does not need to be changed (tape should be changed every 2 months).
6. Error log was checked (F3), and errors followed up on (see manual). 11/21/17 → BAM Cal membrane S/O
11/17 → Tape Sensor
7. Climate control appears operational (If it's cold out the shelter should feel warm, if it's hot out the shelter should feel cool) ✓

II. BAM SAMPLER – Routine Maintenance (monthly). Check yes if maintenance was performed during this visit. See page 56 of BAM manual.

YES NO

☐	☒
☐	☒
☐	☒
☐	☒
☐	☒

1. Inlet Flow check Performed
2. Visual inspection and dust removal
3. Leak check performed
4. PM10 and 2.5 cyclone particle trap cleaned
5. Inlet nozzle and nozzle are cleaned

 AIR SCIENCES INC. DENVER • PORTLAND	
REVIEWED BY <u>RPA</u>	DATE <u>11/29/14</u>
AUDITED BY <u>GG</u>	DATE <u>11/24/14</u>

III. BAM SAMPLER – Routine Maintenance (every 2 months). Check yes if maintenance was performed during this visit. See page 56 of BAM manual.

YES NO

☐	☒
☐	☒

1. Filter tape replaced
2. Ran the Self-Test function

IV. BAM SAMPLER – Routine Maintenance (annual). Check yes if maintenance was performed during this visit. See page 56 of BAM manual.

YES NO

☐	☒
☐	☒

1. Replaced muffler on the pump (*Work performed by Air Sciences)
2. Complete calibration of flow system (*Work performed by Air Sciences)

IV. BAM SAMPLER – Routine Maintenance (annual). Check yes if maintenance was performed during this visit. See page 56 of BAM manual.

YES NO

☐	☒
☐	☒

1. Carbon vanes in pump checked/replaced (*Work performed by Air Sciences)
2. Inlet system cleaned (*Work performed by Air Sciences)

**Comments/Unusual Occurrences: _____

Signature: Kan R

WEST PLANT
BAM PM 2.5 WEEKLY SITE CHECK FORM
RESOLUTION MONITORING PROJECT
PROJECT NO. 262-1



Date: 12/05/2014 Time: 12:47

Operator: Kim BeCo

I. BAM SAMPLER – Weekly Checks.

YES NO

☒	☐
☒	☐
☒	☐
☒	☐
☒	☐
☒	☐
☒	☐

- The sampler is intact and the inlet head is unobstructed.
- The vacuum pump is running and sounds normal.
- The temperature shield is intact, and the sensor is inside of it.
- The BAM is reading the correct time and day.
- The tape is in the proper position and does not need to be changed (tape should be changed every 2 months).
- Error log was checked (F3), and errors followed up on (see manual). 12/01-12/05 → BAM cal Membrane 5%
- Climate control appears operational (If it's cold out the shelter should feel warm, if it's hot out the shelter should feel cool)

II. BAM SAMPLER – Routine Maintenance (monthly). Check yes if maintenance was performed during this visit. See page 56 of BAM manual.

YES NO 66-

☐	☒
☐	☒
☐	☒
☐	☒
☐	☒

- Inlet Flow check Performed
- Visual inspection and dust removal
- Leak check performed
- PM10 and 2.5 cyclone particle trap cleaned
- Inlet nozzle and nozzle are cleaned

 AIR SCIENCES INC. DENVER • CHATTANOOGA	
<u>RPA</u> REVIEWED BY	<u>12/8/14</u> DATE
<u>66-</u> AUDITED BY	<u>12/8/14</u> DATE

III. BAM SAMPLER – Routine Maintenance (every 2 months). Check yes if maintenance was performed during this visit. See page 56 of BAM manual.

YES NO 66-

☐	☒
☐	☒

- Filter tape replaced
- Ran the Self-Test function

III. BAM SAMPLER – Routine Maintenance (semiannual). Check yes if maintenance was performed during this visit. See page 56 of BAM manual.

YES NO 66-

☐	☒
☐	☒

- Replaced muffler on the pump (*Work performed by Air Sciences)
- Complete calibration of flow system (*Work performed by Air Sciences)

IV. BAM SAMPLER – Routine Maintenance (annual). Check yes if maintenance was performed during this visit. See page 56 of BAM manual.

YES NO 66-

☐	☒
☐	☒

- Carbon vanes in pump checked/replaced (*Work performed by Air Sciences)
- Inlet system cleaned (*Work performed by Air Sciences)

**Comments/Unusual Occurrences: _____

Signature: Kim BeCo

WEST PLANT
BAM PM 2.5 WEEKLY SITE CHECK FORM
RESOLUTION MONITORING PROJECT
PROJECT NO. 262-1



Date: 12/11/2014 Time: _____

Operator: Kami Bello

I. BAM SAMPLER – Weekly Checks.

YES NO

☒	☐
☒	☐
☒	☐
☒	☐
☒	☐
☒	☐
☒	☐

1. The sampler is intact and the inlet head is unobstructed.
2. The vacuum pump is running and sounds normal.
3. The temperature shield is intact, and the sensor is inside of it.
4. The BAM is reading the correct time and day.
5. The tape is in the proper position and does not need to be changed (tape should be changed every 2 months).
6. Error log was checked (F3), and errors followed up on (see manual). 12/07-12/11 → After call membrane
7. Climate control appears operational (If it's cold out the shelter should feel warm, if it's hot out the shelter should feel cool)

II. BAM SAMPLER – Routine Maintenance (monthly). Check yes if maintenance was performed during this visit. See page 56 of BAM manual.

YES NO G.B.

☐	☒
☐	☒
☐	☒
☐	☒
☐	☒

1. Inlet Flow check Performed
2. Visual inspection and dust removal
3. Leak check performed
4. PM10 and 2.5 cyclone particle trap cleaned
5. Inlet nozzle and nozzle are cleaned

 AIR SCIENCES INC. DESIGN • FABRICATE	
REVIEWED BY <u>RPA</u>	DATE <u>1/2/14</u>
AUDITED BY <u>G.B.</u>	DATE <u>12/15/14</u>

II. BAM SAMPLER – Routine Maintenance (every 2 months). Check yes if maintenance was performed during this visit. See page 56 of BAM manual.

YES NO G.B.

☐	☒
☐	☒

1. Filter tape replaced
2. Ran the Self-Test function

III. BAM SAMPLER – Routine Maintenance (semiannual). Check yes if maintenance was performed during this visit. See page 56 of BAM manual.

YES NO G.B.

☐	☒
☐	☒

1. Replaced muffler on the pump (*Work performed by Air Sciences)
2. Complete calibration of flow system (*Work performed by Air Sciences)

IV. BAM SAMPLER – Routine Maintenance (annual). Check yes if maintenance was performed during this visit. See page 56 of BAM manual.

YES NO G.B.

☐	☒
☐	☒

1. Carbon vanes in pump checked/replaced (*Work performed by Air Sciences)
2. Inlet system cleaned (*Work performed by Air Sciences)

**Comments/Unusual Occurrences: Flow Error → Ran Self-Test; Pump is out G.B.

PM2.5 conc + flow data will be invalidated after the new pump install! G.B.

Signature: Kami Bello

WEST PLANT
BAM PM 2.5 WEEKLY SITE CHECK FORM
RESOLUTION MONITORING PROJECT
PROJECT NO. 262-1



Date: 12/19/2014 Time: 10:23 Operator: R Ball d

I. BAM SAMPLER – Weekly Checks.

YES NO

☒	☐
☐	☒
☒	☐
☒	☐
☒	☐
☒	☐
☒	☐

1. The sampler is intact and the inlet head is unobstructed.
2. The vacuum pump is running and sounds normal. — Vacuum Pump *brat*, New one on its way ✓ *GG*
3. The temperature shield is intact, and the sensor is inside of it.
4. The BAM is reading the correct time and day.
5. The tape is in the proper position and does not need to be changed (tape should be changed every 2 months).
6. Error log was checked (F3), and errors followed up on (see manual). *Flow Error* ✓ *GG*
7. Climate control appears operational (If it's cold out the shelter should feel warm, if it's hot out the shelter should feel cool)

II. BAM SAMPLER – Routine Maintenance (monthly). Check yes if maintenance was performed during this visit. See page 56 of BAM manual.

YES NO

☐	☒
☐	☒
☐	☒
☐	☒
☐	☒

1. Inlet Flow check Performed
2. Visual inspection and dust removal
3. Leak check performed
4. PM10 and 2.5 cyclone particle trap cleaned
5. Inlet nozzle and nozzle are cleaned

 AIR SCIENCES INC. DENVER • FORT LAUDERDALE	
REVIEWED BY	DATE
<i>RPA</i>	<i>12/14</i>
AUDITED BY	DATE
<i>GG</i>	<i>12/30/14</i>

II. BAM SAMPLER – Routine Maintenance (every 2 months). Check yes if maintenance was performed during this visit. See page 56 of BAM manual.

YES NO

☐	☒
☐	☒

1. Filter tape replaced
2. Ran the Self-Test function

III. BAM SAMPLER – Routine Maintenance (semiannual). Check yes if maintenance was performed during this visit. See page 56 of BAM manual.

YES NO

☐	☒
☐	☒

1. Replaced muffler on the pump (*Work performed by Air Sciences)
2. Complete calibration of flow system (*Work performed by Air Sciences)

IV. BAM SAMPLER – Routine Maintenance (annual). Check yes if maintenance was performed during this visit. See page 56 of BAM manual.

YES NO

☐	☒
☐	☒

1. Carbon vanes in pump checked/replaced (*Work performed by Air Sciences)
2. Inlet system cleaned (*Work performed by Air Sciences)

**Comments/Unusual Occurrences: _____

Signature: *Kami Ball d*

WEST PLANT
 BAM PM 2.5 WEEKLY SITE CHECK FORM
 RESOLUTION MONITORING PROJECT
 PROJECT NO. 262-1



Date: 12/30/2014 Time: 13:05 Operator: K. Balla

I. BAM SAMPLER – Weekly Checks.

YES NO

☒	☐
☒	☐
☒	☐
☒	☐
☒	☐
☒	☐
☒	☐

1. The sampler is intact and the inlet head is unobstructed.
2. The vacuum pump is running and sounds normal.
3. The temperature shield is intact, and the sensor is inside of it.
4. The BAM is reading the correct time and day.
5. The tape is in the proper position and does not need to be changed (tape should be changed every 2 months).
6. Error log was checked (F3), and errors followed up on (see manual). 12/26-12/30 → Flow Failure ✓ 66
7. Climate control appears operational (If it's cold out the shelter should feel warm, if it's hot out the shelter should feel cool)

II. BAM SAMPLER – Routine Maintenance (monthly). Check yes if maintenance was performed during this visit. See page 56 of BAM manual.

YES NO

☒	☐
☒	☐
☒	☐
☐	☒
☒	☐

1. Inlet Flow check Performed
2. Visual inspection and dust removal
3. Leak check performed
4. PM10 and 2.5 cyclone particle trap cleaned
5. Inlet nozzle and nozzle are cleaned

 AIR SCIENCES INC. DENVER • PORTLAND	
REVIEWED BY <u>RPA</u>	DATE <u>1/5/15</u>
AUDITED BY <u>66</u>	DATE <u>1/5/15</u>

II. BAM SAMPLER – Routine Maintenance (every 2 months). Check yes if maintenance was performed during this visit. See page 56 of BAM manual.

YES NO

☐	☒
☒	☐

1. Filter tape replaced
2. Ran the Self-Test function

III. BAM SAMPLER – Routine Maintenance (semiannual). Check yes if maintenance was performed during this visit. See page 56 of BAM manual.

YES NO 66

☐	☒
☐	☒

1. Replaced muffler on the pump (*Work performed by Air Sciences)
2. Complete calibration of flow system (*Work performed by Air Sciences)

IV. BAM SAMPLER – Routine Maintenance (annual). Check yes if maintenance was performed during this visit. See page 56 of BAM manual.

YES NO 66

☐	☒
☐	☒

1. Carbon vanes in pump checked/replaced (*Work performed by Air Sciences)
2. Inlet system cleaned (*Work performed by Air Sciences)

**Comments/Unusual Occurrences: Changed out pump - Ran Self Test ✓ 66

Signature: Kami Balla



Monthly Flow Verification PM_{2.5}

West Plant
PARTICULATE MONITORING PROJECT
PROJECT NO. 262-1

Met One BAM 1020
Firmware:
Calibrator:

PM_{2.5}:

S/N: 148193

S/N:

Delta Cal

Date of Flow Audit:
Time of Flow Audit:

12/30/2014 ✓
13:09 ✓

AIR SCIENCES INC. DENVER • PORTLAND	
REVIEWED BY RPA	DATE 1/5/15
AUDITED BY CB	DATE 1/5/15

Ambient Temperature (AT) °C
Barometric Pressure mmHg

BAM	STD
17.4	18.3
683	680

	Set Point (lpm)	BAM	% Diff (1)	STD Flow Meter	% Diff (2)
(1) Actual Flow Acceptable Differential	15	15.0	0 ✓	14.98	0.13 ✓
		14.700 - 15.300	+/- 2%	14.250 - 15.750	+/- 5%
(2) Actual Flow Acceptable Differential	18.4	18.4	0 ✓	18.4	0 ✓
		18.032 - 18.768	+/- 2%	17.480 - 19.320	+/- 5%
(3) Actual Flow Acceptable Differential	16.7	16.7	0 ✓	16.68	0.12 ✓
		16.336 - 17.034	+/- 2%	15.865 - 17.535	+/- 5%

Calculations:

- (1) % Diff = [(BAM - Set Point)/Set Point]*100 (+/- 2%)
(2) % Diff = [(BAM - Calibrator)/Calibrator]*100 (+/- 5%)

(2) Leak Test BAM
0.7 Should be < 1.0 LPM ✓

Comments/Abnormalities: Self Test "Passed"

Signature: James Ballard

Upon completion of this form, fax to Air Sciences at 303-279-3796

Appendix F: East Plant Meteorological Site Check Forms

**EAST PLANT
MET SITE CHECK FORM**
Resolution
PROJECT NO. 262-1

Date: 10/03/2014

Time: 1:11

Operator: K. Ballard

YES NO **

✓	
✓	
✓	
✓	
✓	
✓	
✓	
✓	
✓	
✓	

1. The tower is intact and upright.
2. The anemometer propeller and the wind direction vane are turning freely.
3. All temperature shields are intact, and the probes are inside their shields.
4. The aspirator fans are operating.
5. The solar radiation sensor is level and has been cleaned.
6. The solar panel is facing south and is clean.
7. The precipitation gauge is clean and free of bugs and dust.
8. The data logger is reading the correct time and day.
9. The site has been visually inspected for unusual wildlife occurrences (dead birds, etc.).
10. Estimate and document the parameters below.

	
AIR SCIENCES INC. DENVER • PORTLAND	
REVIEWED BY <u>RPA</u>	DATE <u>10-17-14</u>
AUDITED BY <u>GS</u>	DATE <u>10/13/14</u>

Parameter	Estimated	Logger	Audit
Speed 10m (m/s)	<u>6 m/s</u>	<u>5.73</u>	<u>6.32</u> +
Direction* 10m (deg)	<u>NE</u>	<u>50.74</u>	<u>58.8</u> +
Ambient Temperature (°C)	<u>29°</u>	<u>27.78</u>	<u>28</u> +
Relative Humidity (%)	<u>15%</u>	<u>11.82</u>	<u>12.1</u> +
Aspirated Temp 2m	<u>29°</u>	<u>27.78</u>	<u>27.9</u> +
Aspirated Temp 10m	<u>28°</u>	<u>26.68</u>	<u>26.8</u> +
Delta Temperature (°C)	<u>N/A</u>	<u>-1.10</u>	<u>-1.1</u> +
Solar Radiation (w/m²)	<u>Sunny</u> Partly cloudy Cloudy	<u>857.07</u>	<u>863</u> +
Barometric Pressure (mmHg)	<u>N/A</u>	<u>655.91</u>	<u>656</u> +
Battery Voltage (V)	<u>N/A</u>	<u>12.70</u>	<u>12.7</u> +
Time (MST)	<u>N/A</u>	<u>1:13</u>	<u>13:15 - LT.</u> +
Date	<u>N/A</u>	<u>10/03/2014</u>	<u>10/03/2014</u> +

*Direction wind is from

Comments/Unusual Occurrences or Weather: _____

When form is completed, please fax to Air Sciences Inc. @ 303-279-3796 (no cover sheet is necessary).

Site Operator Signature: Kane Ballard

**EAST PLANT
MET SITE CHECK FORM
Resolution
PROJECT NO. 262-1**

Date: 10/10/2014

Time: 1:51

Operator: Rami Balla

YES NO **

☒	☐
☒	☐
☒	☐
☒	☐
☒	☐
☒	☐
☒	☐
☒	☐
☒	☐
☒	☐

1. The tower is intact and upright.
2. The anemometer propeller and the wind direction vane are turning freely.
3. All temperature shields are intact, and the probes are inside their shields.
4. The aspirator fans are operating.
5. The solar radiation sensor is level and has been cleaned.
6. The solar panel is facing south and is clean.
7. The precipitation gauge is clean and free of bugs and dust.
8. The data logger is reading the correct time and day.
9. The site has been visually inspected for unusual wildlife occurrences (dead birds, etc.).
10. Estimate and document the parameters below.

 AIR SCIENCES INC. DENVER • PORTLAND	
REVIEWED BY <u>RDA</u>	DATE <u>10-17-14</u>
AUDITED BY <u>66-</u>	DATE <u>10/13/14</u>

Parameter	Estimated	Logger	Audit
Speed 10m (m/s)	<u>5 m/s</u>	<u>4.7</u>	<u>2.95</u> +
Direction* 10m (deg)	<u>W</u>	<u>228.65</u>	<u>247</u> +
Ambient Temperature (°C)	<u>23°</u>	<u>21.18</u>	<u>21.5</u> +
Relative Humidity (%)	<u>55%</u>	<u>62.91</u>	<u>62.2</u> +
Aspirated Temp 2m	<u>23°</u>	<u>20.77</u>	<u>21.1</u> +
Aspirated Temp 10m	<u>22°</u>	<u>20.43</u>	<u>20.5</u> +
Delta Temperature (°C)	N/A	<u>-0.33</u>	<u>-0.607</u> +
Solar Radiation (w/m²)	<u>Sunny</u> Partly cloudy Cloudy	<u>725.54</u>	<u>613</u> +
Barometric Pressure (mm-Hg)	N/A	<u>653.60</u>	<u>654</u> +
Battery Voltage (V)	N/A	<u>12.74</u>	<u>12.8</u> +
Time (MST)	N/A	<u>1:54</u>	<u>14:00 - L.T.</u> +
Date	N/A	<u>10/10/2014</u>	<u>10/10/2014</u> +

66-
+ 779 - 13:30
+ 758 - 13:45
+ 701 - 14:15
+ 651 - 14:30

*Direction wind is from

Comments/Unusual Occurrences or Weather: _____

When form is completed, please fax to Air Sciences Inc. @ 303-279-3796 (no cover sheet is necessary).

Site Operator Signature: Rami Balla

**EAST PLANT
MET SITE CHECK FORM
Resolution
PROJECT NO. 262-1**

Date: 10/23/2014

Time: 10:10

Operator: Kame Ballard

YES NO **

✓
✓
✓
✓
✓
✓
✓
✓
✓
✓

1. The tower is intact and upright.
2. The anemometer propeller and the wind direction vane are turning freely.
3. All temperature shields are intact, and the probes are inside their shields.
4. The aspirator fans are operating.
5. The solar radiation sensor is level and has been cleaned.
6. The solar panel is facing south and is clean.
7. The precipitation gauge is clean and free of bugs and dust.
8. The data logger is reading the correct time and day.
9. The site has been visually inspected for unusual wildlife occurrences (dead birds, etc.).
10. Estimate and document the parameters below.

 AIR SCIENCES INC. PORTLAND • OREGON	
RPA	11/3/14
REVIEWED BY	DATE
AUDITED BY <u>GG</u>	DATE <u>11/3/14</u>

Parameter	Estimated	Logger	Audit	
Speed 10m (m/s)	<u>4.5</u>	<u>3.5</u>	<u>3.35</u>	+
Direction* 10m (deg)	<u>NE</u>	<u>40.89</u>	<u>55.9</u>	+
Ambient Temperature (°C)	<u>25°</u>	<u>23.41</u>	<u>23.1</u>	+
Relative Humidity (%)	<u>35%</u>	<u>39.54</u>	<u>39.9</u>	+
Aspirated Temp 2m	<u>25°</u>	<u>23.01</u>	<u>22.7</u>	+
Aspirated Temp 10m	<u>24°</u>	<u>21.84</u>	<u>21.6</u>	+
Delta Temperature (°C)	N/A	<u>-1.17</u>	<u>-1.16</u>	+
Solar Radiation (w/m²)	<u>Sunny</u> Partly cloudy Cloudy	<u>688.77</u>	<u>680</u>	+
Barometric Pressure (mmHg)	N/A	<u>656.36</u>	<u>656</u>	+
Battery Voltage (V)	N/A	<u>12.75</u>	<u>12.8</u>	+
Time (MST)	N/A	<u>10:12</u>	<u>10:15 - L.T.</u>	+
Date	N/A	<u>10/23/2014</u>	<u>10/23/2014</u>	+

*Direction wind is from

Comments/Unusual Occurrences or Weather: Noise monitoring done for this site — ✓ GG

When form is completed, please fax to Air Sciences Inc. @ 303-279-3796 (no cover sheet is necessary).

Site Operator Signature: Kame Ballard

**EAST PLANT
MET SITE CHECK FORM
Resolution
PROJECT NO. 262-1**

Date: 10/31/2014 Time: 1:01 Operator: Kanu Ballard

YES NO **

- | | |
|---|--|
| ✓ | 1. The tower is intact and upright. |
| ✓ | 2. The anemometer propeller and the wind direction vane are turning freely. |
| ✓ | 3. All temperature shields are intact, and the probes are inside their shields. |
| ✓ | 4. The aspirator fans are operating. |
| ✓ | 5. The solar radiation sensor is level and has been cleaned. |
| ✓ | 6. The solar panel is facing south and is clean. |
| ✓ | 7. The precipitation gauge is clean and free of bugs and dust. |
| ✓ | 8. The data logger is reading the correct time and day. |
| ✓ | 9. The site has been visually inspected for unusual wildlife occurrences (dead birds, etc.). |
| ✓ | 10. Estimate and document the parameters below. |



AIR SCIENCES INC.
DENVER • PORTLAND

REVIEWED BY: KAK DATE: 11/3/14

AUDITED BY: GG DATE: 11/3/14

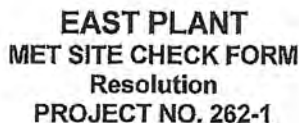
Parameter	Estimated	Logger	Audit
Speed 10m (m/s)		5.32	5.45 +
Direction* 10m (deg)		133.36	126 +
Ambient Temperature (°C)		24.12	25.1 +
Relative Humidity (%)		24.16	27.5 +
Aspirated Temp 2m		24.04	24.8 +
Aspirated Temp 10m		24.07	23.9 +
Delta Temperature (°C)	N/A	-0.47	-0.942 +
Solar Radiation (w/m ²)	Sunny (Partly cloudy) Cloudy	357.54	609 +
Barometric Pressure (mmHg)	N/A	652.68	653 +
Battery Voltage (V)	N/A	12.73	12.7 +
Time (MST)	N/A	1:03 pm	13:00 C.T. +
Date	N/A	10/31/2014	10/31/2014 +

*Direction wind is from

Comments/Unusual Occurrences or Weather: _____

When form is completed, please fax to Air Sciences Inc. @ 303-279-3796 (no cover sheet is necessary).

Site Operator Signature: Kanu Ballard



Site Operator Signature:

**EAST PLANT
MET SITE CHECK FORM
Resolution
PROJECT NO. 262-1**

Date: 11/13/2014

Time: 3:59

Operator: Kane Ball

YES NO **

- | | |
|---|--|
| ✓ | 1. The tower is intact and upright. |
| ✓ | 2. The anemometer propeller and the wind direction vane are turning freely. |
| ✓ | 3. All temperature shields are intact, and the probes are inside their shields. |
| ✓ | 4. The aspirator fans are operating. |
| ✓ | 5. The solar radiation sensor is level and has been cleaned. |
| ✓ | 6. The solar panel is facing south and is clean. |
| ✓ | 7. The precipitation gauge is clean and free of bugs and dust. |
| ✓ | 8. The data logger is reading the correct time and day. |
| ✓ | 9. The site has been visually inspected for unusual wildlife occurrences (dead birds, etc.). |
| ✓ | 10. Estimate and document the parameters below. |



Parameter	Estimated	Logger	Audit
Speed 10m (m/s)	<u>2 m/s</u>	<u>1.9 m/s</u>	<u>3.01</u>
Direction* 10m (deg)	<u>ESE</u>	<u>197.51</u>	<u>222</u>
Ambient Temperature (°C)	<u>21°</u>	<u>19.88</u>	<u>19.8</u>
Relative Humidity (%)	<u>85%</u>	<u>85.31</u>	<u>85.8</u>
Aspirated Temp 2m	<u>21°</u>	<u>19.24</u>	<u>19.1</u>
Aspirated Temp 10m	<u>20°</u>	<u>18.41</u>	<u>18.4</u>
Delta Temperature (°C)	N/A	<u>-0.85</u>	<u>-0.769</u>
Solar Radiation (w/m²)	<u>Sunny</u> <u>Partly cloudy</u> <u>Cloudy</u>	<u>370.45</u>	<u>367</u>
Barometric Pressure (mmHg)	N/A	<u>652.46</u>	<u>653</u>
Battery Voltage (V)	N/A	<u>12.79</u>	<u>12.8</u>
Time (MST)	N/A	<u>3:12</u>	<u>15:15 - L.T.</u>
Date	N/A	<u>11/13/2014</u>	<u>11/13/2014</u>

EB
211 - 14:45
+ 246 - 15:00
* 228 - 15:30
+ 200 - 15:45

*Direction wind is from

Comments/Unusual Occurrences or Weather: Filed map. per VEG

When form is completed, please fax to Air Sciences Inc. @ 303-279-3796 (no cover sheet is necessary).

Site Operator Signature: Kane Ball

**EAST PLANT
MET SITE CHECK FORM
Resolution
PROJECT NO. 262-1**

Date: 11/21/2014

Time: 2:25

Operator: James Bellech

YES NO **

☒	☐
☒	☐
☒	☐
☒	☐
☒	☐
☒	☐
☒	☐
☒	☐
☒	☐
☒	☐

- The tower is intact and upright.
- The anemometer propeller and the wind direction vane are turning freely.
- All temperature shields are intact, and the probes are inside their shields.
- The aspirator fans are operating.
- The solar radiation sensor is level and has been cleaned.
- The solar panel is facing south and is clean.
- The precipitation gauge is clean and free of bugs and dust.
- The data logger is reading the correct time and day.
- The site has been visually inspected for unusual wildlife occurrences (dead birds, etc.).
- Estimate and document the parameters below.

 AIR SCIENCES INC. DENVER • CHICAGO	
REVIEWED BY <u>RPA</u>	DATE <u>11/21/14</u>
AUDITED BY <u>[Signature]</u>	DATE <u>11/24/14</u>

Parameter	Estimated	Logger	Audit
Speed 10m (m/s)	<u>3m/s</u>	<u>2.54</u>	<u>1.48</u>
Direction* 10m (deg)	<u>Wist</u>	<u>266.37</u>	<u>298</u>
Ambient Temperature (°C)	<u>19°</u>	<u>18.31</u>	<u>18</u>
Relative Humidity (%)	<u>15%</u>	<u>19.95</u>	<u>20.8</u>
Aspirated Temp 2m	<u>19°</u>	<u>15.1</u>	<u>15.6</u>
Aspirated Temp 10m	<u>18°</u>	<u>14.42</u>	<u>14.6</u>
Delta Temperature (°C)	N/A	<u>-0.47</u>	<u>-0.957</u>
Solar Radiation (w/m ²)	<u>Sunny</u> Partly cloudy Cloudy	<u>663.25</u>	<u>610</u>
Barometric Pressure (mmHg)	N/A	<u>650.12</u>	<u>650</u>
Battery Voltage (V)	N/A	<u>12.85</u>	<u>12.9</u>
Time (MST)	N/A	<u>2:28</u>	<u>14:30 - L.T.</u>
Date	N/A	<u>11/21/2014</u>	<u>11/21/2014</u>

66

292 - 14:00
+ 323 - 14:15
* 274 - 14:45
+ 34.6 - 15:00
+
+
+
+
+
+
+
+

*Direction wind is from

Comments/Unusual Occurrences or Weather: _____

When form is completed, please fax to Air Sciences Inc. @ 303-279-3796 (no cover sheet is necessary).

Site Operator Signature: James Bellech

**EAST PLANT
MET SITE CHECK FORM
Resolution
PROJECT NO. 262-1**

Date: 12/5/2014

Time: 2:05

Operator: Hann BaCa

YES NO **

✓	
✓	
✓	
✓	
✓	
✓	
✓	
✓	
✓	
✓	

1. The tower is intact and upright.
2. The anemometer propeller and the wind direction vane are turning freely.
3. All temperature shields are intact, and the probes are inside their shields.
4. The aspirator fans are operating.
5. The solar radiation sensor is level and has been cleaned.
6. The solar panel is facing south and is clean.
7. The precipitation gauge is clean and free of bugs and dust.
8. The data logger is reading the correct time and day.
9. The site has been visually inspected for unusual wildlife occurrences (dead birds, etc.).
10. Estimate and document the parameters below.

 AIR SCIENCES INC. DENVER, COLORADO	
RPA REVIEWED BY	12/08/14 DATE
AUDITED BY	12/08/14 DATE

Parameter	Estimated	Logger	Audit
Speed 10m (m/s)	3.48	3.48	4.66
Direction* 10m (deg)	NE	35.85	45.6
Ambient Temperature (°C)	15°	14.07	14.1
Relative Humidity (%)	55%	62.97	63.4
Aspirated Temp 2m	15°	13.99	13.9
Aspirated Temp 10m	14°	13.42	13.2
Delta Temperature (°C)	N/A	-0.61	-0.708
Solar Radiation (w/m²)	Sunny (Partly cloudy) Cloudy	354.14	356
Barometric Pressure (mmHg)	N/A	655.74	656
Battery Voltage (V)	N/A	12.89	12.9
Time (MST)	N/A	2:07	14:00 - L.T.
Date	N/A	12/05/2014	12/05/2014

*Direction wind is from

Comments/Unusual Occurrences or Weather: _____

When form is completed, please fax to Air Sciences Inc. @ 303-279-3796 (no cover sheet is necessary).

Site Operator Signature: _____

Hann BaCa

**EAST PLANT
MET SITE CHECK FORM
Resolution
PROJECT NO. 262-1**

Date: 12/12/2014

Time: 12 pm

Operator: Kam Ballard

YES NO **

✓	
✓	
✓	
✓	
✓	
✓	
✓	
✓	
✓	
✓	

1. The tower is intact and upright.
2. The anemometer propeller and the wind direction vane are turning freely.
3. All temperature shields are intact, and the probes are inside their shields.
4. The aspirator fans are operating.
5. The solar radiation sensor is level and has been cleaned.
6. The solar panel is facing south and is clean.
7. The precipitation gauge is clean and free of bugs and dust.
8. The data logger is reading the correct time and day.
9. The site has been visually inspected for unusual wildlife occurrences (dead birds, etc.).
10. Estimate and document the parameters below.

 AIR SCIENCES INC. DENVER • FONTANA	
REVIEWED BY	<u>RPA</u> DATE <u>1/2/14</u>
AUDITED BY	<u>CC</u> DATE <u>12/15/14</u>

Parameter	Estimated	Logger	Audit	
Speed 10m (m/s)	<u>3m/s</u>	<u>3.17</u>	<u>2.68</u>	+
Direction* 10m (deg)	<u>SE</u>	<u>113.99</u>	<u>126</u>	+
Ambient Temperature (°C)	<u>19°</u>	<u>18.33</u>	<u>18</u>	+
Relative Humidity (%)	<u>30%</u>	<u>30.61</u>	<u>36.9</u>	+
Aspirated Temp 2m	<u>19°</u>	<u>17.53</u>	<u>17.3</u>	+
Aspirated Temp 10m	<u>18</u>	<u>16.67</u>	<u>16.3</u>	+
Delta Temperature (°C)	N/A	<u>-0.91</u>	<u>-1</u>	+
Solar Radiation (w/m²)	<u>Sunny</u> Partly cloudy Cloudy	<u>629.72</u>	<u>622</u>	+
Barometric Pressure (mmHg)	N/A	<u>655.08</u>	<u>655</u>	+
Battery Voltage (V)	N/A	<u>12.81</u>	<u>12.8</u>	+
Time (MST)	N/A	<u>12:03</u>	<u>12:00 - L.T.</u>	+
Date	N/A	<u>12/12/2014</u>	<u>12/12/2014</u>	+

*Direction wind is from

Comments/Unusual Occurrences or Weather:

When form is completed, please fax to Air Sciences Inc. @ 303-279-3796 (no cover sheet is necessary).

Site Operator Signature:

Kam Ballard

**EAST PLANT
MET SITE CHECK FORM
Resolution
PROJECT NO. 262-1**

Date: 12/19/2014

Time: 9:41

Operator: Kami

YES NO **

✓	
✓	
✓	
✓	
✓	
✓	
✓	
✓	
✓	
✓	

1. The tower is intact and upright.
2. The anemometer propeller and the wind direction vane are turning freely.
3. All temperature shields are intact, and the probes are inside their shields.
4. The aspirator fans are operating.
5. The solar radiation sensor is level and has been cleaned.
6. The solar panel is facing south and is clean.
7. The precipitation gauge is clean and free of bugs and dust.
8. The data logger is reading the correct time and day.
9. The site has been visually inspected for unusual wildlife occurrences (dead birds, etc.).
10. Estimate and document the parameters below.

 AIR SCIENCES INC. DENVER • PORTLAND	
REVIEWED BY	RPA
AUDITED BY	GG
DATE	12/14
DATE	12/30/14

Parameter	Estimated	Logger	Audit
Speed 10m (m/s)	5 m/s	5.93	4.65 +
Direction* 10m (deg)	E	86.74	85 +
Ambient Temperature (°C)	5°	6.43	6.31 +
Relative Humidity (%)	55°	62.71	62.8 +
Aspirated Temp 2m	5°	5.99	5.88 +
Aspirated Temp 10m	4°	5.43	5.36 +
Delta Temperature (°C)	N/A	-0.57	-0.514 +
Solar Radiation (w/m²)	Sunny Partly cloudy Cloudy	391.62	417 +
Barometric Pressure (mmHg)	N/A	656.65	657 +
Battery Voltage (V)	N/A	13.05	13.1 +
Time (MST)	N/A	9:43	9:45 - LT. +
Date	N/A	12/19/2014	12/19/2014 +

*Direction wind is from

Comments/Unusual Occurrences or Weather: _____

When form is completed, please fax to Air Sciences Inc. @ 303-279-3796 (no cover sheet is necessary).

Site Operator Signature: _____

Kami Belled



AIR SCIENCES INC.

REVIEWED BY: RPA

INITIALS BY: WR

DATE: 1-6-15

DATE: 1-5-15



**EAST PLANT
MET SITE CHECK FORM
Resolution
PROJECT NO. 262-1**

Date: 12/30/2014

Time: 10:09

Operator: Kane Ballard

YES NO **

✓	
✓	
✓	
✓	
✓	
✓	
✓	
✓	
✓	
✓	

1. The tower is intact and upright.
2. The anemometer propeller and the wind direction vane are turning freely.
3. All temperature shields are intact, and the probes are inside their shields.
4. The aspirator fans are operating.
5. The solar radiation sensor is level and has been cleaned.
6. The solar panel is facing south and is clean.
7. The precipitation gauge is clean and free of bugs and dust.
8. The data logger is reading the correct time and day.
9. The site has been visually inspected for unusual wildlife occurrences (dead birds, etc.).
10. Estimate and document the parameters below.

Parameter	Estimated	Logger	Audit
Speed 10m (m/s)	2 m/s	2.54	2.71 - WS (m/s)
Direction* 10m (deg)	ESE	114.22	114 - WD (deg)
Ambient Temperature (°C)	8°	10.18	10.°C
Relative Humidity (%)	15%	21.39	21.8 %
Aspirated Temp 2m	8°	9.36	9.33 - °C
Aspirated Temp 10m	7°	8.64	8.56 - °C
Delta Temperature (°C)	N/A	-0.72	-0.767 - °C
Solar Radiation (w/m²)	Sunny Partly cloudy Cloudy	504.49	497 - SR (w/m²)
Barometric Pressure (mmHg)	N/A	651.41	651 - mmHg
Battery Voltage (V)	N/A	13.01	13 - V
Time (MST)	N/A	10:12	10:15 - LT
Date	N/A	12/30/2014	12/30/2014

*Direction wind is from

Comments/Unusual Occurrences or Weather: _____

When form is completed, please fax to Air Sciences Inc. @ 303-279-3796 (no cover sheet is necessary).

Site Operator Signature: Kane Ballard

**Appendix G: East Plant PM₁₀ and PM_{2.5} Site Check
Forms and Flow Audits**

EAST PLANT
BAM PM10 WEEKLY SITE CHECK FORM
RESOLUTION MONITORING PROJECT
PROJECT NO. 262-1



Date: 10/03/2014 Time: 1:28 Operator: H. Ballard

I. BAM SAMPLER – Weekly Checks.

YES	NO	
☒	☐	1. The sampler is intact and the Inlet head is unobstructed.
☒	☐	2. The vacuum pump is running and sounds normal.
☒	☐	3. The temperature shield is intact, and the sensor is inside of it.
☒	☐	4. The BAM is reading the correct time and day.
☒	☐	5. The tape is in the proper position and does not need to be changed (tape should be changed every 2 months).
☒	☐	6. Error log was checked (F3), and errors followed up on (see manual).
☒	☐	7. Climate control appears operational (If it's cold out the shelter should feel warm, if it's hot out the shelter should feel cool)

II. BAM SAMPLER – Routine Maintenance (monthly). Check yes if maintenance was performed during this visit. See page 56 of BAM manual.

YES	NO	
☐	☒	1. Inlet Flow check Performed
☐	☒	2. Visual inspection and dust removal
☐	☒	3. Leak check performed
☐	☒	4. PM10 particle trap cleaned
☐	☒	5. Inlet nozzle and nozzle are cleaned

 AIR SCIENCES INC. PORTLAND • PORTLAND	
REVIEWED BY <u>RPA</u>	DATE <u>10-14-14</u>
AUDITED BY <u>SG</u>	DATE <u>10/13/14</u>

III. BAM SAMPLER – Routine Maintenance (every 2 months). Check yes if maintenance was performed during this visit. See page 56 of BAM manual.

YES	NO	
☐	☒	1. Filter tape replaced
☐	☒	2. Ran the Self-Test function

IV. BAM SAMPLER – Routine Maintenance (semiannual). Check yes if maintenance was performed during this visit. See page 56 of BAM manual.

YES	NO	
☐	☒	1. Replaced muffler on the pump (*Work performed by Air Sciences)
☐	☒	2. Complete calibration of flow system (*Work performed by Air Sciences)

V. BAM SAMPLER – Routine Maintenance (annual). Check yes if maintenance was performed during this visit. See page 56 of BAM manual.

YES	NO	
☐	☒	1. Carbon vanes in pump checked/replaced (*Work performed by Air Sciences)
☐	☒	2. Inlet system cleaned (*Work performed by Air Sciences)

**Comments/Unusual Occurrences: Bp calibrated to 652 ✓ SG

* PM10 conc + flow invalidated @ 14:00 hrs! SG

Signature: H. Ballard

EAST PLANT
BAM PM10 WEEKLY SITE CHECK FORM
RESOLUTION MONITORING PROJECT
PROJECT NO. 262-1



Date: 10/10/2014 Time: 1:54 Operator: K. PaCa CI

I. BAM SAMPLER – Weekly Checks.

YES NO

☒	☐
☒	☐
☒	☐
☒	☐
☒	☐
☒	☐
☒	☐

- The sampler is intact and the inlet head is unobstructed.
- The vacuum pump is running and sounds normal.
- The temperature shield is intact, and the sensor is inside of it.
- The BAM is reading the correct time and day.
- The tape is in the proper position and does not need to be changed (tape should be changed every 2 months).
- Error log was checked (F3), and errors followed up on (see manual). 9/24 → 10/07 → BAM Cal Mem. 5%
- Climate control appears operational (If it's cold out the shelter should feel warm, if it's hot out the shelter should feel cool) 66

II. BAM SAMPLER – Routine Maintenance (monthly). Check yes if maintenance was performed during this visit. See page 56 of BAM manual.

YES NO 66-

☐	☒
☐	☒
☐	☒
☐	☒
☐	☒

- Inlet Flow check Performed
- Visual inspection and dust removal
- Leak check performed
- PM10 particle trap cleaned
- Inlet nozzle and nozzle are cleaned

 AIR SCIENCES INC. DENVER • PORTLAND	
REVIEWED BY <u>RDA</u>	DATE <u>10-14-14</u>
AUDITED BY <u>66-</u>	DATE <u>10/15/14</u>

III. BAM SAMPLER – Routine Maintenance (every 2 months). Check yes if maintenance was performed during this visit. See page 56 of BAM manual.

YES NO 66

☐	☒
☐	☒

- Filter tape replaced
- Ran the Self-Test function

III. BAM SAMPLER – Routine Maintenance (semiannual). Check yes if maintenance was performed during this visit. See page 56 of BAM manual.

YES NO 66

☐	☒
☐	☒

- Replaced muffler on the pump (*Work performed by Air Sciences)
- Complete calibration of flow system (*Work performed by Air Sciences)

IV. BAM SAMPLER – Routine Maintenance (annual). Check yes if maintenance was performed during this visit. See page 56 of BAM manual.

YES NO 66

☐	☒
☐	☒

- Carbon vanes in pump checked/replaced (*Work performed by Air Sciences)
- Inlet system cleaned (*Work performed by Air Sciences)

**Comments/Unusual Occurrences: _____

Signature: Kari PaCa

EAST PLANT
BAM PM10 WEEKLY SITE CHECK FORM
RESOLUTION MONITORING PROJECT
PROJECT NO. 262-1



Date: 10/23/2014 Time: 10:15 Operator: Kami

I. BAM SAMPLER – Weekly Checks.

YES NO

☒	☐
☒	☐
☒	☐
☒	☐
☒	☐
☒	☐
☒	☐

1. The sampler is intact and the inlet head is unobstructed.
2. The vacuum pump is running and sounds normal.
3. The temperature shield is intact, and the sensor is inside of it.
4. The BAM is reading the correct time and day.
5. The tape is in the proper position and does not need to be changed (tape should be changed every 2 months).
6. Error log was checked (F3), and errors followed up on (see manual). 10/20 - Maintenance ✓ GG
7. Climate control appears operational (If it's cold out the shelter should feel warm, if it's hot out the shelter should feel cool)

II. BAM SAMPLER – Routine Maintenance (monthly). Check yes if maintenance was performed during this visit. See page 56 of BAM manual.

YES NO GG

☐	☒
☐	☒
☐	☒
☐	☒
☐	☒

1. Inlet Flow check Performed
2. Visual inspection and dust removal
3. Leak check performed
4. PM10 particle trap cleaned
5. Inlet nozzle and nozzle are cleaned

 AIR SCIENCES INC. DENVER • PORTLAND	
<u>RPA</u> REVIEWED BY	<u>4/3/14</u> DATE
<u>GG</u> INITIATED BY	<u>11/3/14</u> DATE

III. BAM SAMPLER – Routine Maintenance (every 2 months). Check yes if maintenance was performed during this visit. See page 56 of BAM manual.

YES NO GG

☐	☒
☐	☒

1. Filter tape replaced
2. Ran the Self-Test function

III. BAM SAMPLER – Routine Maintenance (semiannual). Check yes if maintenance was performed during this visit. See page 56 of BAM manual.

YES NO GG

☐	☒
☐	☒

1. Replaced muffler on the pump (*Work performed by Air Sciences)
2. Complete calibration of flow system (*Work performed by Air Sciences)

IV. BAM SAMPLER – Routine Maintenance (annual). Check yes if maintenance was performed during this visit. See page 56 of BAM manual.

YES NO GG

☐	☒
☐	☒

1. Carbon vanes in pump checked/replaced (*Work performed by Air Sciences)
2. Inlet system cleaned (*Work performed by Air Sciences)

**Comments/Unusual Occurrences: PM10 conc + flow invalidated @ 11:00 hrs! GG

Signature: Kami Ballard

EAST PLANT

BAM PM10 WEEKLY SITE CHECK FORM
RESOLUTION MONITORING PROJECT
PROJECT NO. 262-1



Date: 10/30/2014 Time: 1:04

Operator: Karin B. O'Neil

I. BAM SAMPLER – Weekly Checks.

YES NO

☒	☐
☒	☐
☒	☐
☒	☐
☒	☐
☒	☐
☒	☐

1. The sampler is intact and the inlet head is unobstructed.
2. The vacuum pump is running and sounds normal.
3. The temperature shield is intact, and the sensor is inside of it.
4. The BAM is reading the correct time and day.
5. The tape is in the proper position and does not need to be changed (tape should be changed every 2 months).
6. Error log was checked (F3), and errors followed up on (see manual). 10/23 Maintenance ✓ 66.
7. Climate control appears operational (If it's cold out the shelter should feel warm, if it's hot out the shelter should feel cool)

II. BAM SAMPLER – Routine Maintenance (monthly). Check yes if maintenance was performed during this visit. See page 56 of BAM manual.

YES NO

☐	☒
☐	☒
☐	☒
☐	☒
☐	☒

1. Inlet Flow check Performed
2. Visual inspection and dust removal
3. Leak check performed
4. PM10 particle trap cleaned
5. Inlet nozzle and nozzle are cleaned

RPA	11/3/14
DATE	DATE
66-	11/3/14

II. BAM SAMPLER – Routine Maintenance (every 2 months). Check yes if maintenance was performed during this visit. See page 56 of BAM manual.

YES NO

☐	☒
☐	☒

1. Filter tape replaced
2. Ran the Self-Test function

III. BAM SAMPLER – Routine Maintenance (semiannual). Check yes if maintenance was performed during this visit. See page 56 of BAM manual.

YES NO

☐	☒
☐	☒

1. Replaced muffler on the pump (*Work performed by Air Sciences)
2. Complete calibration of flow system (*Work performed by Air Sciences)

IV. BAM SAMPLER – Routine Maintenance (annual). Check yes if maintenance was performed during this visit. See page 56 of BAM manual.

YES NO

☐	☒
☐	☒

1. Carbon vanes in pump checked/replaced (*Work performed by Air Sciences)
2. Inlet system cleaned (*Work performed by Air Sciences)

Comments/Unusual Occurrences: _____

Signature: Karin B. O'Neil

EAST PLANT

BAM PM10 WEEKLY SITE CHECK FORM
RESOLUTION MONITORING PROJECT
PROJECT NO. 262-1

AIR SCIENCES INC.
DENVER • PORTLAND

Date: 11/7/14 Time: 10:52 Operator: K. Baak

I. BAM SAMPLER – Weekly Checks.

YES NO

☒	☐
☒	☐
☒	☐
☒	☐
☒	☐
☒	☐
☒	☐

1. The sampler is intact and the inlet head is unobstructed.
2. The vacuum pump is running and sounds normal.
3. The temperature shield is intact, and the sensor is inside of it.
4. The BAM is reading the correct time and day.
5. The tape is in the proper position and does not need to be changed (tape should be changed every 2 months).
6. Error log was checked (F3), and errors followed up on (see manual). NA ✓ 66-
7. Climate control appears operational (If it's cold out the shelter should feel warm, if it's hot out the shelter should feel cool)

II. BAM SAMPLER – Routine Maintenance (monthly). Check yes if maintenance was performed during this visit. See page 56 of BAM manual.

YES NO 66-

☐	☒
☐	☒
☐	☒
☐	☒
☐	☒

1. Inlet Flow check Performed
2. Visual inspection and dust removal
3. Leak check performed
4. PM10 particle trap cleaned
5. Inlet nozzle and nozzle are cleaned

 AIR SCIENCES INC. DENVER • PORTLAND	
REVIEWED BY <u>RDA</u>	DATE <u>11/24/14</u>
AUDITED BY <u>66-</u>	

III. BAM SAMPLER – Routine Maintenance (every 2 months). Check yes if maintenance was performed during this visit. See page 56 of BAM manual.

YES NO 66-

☐	☒
☐	☒

1. Filter tape replaced
2. Ran the Self-Test function

IV. BAM SAMPLER – Routine Maintenance (annual). Check yes if maintenance was performed during this visit. See page 56 of BAM manual.

YES NO 66-

☐	☒
☐	☒

1. Replaced muffler on the pump (*Work performed by Air Sciences)
2. Complete calibration of flow system (*Work performed by Air Sciences)

IV. BAM SAMPLER – Routine Maintenance (annual). Check yes if maintenance was performed during this visit. See page 56 of BAM manual.

YES NO 66-

☐	☒
☐	☒

1. Carbon vanes in pump checked/replaced (*Work performed by Air Sciences)
2. Inlet system cleaned (*Work performed by Air Sciences)

"Comments/Unusual Occurrences: _____

Signature: [Signature]

EAST PLANT

BAM PM10 WEEKLY SITE CHECK FORM
RESOLUTION MONITORING PROJECT
PROJECT NO. 262-1



Date: 11/13/2014 Time: 1:13 Operator: K. Ballard

I. BAM SAMPLER – Weekly Checks.

YES NO

✓	
✓	
✓	
✓	
✓	
✓	
✓	

1. The sampler is intact and the inlet head is unobstructed.
2. The vacuum pump is running and sounds normal.
3. The temperature shield is intact, and the sensor is inside of it.
4. The BAM is reading the correct time and day.
5. The tape is in the proper position and does not need to be changed (tape should be changed every 2 months).
6. Error log was checked (F3), and errors followed up on (see manual). 10/23 → Maintenance ✓ CB
7. Climate control appears operational (If it's cold out the shelter should feel warm, if it's hot out the shelter should feel cool)

II. BAM SAMPLER – Routine Maintenance (monthly). Check yes if maintenance was performed during this visit. See page 56 of BAM manual.

YES NO CB

	✓
	✓
	✓
	✓
	✓

1. Inlet Flow check Performed
2. Visual inspection and dust removal
3. Leak check performed
4. PM10 particle trap cleaned
5. Inlet nozzle and nozzle are cleaned

 AIR SCIENCES INC. DENVER • PORTLAND	
REVIEWED BY <u>CB</u>	DATE <u>11/24/14</u>
AUDITED BY <u>CB</u>	DATE <u>11/24/14</u>

III. BAM SAMPLER – Routine Maintenance (every 2 months). Check yes if maintenance was performed during this visit. See page 56 of BAM manual.

YES NO CB

	✓
	✓

1. Filter tape replaced
2. Ran the Self-Test function

IV. BAM SAMPLER – Routine Maintenance (semiannual). Check yes if maintenance was performed during this visit. See page 56 of BAM manual.

YES NO CB

	✓
	✓

1. Replaced muffler on the pump (*Work performed by Air Sciences)
2. Complete calibration of flow system (*Work performed by Air Sciences)

IV. BAM SAMPLER – Routine Maintenance (annual). Check yes if maintenance was performed during this visit. See page 56 of BAM manual.

YES NO CB

	✓
	✓

1. Carbon vanes in pump checked/replaced (*Work performed by Air Sciences)
2. Inlet system cleaned (*Work performed by Air Sciences)

**Comments/Unusual Occurrences: _____

Signature: Kam Ballard

EAST PLANT

BAM PM10 WEEKLY SITE CHECK FORM
RESOLUTION MONITORING PROJECT
PROJECT NO. 262-1



Date: 11/21/2014 Time: _____ Operator: John Ballard

I. BAM SAMPLER – Weekly Checks.

YES NO

☒	☐
☒	☐
☒	☐
☒	☐
☒	☐
☒	☐
☒	☐

1. The sampler is intact and the inlet head is unobstructed.
2. The vacuum pump is running and sounds normal.
3. The temperature shield is intact, and the sensor is inside of it.
4. The BAM is reading the correct time and day.
5. The tape is in the proper position and does not need to be changed (tape should be changed every 2 months).
6. Error log was checked (F3), and errors followed up on (see manual). 10/23 → Maintenance ✓ CB
7. Climate control appears operational (If it's cold out the shelter should feel warm, if it's hot out the shelter should feel cool)

II. BAM SAMPLER – Routine Maintenance (monthly). Check yes if maintenance was performed during this visit. See page 56 of BAM manual.

YES NO CB

☐	☒
☐	☒
☐	☒
☐	☒
☐	☒

1. Inlet Flow check Performed
2. Visual inspection and dust removal
3. Leak check performed
4. PM10 particle trap cleaned
5. Inlet nozzle and nozzle are cleaned

AIR SCIENCES INC. DENVER • PORTLAND	
REPORT APPROVED BY <u>RPA</u>	DATE <u>11/21/14</u>
REPORTED BY <u>CB</u>	DATE <u>11/25/14</u>

II. BAM SAMPLER – Routine Maintenance (every 2 months). Check yes if maintenance was performed during this visit. See page 56 of BAM manual.

YES NO CB

☐	☒
☐	☒

1. Filter tape replaced
2. Ran the Self-Test function

III. BAM SAMPLER – Routine Maintenance (semiannual). Check yes if maintenance was performed during this visit. See page 56 of BAM manual.

YES NO CB

☐	☒
☐	☒

1. Replaced muffler on the pump (*Work performed by Air Sciences)
2. Complete calibration of flow system (*Work performed by Air Sciences)

IV. BAM SAMPLER – Routine Maintenance (annual). Check yes if maintenance was performed during this visit. See page 56 of BAM manual.

YES NO CB

☐	☒
☐	☒

1. Carbon vanes in pump checked/replaced (*Work performed by Air Sciences)
2. Inlet system cleaned (*Work performed by Air Sciences)

**Comments/Unusual Occurrences: _____

Signature: John Ballard

EAST PLANT
 BAM PM10 WEEKLY SITE CHECK FORM
 RESOLUTION MONITORING PROJECT
 PROJECT NO. 262-1



Date: 12/05/2014 Time: 2:10 Operator: K. BCL

I. BAM SAMPLER -- Weekly Checks.

YES NO

☒	☐
☒	☐
☒	☐
☒	☐
☒	☐
☒	☐
☒	☐

1. The sampler is intact and the inlet head is unobstructed.
2. The vacuum pump is running and sounds normal.
3. The temperature shield is intact, and the sensor is inside of it.
4. The BAM is reading the correct time and day.
5. The tape is in the proper position and does not need to be changed (tape should be changed every 2 months).
6. Error log was checked (F3), and errors followed up on (see manual). 10/23 → Maintenance
7. Climate control appears operational (If it's cold out the shelter should feel warm, if it's hot out the shelter should feel cool)

II. BAM SAMPLER -- Routine Maintenance (monthly). Check yes if maintenance was performed during this visit. See page 56 of BAM manual.

YES NO

☐	☒
☐	☒
☐	☒
☐	☒
☐	☒

1. Inlet Flow check Performed
2. Visual inspection and dust removal
3. Leak check performed
4. PM10 particle trap cleaned
5. Inlet nozzle and nozzle are cleaned


AIR SCIENCES INC.
DENVER • FORTLAUD
 12/08/14
 REVIEWED BY: WPA
 AUDITED BY: 66- 12/08/14

III. BAM SAMPLER -- Routine Maintenance (every 2 months). Check yes if maintenance was performed during this visit. See page 56 of BAM manual.

YES NO

☐	☒
☐	☒

1. Filter tape replaced
2. Ran the Self-Test function

III. BAM SAMPLER -- Routine Maintenance (semiannual). Check yes if maintenance was performed during this visit. See page 56 of BAM manual.

YES NO

☐	☒
☐	☒

1. Replaced muffler on the pump (*Work performed by Air Sciences)
2. Complete calibration of flow system (*Work performed by Air Sciences)

IV. BAM SAMPLER -- Routine Maintenance (annual). Check yes if maintenance was performed during this visit. See page 56 of BAM manual.

YES NO

☐	☒
☐	☒

1. Carbon vanes in pump checked/replaced (*Work performed by Air Sciences)
2. Inlet system cleaned (*Work performed by Air Sciences)

**Comments/Unusual Occurrences: _____

Signature: K. BCL

EAST PLANT
BAM PM10 WEEKLY SITE CHECK FORM
RESOLUTION MONITORING PROJECT
PROJECT NO. 262-1



Date: 12/12/2014 Time: 12:05 Operator: Kami Ballard

I. BAM SAMPLER – Weekly Checks.

YES NO

☒	☐
☒	☐
☒	☐
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☒	☐
☒	☐

1. The sampler is intact and the inlet head is unobstructed.
2. The vacuum pump is running and sounds normal.
3. The temperature shield is intact, and the sensor is inside of it.
4. The BAM is reading the correct time and day.
5. The tape is in the proper position and does not need to be changed (tape should be changed every 2 months).
6. Error log was checked (F3), and errors followed up on (see manual). 12/04 → Power Fail ✓ EG
7. Climate control appears operational (If it's cold out the shelter should feel warm, if it's hot out the shelter should feel cool)

II. BAM SAMPLER – Routine Maintenance (monthly). Check yes if maintenance was performed during this visit. See page 56 of BAM manual.

YES NO

☐	☒
☐	☒
☐	☒
☐	☒
☒	☐

1. Inlet Flow check Performed
2. Visual inspection and dust removal
3. Leak check performed
4. PM10 particle trap cleaned
5. Inlet nozzle and nozzle are cleaned

 AIR SCIENCES INC. DRIVES + PORTLAND	
REVIEWED BY	<u>RPA</u> DATE <u>12/14</u>
AUDITED BY	<u>EG</u> DATE <u>12/15/14</u>

II. BAM SAMPLER – Routine Maintenance (every 2 months). Check yes if maintenance was performed during this visit. See page 56 of BAM manual.

YES NO

☒	☐
☒	☐

1. Filter tape replaced
2. Ran the Self-Test function

III. BAM SAMPLER – Routine Maintenance (semiannual). Check yes if maintenance was performed during this visit. See page 56 of BAM manual.

YES NO

☐	☒
☐	☒

1. Replaced muffler on the pump (*Work performed by Air Sciences)
2. Complete calibration of flow system (*Work performed by Air Sciences)

IV. BAM SAMPLER – Routine Maintenance (annual). Check yes if maintenance was performed during this visit. See page 56 of BAM manual.

YES NO

☐	☒
☐	☒

1. Carbon vanes in pump checked/replaced (*Work performed by Air Sciences)
2. Inlet system cleaned (*Work performed by Air Sciences)

**Comments/Unusual Occurrences: SELF TEST - PASSED

* PM10 conc. + flow invalidated @ 13:00 hrs! EG

Signature: Kami Ballard

EAST PLANT
BAM PM10 WEEKLY SITE CHECK FORM
RESOLUTION MONITORING PROJECT
PROJECT NO. 262-1



Date: 12/19/2014 Time: 9:39

Operator: Karen Baller

I. BAM SAMPLER – Weekly Checks.

YES	NO
☒	☐
☒	☐
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☒	☐

1. The sampler is intact and the inlet head is unobstructed.
2. The vacuum pump is running and sounds normal.
3. The temperature shield is intact, and the sensor is inside of it.
4. The BAM is reading the correct time and day.
5. The tape is in the proper position and does not need to be changed (tape should be changed every 2 months).
6. Error log was checked (F3), and errors followed up on (see manual). 12/12 → tape break ✓ **GG**
7. Climate control appears operational (If it's cold out the shelter should feel warm, if it's hot out the shelter should feel cool)

II. BAM SAMPLER – Routine Maintenance (monthly). Check yes if maintenance was performed during this visit. See page 56 of BAM manual.

YES NO **GG**

☐	☒
☐	☒
☐	☒
☐	☒
☐	☒

1. Inlet Flow check Performed
2. Visual inspection and dust removal
3. Leak check performed
4. PM10 particle trap cleaned
5. Inlet nozzle and nozzle are cleaned

 AIR SCIENCES INC DESIGN • INSTALL • MAINTENANCE	
REVIEWED BY: <u>RPA</u>	DATE: <u>1/2/14</u>
AUDITED BY: <u>GG</u>	DATE: <u>12/30/14</u>

II. BAM SAMPLER – Routine Maintenance (every 2 months). Check yes if maintenance was performed during this visit. See page 56 of BAM manual.

YES NO **GG**

☐	☒
☐	☒

1. Filter tape replaced
2. Ran the Self-Test function

III. BAM SAMPLER – Routine Maintenance (semiannual). Check yes if maintenance was performed during this visit. See page 56 of BAM manual.

YES NO **GG**

☐	☒
☐	☒

1. Replaced muffler on the pump (*Work performed by Air Sciences)
2. Complete calibration of flow system (*Work performed by Air Sciences)

IV. BAM SAMPLER – Routine Maintenance (annual). Check yes if maintenance was performed during this visit. See page 56 of BAM manual.

YES NO **GG**

☐	☒
☐	☒

1. Carbon vanes in pump checked/replaced (*Work performed by Air Sciences)
2. Inlet system cleaned (*Work performed by Air Sciences)

**Comments/Unusual Occurrences: _____

Signature: Karen Baller

REVIEWED BY

RPA

DATE

1/2/14

AUDITED BY

GG

DATE

12/30/14

Monthly Flow Verification PM₁₀

East Plant

PARTICULATE MONITORING PROJECT

PROJECT NO. 262-1

Met One

PM₁₀: 8714

S/N:

Firmware:

Calibrator:

Delta Cal

S/N:

Date of Flow Audit:

12/19/2014

Time of Flow Audit:

9:45

BAM STD

Ambient Temperature (AT) °C

6.2	7.1
66.2	65.65

Berometric Pressure mmHg

	Set Point (lpm)	BAM	% Diff (1)	STD Flow Meter	% Diff (2)
(1) Actual Flow	15	15.0	0	15.18	-1.19
Acceptable Differential		14.700 - 15.300	+/- 2%	14.250 - 15.750	+/- 5%
(2) Actual Flow	18.4	18.4	0	18.75	-1.87
Acceptable Differential		18.032 - 18.768	+/- 2%	17.480 - 19.320	+/- 5%
(3) Actual Flow	16.7	16.7	0	16.87	-1.01
Acceptable Differential		16.336 - 17.034	+/- 2%	15.865 - 17.535	+/- 5%

Calculations:

(1) % Diff = [(BAM - Set Point)/Set Point]*100 (+/- 2%)

(2) % Diff = [(BAM - Calibrator)/Calibrator]*100 (+/- 5%)

(2) Leak Test

BAM

0.4

Should be < 1.0 LPM

Comments/Abnormalities:

Leak Test = "PASSED"

Signature:

Kenneth Br. Co. a

Upon completion of this form, fax to Air Sciences at 303-279-3796

* PM10 conc. + flow invalidated @ 10:00 hrs! GG

EAST PLANT

BAM PM10 WEEKLY SITE CHECK FORM
RESOLUTION MONITORING PROJECT
PROJECT NO. 262-1


AIR SCIENCES INC.
DESIGNED • PORTLAND

Date: 12/30/2014 Time: 12:13

Operator: Jami Ballard

I. BAM SAMPLER – Weekly Checks.

YES NO

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1. The sampler is intact and the inlet head is unobstructed.
2. The vacuum pump is running and sounds normal.
3. The temperature shield is intact, and the sensor is inside of it.
4. The BAM is reading the correct time and day.
5. The tape is in the proper position and does not need to be changed (tape should be changed every 2 months).
6. Error log was checked (F3), and errors followed up on (see manual). 12/19 → Maintenance
7. Climate control appears operational (If it's cold out the shelter should feel warm, if it's hot out the shelter should feel cool)

II. BAM SAMPLER – Routine Maintenance (monthly). Check yes if maintenance was performed during this visit. See page 56 of BAM manual.

YES NO WR

☐	☐
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☐	☐
☐	☐

1. Inlet Flow check Performed
2. Visual inspection and dust removal
3. Leak check performed
4. PM10 particle trap cleaned
5. Inlet nozzle and nozzle are cleaned

 AIR SCIENCES INC. DESIGNED • PORTLAND	
REVIEWED BY <u>RPA</u> AUDITED BY <u>WR</u>	DATE <u>1-6-15</u> DATE <u>1-5-15</u>

II. BAM SAMPLER – Routine Maintenance (every 2 months). Check yes if maintenance was performed during this visit. See page 56 of BAM manual.

YES NO WR

☐	☐
☐	☐
☐	☐
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☐	☐
☐	☐
☐	☐

1. Filter tape replaced
2. Ran the Self-Test function

III. BAM SAMPLER – Routine Maintenance (semiannual). Check yes if maintenance was performed during this visit. See page 56 of BAM manual.

YES NO WR

☐	☐
☐	☐
☐	☐
☐	☐
☐	☐
☐	☐
☐	☐

1. Replaced muffler on the pump (*Work performed by Air Sciences)
2. Complete calibration of flow system (*Work performed by Air Sciences)

IV. BAM SAMPLER – Routine Maintenance (annual). Check yes if maintenance was performed during this visit. See page 56 of BAM manual.

YES NO WR

☐	☐
☐	☐
☐	☐
☐	☐
☐	☐
☐	☐
☐	☐

1. Carbon vanes in pump checked/replaced (*Work performed by Air Sciences)
2. Inlet system cleaned (*Work performed by Air Sciences)

**Comments/Unusual Occurrences: _____

Signature: Jami Ballard

EAST PLANT
BAM PM 2.5 WEEKLY SITE CHECK FORM
RESOLUTION MONITORING PROJECT
PROJECT NO. 262-1



Date: 10/08/2014 Time: 1:35 Operator: Hani Balla

I. BAM SAMPLER – Weekly Checks.

YES NO

☒	☐
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☒	☐

1. The sampler is intact and the inlet head is unobstructed.
2. The vacuum pump is running and sounds normal.
3. The temperature shield is intact, and the sensor is inside of it.
4. The BAM is reading the correct time and day.
5. The tape is in the proper position and does not need to be changed (tape should be changed every 2 months).
6. Error log was checked (F3), and errors followed up on (see manual). 9/29 → 10/03 - Flow Tape Error
7. Climate control appears operational (If it's cold out the shelter should feel warm, if it's hot out the shelter should feel cool)

II. BAM SAMPLER – Routine Maintenance (monthly). Check yes if maintenance was performed during this visit. See page 56 of BAM manual.

YES NO

☐	☒
☐	☒
☐	☒
☐	☒
☐	☒

1. Inlet Flow check Performed
2. Visual inspection and dust removal
3. Leak check performed
4. PM10 and 2.5 cyclone particle trap cleaned
5. Inlet nozzle and nozzle are cleaned

AIR SCIENCES INC.	
VMA	DENVER - PORTLAND
REVIEWED BY	DATE <u>10-17-14</u>
AUDITED BY <u>GG</u>	DATE <u>10/13/14</u>

III. BAM SAMPLER – Routine Maintenance (every 2 months). Check yes if maintenance was performed during this visit. See page 56 of BAM manual.

YES NO

☐	☒
☐	☒

1. Filter tape replaced
2. Ran the Self-Test function

IV. BAM SAMPLER – Routine Maintenance (semiannual). Check yes if maintenance was performed during this visit. See page 56 of BAM manual.

YES NO

☐	☒
☐	☒

1. Replaced muffler on the pump (*Work performed by Air Sciences)
2. Complete calibration of flow system (*Work performed by Air Sciences)

IV. BAM SAMPLER – Routine Maintenance (annual). Check yes if maintenance was performed during this visit. See page 56 of BAM manual.

YES NO

☐	☒
☐	☒

1. Carbon vanes in pump checked/replaced (*Work performed by Air Sciences)
2. Inlet system cleaned (*Work performed by Air Sciences)

**Comments/Unusual Occurrences: Pump out → changed it & ran self test. Self Test "Passed"

* PM 2.5 conc. & flow invalidated from 03:00 hrs on 10/1/14 through 15:00 hrs. on 10/3/2014! GG Signature: Hani Balla

EAST PLANT

BAM PM 2.5 WEEKLY SITE CHECK FORM
RESOLUTION MONITORING PROJECT
PROJECT NO. 262-1



Date: 10/10/2014 Time: 1:58 Operator: Kami Praca

I. BAM SAMPLER – Weekly Checks.

YES NO

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☒	☐
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1. The sampler is intact and the inlet head is unobstructed.
2. The vacuum pump is running and sounds normal.
3. The temperature shield is intact, and the sensor is inside of it.
4. The BAM is reading the correct time and day.
5. The tape is in the proper position and does not need to be changed (tape should be changed every 2 months).
6. Error log was checked (F3), and errors followed up on (see manual). 10/03 → flow failure ✓ 66-
7. Climate control appears operational (If it's cold out the shelter should feel warm, if it's hot out the shelter should feel cool)

II. BAM SAMPLER – Routine Maintenance (monthly). Check yes if maintenance was performed during this visit. See page 56 of BAM manual.

YES NO

☐	☒
☐	☒
☐	☒
☐	☒
☐	☒

1. Inlet Flow check Performed
2. Visual inspection and dust removal
3. Leak check performed
4. PM10 and 2.5 cyclone particle trap cleaned
5. Inlet nozzle and nozzle are cleaned

AIR SCIENCES INC. DENVER • PORTLAND	
REVIEWED BY <u>RPA</u>	DATE <u>10-14-14</u>
AUDITED BY <u>66-</u>	DATE <u>10/13/14</u>

III. BAM SAMPLER – Routine Maintenance (every 2 months). Check yes if maintenance was performed during this visit. See page 56 of BAM manual.

YES NO

☐	☒
☐	☒

1. Filter tape replaced
2. Ran the Self-Test function

IV. BAM SAMPLER – Routine Maintenance (semiannual). Check yes if maintenance was performed during this visit. See page 56 of BAM manual.

YES NO

☐	☒
☐	☒

1. Replaced muffler on the pump (*Work performed by Air Sciences)
2. Complete calibration of flow system (*Work performed by Air Sciences)

V. BAM SAMPLER – Routine Maintenance (annual). Check yes if maintenance was performed during this visit. See page 56 of BAM manual.

YES NO

☐	☒
☐	☒

1. Carbon vanes in pump checked/replaced (*Work performed by Air Sciences)
2. Inlet system cleaned (*Work performed by Air Sciences)

**Comments/Unusual Occurrences: _____

Signature: _____

EAST PLANT
BAM PM 2.5 WEEKLY SITE CHECK FORM
RESOLUTION MONITORING PROJECT
PROJECT NO. 262-1



Date: 10/23/2014

Time: 10:18

Operator: Kanu Balla

I. BAM SAMPLER -- Weekly Checks.

YES NO

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☒	☐

1. The sampler is intact and the inlet head is unobstructed.
2. The vacuum pump is running and sounds normal.
3. The temperature shield is intact, and the sensor is inside of it.
4. The BAM is reading the correct time and day.
5. The tape is in the proper position and does not need to be changed (tape should be changed every 2 months).
6. Error log was checked (F3), and errors followed up on (see manual). 10/20 -> Maintenance ✓ 66
7. Climate control appears operational (If it's cold out the shelter should feel warm, if it's hot out the shelter should feel cool)

II. BAM SAMPLER -- Routine Maintenance (monthly). Check yes if maintenance was performed during this visit. See page 56 of BAM manual.

YES NO 66

☐	☒
☐	☒
☐	☒
☐	☒
☐	☒

1. Inlet Flow check Performed
2. Visual inspection and dust removal
3. Leak check performed
4. PM10 and 2.5 cyclone particle trap cleaned
5. Inlet nozzle and nozzle are cleaned

 AIR SCIENCES INC. DENVER • FORTLAUD	
<u>RPA</u> REVIEWED BY	<u>11/3/14</u> DATE
<u>66</u> AUDITED BY	<u>11/3/14</u> DATE

II. BAM SAMPLER -- Routine Maintenance (every 2 months). Check yes if maintenance was performed during this visit. See page 56 of BAM manual.

YES NO 66

☐	☒
☐	☒

1. Filter tape replaced
2. Ran the Self-Test function

III. BAM SAMPLER -- Routine Maintenance (semiannual). Check yes if maintenance was performed during this visit. See page 56 of BAM manual.

YES NO 66

☐	☒
☐	☒

1. Replaced muffler on the pump (*Work performed by Air Sciences)
2. Complete calibration of flow system (*Work performed by Air Sciences)

IV. BAM SAMPLER -- Routine Maintenance (annual). Check yes if maintenance was performed during this visit. See page 56 of BAM manual.

YES NO 66

☐	☒
☐	☒

1. Carbon vanes in pump checked/replaced (*Work performed by Air Sciences)
2. Inlet system cleaned (*Work performed by Air Sciences)

*Comments/Unusual Occurrences: PM 2.5 cont. + flow invalidated @ 11:00hrs! 66

Signature: Kanu Balla

EAST PLANT

BAM PM 2.5 WEEKLY SITE CHECK FORM
RESOLUTION MONITORING PROJECT
PROJECT NO. 262-1



Date: 10/30/2014 Time: 1:06 Operator: Kam B. C.

I. BAM SAMPLER – Weekly Checks.

YES NO

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1. The sampler is intact and the inlet head is unobstructed.
2. The vacuum pump is running and sounds normal.
3. The temperature shield is intact, and the sensor is inside of it.
4. The BAM is reading the correct time and day.
5. The tape is in the proper position and does not need to be changed (tape should be changed every 2 months).
6. Error log was checked (F3), and errors followed up on (see manual). 10/23 → Maintenance VGG
7. Climate control appears operational (If it's cold out the shelter should feel warm, if it's hot out the shelter should feel cool)

II. BAM SAMPLER – Routine Maintenance (monthly). Check yes if maintenance was performed during this visit. See page 56 of BAM manual.

YES NO

☐	☒
☐	☒
☐	☒
☐	☒
☐	☒

1. Inlet Flow check Performed
2. Visual inspection and dust removal
3. Leak check performed
4. PM10 and 2.5 cyclone particle trap cleaned
5. Inlet nozzle and nozzle are cleaned

RPA	11/3/14
REVIEWED BY	DATE
GG	11/3/14
AUDITED BY	DATE

II. BAM SAMPLER – Routine Maintenance (every 2 months). Check yes if maintenance was performed during this visit. See page 56 of BAM manual.

YES NO

☐	☒
☐	☒

1. Filter tape replaced
2. Ran the Self-Test function

III. BAM SAMPLER – Routine Maintenance (semiannual). Check yes if maintenance was performed during this visit. See page 56 of BAM manual.

YES NO

☐	☒
☐	☒

1. Replaced muffler on the pump (*Work performed by Air Sciences)
2. Complete calibration of flow system (*Work performed by Air Sciences)

IV. BAM SAMPLER – Routine Maintenance (annual). Check yes if maintenance was performed during this visit. See page 56 of BAM manual.

YES NO

☐	☒
☐	☒

1. Carbon vanes in pump checked/replaced (*Work performed by Air Sciences)
2. Inlet system cleaned (*Work performed by Air Sciences)

**Comments/Unusual Occurrences:

Signature: Kam B. C.

EAST PLANT

BAM PM 2.5 WEEKLY SITE CHECK FORM
RESOLUTION MONITORING PROJECT
PROJECT NO. 262-1



Date: 11/7/14 Time: 10:53 Operator: K. Baak

I. BAM SAMPLER – Weekly Checks.

YES NO

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☒	☐

1. The sampler is intact and the inlet head is unobstructed.
2. The vacuum pump is running and sounds normal.
3. The temperature shield is intact, and the sensor is inside of it.
4. The BAM is reading the correct time and day.
5. The tape is in the proper position and does not need to be changed (tape should be changed every 2 months).
6. Error log was checked (F3), and errors followed up on (see manual). 11/7, 11/6, 11/5 BAM CAL SV. ✓ 66-
7. Climate control appears operational (If it's cold out the shelter should feel warm, if it's hot out the shelter should feel cool)

II. BAM SAMPLER – Routine Maintenance (monthly). Check yes if maintenance was performed during this visit. See page 56 of BAM manual.

YES NO 66-

☐	☒
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☐	☒
☐	☒
☐	☒

1. Inlet Flow check Performed
2. Visual inspection and dust removal
3. Leak check performed
4. PM10 and 2.5 cyclone particle trap cleaned
5. Inlet nozzle and nozzle are cleaned

 AIR SCIENCES INC. DENVER • PORTLAND	
REVIEWED BY: <u>RPA</u>	DATE: <u>11/27/14</u>
AUDITED BY: <u>66</u>	DATE: <u>11/24/14</u>

III. BAM SAMPLER – Routine Maintenance (every 2 months). Check yes if maintenance was performed during this visit. See page 56 of BAM manual.

YES NO 66-

☐	☒
☐	☒

1. Filter tape replaced
2. Ran the Self-Test function

III. BAM SAMPLER – Routine Maintenance (semiannual). Check yes if maintenance was performed during this visit. See page 56 of BAM manual.

YES NO 66-

☐	☒
☐	☒

1. Replaced muffler on the pump (*Work performed by Air Sciences)
2. Complete calibration of flow system (*Work performed by Air Sciences)

IV. BAM SAMPLER – Routine Maintenance (annual). Check yes if maintenance was performed during this visit. See page 56 of BAM manual.

YES NO 66-

☐	☒
☐	☒

1. Carbon vanes in pump checked/replaced (*Work performed by Air Sciences)
2. Inlet system cleaned (*Work performed by Air Sciences)

*Comments/Unusual Occurrences: _____

Signature: K. Baak

EAST PLANT
BAM PM 2.5 WEEKLY SITE CHECK FORM
RESOLUTION MONITORING PROJECT
PROJECT NO. 262-1



Date: 11/13/2014 Time: 3:15 Operator: R. Bell

I. BAM SAMPLER – Weekly Checks.

YES NO

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☒	☐
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☒	☐

1. The sampler is intact and the inlet head is unobstructed.
2. The vacuum pump is running and sounds normal.
3. The temperature shield is intact, and the sensor is inside of it.
4. The BAM is reading the correct time and day.
5. The tape is in the proper position and does not need to be changed (tape should be changed every 2 months).
6. Error log was checked (F3), and errors followed up on (see manual). 11/10 → BAM Cal Membrane
7. Climate control appears operational (If it's cold out the shelter should feel warm, if it's hot out the shelter should feel cool)

II. BAM SAMPLER – Routine Maintenance (monthly). Check yes if maintenance was performed during this visit. See page 56 of BAM manual.

YES NO

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☐	☒
☐	☒
☐	☒

1. Inlet Flow check Performed
2. Visual Inspection and dust removal
3. Leak check performed
4. PM10 and 2.5 cyclone particle trap cleaned
5. Inlet nozzle and nozzle are cleaned

 AIR SCIENCES INC. DENVER • PORTLAND	
REVIEWED BY <u>RPA</u> AUDITED BY <u>GB</u>	DATE <u>11/29/14</u> DATE <u>11/29/14</u>

III. BAM SAMPLER – Routine Maintenance (every 2 months). Check yes if maintenance was performed during this visit. See page 56 of BAM manual.

YES NO

☐	☒
☐	☒

1. Filter tape replaced
2. Ran the Self-Test function

III. BAM SAMPLER – Routine Maintenance (semiannual). Check yes if maintenance was performed during this visit. See page 56 of BAM manual.

YES NO

☐	☒
☐	☒

1. Replaced muffler on the pump (*Work performed by Air Sciences)
2. Complete calibration of flow system (*Work performed by Air Sciences)

IV. BAM SAMPLER – Routine Maintenance (annual). Check yes if maintenance was performed during this visit. See page 56 of BAM manual.

YES NO

☐	☒
☐	☒

1. Carbon vanes in pump checked/replaced (*Work performed by Air Sciences)
2. Inlet system cleaned (*Work performed by Air Sciences)

**Comments/Unusual Occurrences: _____

Signature: R. Bell

EAST PLANT
BAM PM 2.5 WEEKLY SITE CHECK FORM
RESOLUTION MONITORING PROJECT
PROJECT NO. 262-1



Date: 11/21/2014 Time: _____

Operator: Kanu Balad

I. BAM SAMPLER – Weekly Checks.

YES NO

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1. The sampler is intact and the inlet head is unobstructed.
2. The vacuum pump is running and sounds normal.
3. The temperature shield is intact, and the sensor is inside of it.
4. The BAM is reading the correct time and day.
5. The tape is in the proper position and does not need to be changed (tape should be changed every 2 months).
6. Error log was checked (F3), and errors followed up on (see manual). 11/10 → Bam Cal membrane 5%
7. Climate control appears operational (If it's cold out the shelter should feel warm, if it's hot out the shelter should feel cool)

II. BAM SAMPLER – Routine Maintenance (monthly). Check yes if maintenance was performed during this visit. See page 56 of BAM manual.

YES NO

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1. Inlet Flow check Performed
2. Visual inspection and dust removal
3. Leak check performed
4. PM10 and 2.5 cyclone particle trap cleaned
5. Inlet nozzle and nozzle are cleaned

 AIR SCIENCES INC. NEWEE • PORTLAND	
REVIEWED BY <u>RPA</u>	DATE <u>11/24/14</u>
AUDITED BY <u>66</u>	<u>11/24/14</u>

III. BAM SAMPLER – Routine Maintenance (every 2 months). Check yes if maintenance was performed during this visit. See page 56 of BAM manual.

YES NO

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☒	

1. Filter tape replaced
2. Ran the Self-Test function

IV. BAM SAMPLER – Routine Maintenance (annual). Check yes if maintenance was performed during this visit. See page 56 of BAM manual.

YES NO

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☒	

1. Replaced muffler on the pump (*Work performed by Air Sciences)
2. Complete calibration of flow system (*Work performed by Air Sciences)

IV. BAM SAMPLER – Routine Maintenance (annual). Check yes if maintenance was performed during this visit. See page 56 of BAM manual.

YES NO

☒	
☒	

1. Carbon vanes in pump checked/replaced (*Work performed by Air Sciences)
2. Inlet system cleaned (*Work performed by Air Sciences)

Comments/Unusual Occurrences: _____

Signature: Kanu Balad

EAST PLANT

BAM PM 2.5 WEEKLY SITE CHECK FORM
RESOLUTION MONITORING PROJECT
PROJECT NO. 262-1



Date: 12/07/2014

Time: 2:11

Operator: Rami

I. BAM SAMPLER – Weekly Checks.

YES NO

☒	☐
☒	☐
☒	☐
☒	☐
☒	☐
☒	☐
☒	☐

1. The sampler is intact and the inlet head is unobstructed.
2. The vacuum pump is running and sounds normal.
3. The temperature shield is intact, and the sensor is inside of it.
4. The BAM is reading the correct time and day.
5. The tape is in the proper position and does not need to be changed (tape should be changed every 2 months).
6. Error log was checked (F3), and errors followed up on (see manual). 11/10 → BAM Col Membrane
7. Climate control appears operational (If it's cold out the shelter should feel warm, if it's hot out the shelter should feel cool)

II. BAM SAMPLER – Routine Maintenance (monthly). Check yes if maintenance was performed during this visit. See page 56 of BAM manual.

YES NO

☐	☒
☐	☒
☐	☒
☐	☒
☐	☒

1. Inlet Flow check Performed
2. Visual inspection and dust removal
3. Leak check performed
4. PM10 and 2.5 cyclone particle trap cleaned
5. Inlet nozzle and nozzle are cleaned

 AIR SCIENCES INC. DENVER • PORTLAND	
REVIEWED BY <u>ppr</u>	DATE <u>12/08/14</u>
AUDITED BY <u>66</u>	DATE <u>12/08/14</u>

II. BAM SAMPLER – Routine Maintenance (every 2 months). Check yes if maintenance was performed during this visit. See page 56 of BAM manual.

YES NO

☐	☒
☐	☒

1. Filter tape replaced
2. Ran the Self-Test function

III. BAM SAMPLER – Routine Maintenance (semiannual). Check yes if maintenance was performed during this visit. See page 56 of BAM manual.

YES NO

☐	☒
☐	☒

1. Replaced muffler on the pump (*Work performed by Air Sciences)
2. Complete calibration of flow system (*Work performed by Air Sciences)

IV. BAM SAMPLER – Routine Maintenance (annual). Check yes if maintenance was performed during this visit. See page 56 of BAM manual.

YES NO

☐	☒
☐	☒

1. Carbon vanes in pump checked/replaced (*Work performed by Air Sciences)
2. Inlet system cleaned (*Work performed by Air Sciences)

**Comments/Unusual Occurrences: _____

Signature: _____

EAST PLANT
BAM PM 2.5 WEEKLY SITE CHECK FORM
RESOLUTION MONITORING PROJECT
PROJECT NO. 262-1



Date: 12/12/2014

Time: 12:13

Operator: Karen Ballard

I. BAM SAMPLER – Weekly Checks.

YES	NO
☒	☐
☒	☐
☒	☐
☒	☐
☒	☐
☒	☐
☒	☐

- The sampler is intact and the inlet head is unobstructed.
- The vacuum pump is running and sounds normal.
- The temperature shield is intact, and the sensor is inside of it.
- The BAM is reading the correct time and day.
- The tape is in the proper position and does not need to be changed (tape should be changed every 2 months).
- Error log was checked (F3), and errors followed up on (see manual). 12/06 → Power Fail ✓ GG
- Climate control appears operational (If it's cold out the shelter should feel warm, if it's hot out the shelter should feel cool)

II. BAM SAMPLER – Routine Maintenance (monthly). Check yes if maintenance was performed during this visit. See page 56 of BAM manual.

YES NO GG-

☐	☒
☐	☒
☐	☒
☒	☒
☐	☒

- Inlet Flow check Performed
- Visual inspection and dust removal
- Leak check performed
- PM10 and 2.5 cyclone particle trap cleaned
- Inlet nozzle and nozzle are cleaned

 AIR SCIENCES INC. ANALYSIS • PROTECTION	
REVIEWED BY	<u>RPA</u>
AUDITED BY	<u>GG</u>
	<u>1/2/14</u> <u>12/15/14</u>

III. BAM SAMPLER – Routine Maintenance (every 2 months). Check yes if maintenance was performed during this visit. See page 56 of BAM manual.

YES NO

☒	☐
☒	☐

- Filter tape replaced
- Ran the Self-Test function

IV. BAM SAMPLER – Routine Maintenance (semiannual). Check yes if maintenance was performed during this visit. See page 56 of BAM manual.

YES NO GG-

☐	☒
☐	☒

- Replaced muffler on the pump (*Work performed by Air Sciences)
- Complete calibration of flow system (*Work performed by Air Sciences)

V. BAM SAMPLER – Routine Maintenance (annual). Check yes if maintenance was performed during this visit. See page 56 of BAM manual.

YES NO GG-

☐	☒
☐	☒

- Carbon vanes in pump checked/replaced (*Work performed by Air Sciences)
- Inlet system cleaned (*Work performed by Air Sciences)

**Comments/Unusual Occurrences: Self Test - PASSED

* PM 2.5 conc. + flow invalidated @ 15:00 hrs! GG-

Signature: Karen Ballard

EAST PLANT

BAM PM 2.5 WEEKLY SITE CHECK FORM
RESOLUTION MONITORING PROJECT
PROJECT NO. 262-1



Date: 12/19/2014

Time: 9:42

Operator: [Signature]

I. BAM SAMPLER – Weekly Checks.

YES	NO
☒	☐
☒	☐
☒	☐
☒	☐
☒	☐
☒	☐
☒	☐

1. The sampler is intact and the inlet head is unobstructed.
2. The vacuum pump is running and sounds normal.
3. The temperature shield is intact, and the sensor is inside of it.
4. The BAM is reading the correct time and day.
5. The tape is in the proper position and does not need to be changed (tape should be changed every 2 months).
6. Error log was checked (F3), and errors followed up on (see manual). 12/17 → Pelt Cool Membrane 5/6
7. Climate control appears operational (If it's cold out the shelter should feel warm, if it's hot out the shelter should feel cool) 66

II. BAM SAMPLER – Routine Maintenance (monthly). Check yes if maintenance was performed during this visit. See page 56 of BAM manual.

YES NO 66-

☐	☒
☐	☒
☐	☒
☐	☒
☐	☒

1. Inlet Flow check Performed
2. Visual inspection and dust removal
3. Leak check performed
4. PM10 and 2.5 cyclone particle trap cleaned
5. Inlet nozzle and nozzle are cleaned

 AIR SCIENCES INC. DENVER • PORTLAND	
REVIEWED BY <u>RPA</u>	DATE <u>1/2/14</u>
AUDITED BY <u>66-</u>	DATE <u>12/30/14</u>

III. BAM SAMPLER – Routine Maintenance (every 2 months). Check yes if maintenance was performed during this visit. See page 56 of BAM manual.

YES NO 66-

☐	☒
☐	☒

1. Filter tape replaced
2. Ran the Self-Test function

III. BAM SAMPLER – Routine Maintenance (semiannual). Check yes if maintenance was performed during this visit. See page 56 of BAM manual.

YES NO 66-

☐	☒
☐	☒

1. Replaced muffler on the pump (*Work performed by Air Sciences)
2. Complete calibration of flow system (*Work performed by Air Sciences)

IV. BAM SAMPLER – Routine Maintenance (annual). Check yes if maintenance was performed during this visit. See page 56 of BAM manual.

YES NO 66-

☐	☒
☐	☒

1. Carbon vanes in pump checked/replaced (*Work performed by Air Sciences)
2. Inlet system cleaned (*Work performed by Air Sciences)

**Comments/Unusual Occurrences: _____

Signature: [Signature: Kara Balla]



AIR SCIENCES INC
DENVER • PORTLAND

REVIEWED BY	RPA	DATE	1/2/14
AUDITED BY	GG -	DATE	12/30/14



Monthly Flow Verification PM_{2.5}

East Plant
PARTICULATE MONITORING PROJECT
PROJECT NO. 282-1

Met One PM_{2.5}: S/N: 6446
Firmware: Delta Cal S/N: _____
Calibrator: _____

Date of Flow Audit: 12/19/2014 ✓
Time of Flow Audit: 9:47

	BAM	STD
Ambient Temperature (AT) °C	6.8	7.0 ✓
Berometric Pressure mmHg	660	656.5 ?

	Set Point (lpm)	BAM	% Diff (1)	STD Flow Meter	% Diff (2)
(1) Actual Flow Acceptable Differential	15	15.0	0 ✓	15.09	0.6 ✓
		14.700 - 15.300	+/- 2%	14.250 - 15.750	+/- 5%
(2) Actual Flow Acceptable Differential	18.4	18.3	0.54 ✓	18.61	1.67 ✓
		18.032 - 18.768	+/- 2%	17.480 - 19.320	+/- 5%
(3) Actual Flow Acceptable Differential	16.7	16.7	0 ✓	16.80	0.6 ✓
		16.336 - 17.034	+/- 2%	15.865 - 17.535	+/- 5%

Calculations:

(1) % Diff = [(BAM - Set Point)/Set Point]*100 (+/- 2%)

(2) % Diff = [(BAM - Calibrator)/Calibrator]*100 (+/- 5%)

(2) Leak Test BAM: 0.5 Should be < 1.0 LPM ✓

Comments/Abnormalities:

Signature: _____

Upon completion of this form, fax to Air Sciences at 303-279-3796

* PM_{2.5} conc. + flow invalidated @ 10:00 hrs! GG

EAST PLANT
BAM PM 2.5 WEEKLY SITE CHECK FORM
RESOLUTION MONITORING PROJECT
PROJECT NO. 262-1



Date: 12/30/2014 Time: 10:15 Operator: Kami Ballad

I. BAM SAMPLER – Weekly Checks.

YES NO

✓	
✓	
✓	
✓	
✓	
✓	
✓	

1. The sampler is intact and the inlet head is unobstructed.
2. The vacuum pump is running and sounds normal.
3. The temperature shield is intact, and the sensor is inside of it.
4. The BAM is reading the correct time and day.
5. The tape is in the proper position and does not need to be changed (tape should be changed every 2 months).
6. Error log was checked (F3), and errors followed up on (see manual). 12/23-12/24 → BAM cal Membrane 56
7. Climate control appears operational (If it's cold out the shelter should feel warm, if it's hot out the shelter should feel cool)

II. BAM SAMPLER – Routine Maintenance (monthly). Check yes if maintenance was performed during this visit. See page 56 of BAM manual.

YES NO WR

	↓
	↓
	↓
	↓
	↓
	↓

1. Inlet Flow check Performed
2. Visual inspection and dust removal
3. Leak check performed
4. PM10 and 2.5 cyclone particle trap cleaned
5. Inlet nozzle and nozzle are cleaned

AIR SCIENCES INC. DENVER • PORTLAND	
REVIEWED BY <u>RPA</u>	DATE <u>1-6-15</u>
AUDITED BY <u>WR</u>	DATE <u>1-5-15</u>

III. BAM SAMPLER – Routine Maintenance (every 2 months). Check yes if maintenance was performed during this visit. See page 56 of BAM manual.

YES NO WR

	↓
	↓

1. Filter tape replaced
2. Ran the Self-Test function

III. BAM SAMPLER – Routine Maintenance (semiannual). Check yes if maintenance was performed during this visit. See page 56 of BAM manual.

YES NO WR

	↓
	↓

1. Replaced muffler on the pump (*Work performed by Air Sciences)
2. Complete calibration of flow system (*Work performed by Air Sciences)

IV. BAM SAMPLER – Routine Maintenance (annual). Check yes if maintenance was performed during this visit. See page 56 of BAM manual.

YES NO WR

	↓
	↓

1. Carbon vanes in pump checked/replaced (*Work performed by Air Sciences)
2. Inlet system cleaned (*Work performed by Air Sciences)

**Comments/Unusual Occurrences: _____

Signature: Kami Ballad

**Appendix H: East Plant SO₂, NO_x, and O₃ Site Check
and Audit Forms**

Resolution Copper Mining

East Plant Monitoring Station

SO₂ Level 1 Zero and Span Calibration

Operator: <i>R. ATTRIDGE</i>	Teledyne API T100 SO ₂ Analyzer S/N <i>193</i>	Calibration Start Time <i>0730</i>
Date: <i>10.7.14</i>	Teledyne API T700 Primary Standard Dilution Calibrator S/N <i>191</i>	Calibration Stop Time <i>0810</i>
	NIST Traceable Gas Conc. <i>40.4</i>	T100 Analyzer Range <i>0-500 ppb</i>
		Shelter Temperature (5-40 °C) <i>24.2</i>

Biweekly Manual Level 1 Zero and Span Calibration

Target Dilution (ppb)	Actual Target Dilution Generated	SO ₂ Response	Analyzer Stability	Acceptance Criteria	Final Response
Zero Air	<i>Zero</i>	<i>-0.3</i>	<i>0.3</i>	Zero Drift ≤ ± 1.5 %	<i>0.02</i>
400 ppb	<i>400</i>	<i>386.8</i>	<i>0.5</i>	Span Drift ≤ ± 10 %	<i>407.0</i>

Real time Analyzer vs. Logger Data Comparison

Target Dilution (ppb)	Analyzer Response (ppb)	Logger Response (ppb)	Acceptance Criteria	Adjustment Required?
Zero Air	<i>0.02</i>	<i>0.13</i>	± 2 ppb	<i>NO</i>
400 ppb	<i>407.0</i>	<i>407.6</i>	± 2 ppb	<i>NO</i>

Analyzer Parameters

Sample Flow (<i>650 ± 65</i> cc/min)	<i>619</i>	Sample Press. (Ambient ± 2 in-Hg)	<i>25.8</i>
UV Lamp (1000 - 4800 mV)	<i>2170.3</i>	Lamp Ratio (30 - 120%)	<i>91.8</i>
Slope (1 ± 0.3)	<i>1.082</i>	BOX Temp. (Ambient ± 5°C)	<i>33.4</i>
Offset (< 250 mV)	<i>24.2</i>	HVPS (400 - 900 V)	<i>614</i>

Operator Comments:

Hourly concentrations collected from 0800 to 0900 - should be invalidated - RPA

Operator Signature:




AIR SCIENCES INC.
10-22-14
RPA
REVIEWED BY: WR
AUDITED BY: 10-17-14

Resolution Copper Mining
East Plant Monitoring Station
SO₂ Level 2 Zero and Span Verification



DENVER • PORTLAND

Operator:	Teledyne API T100 SO ₂ Analyzer S/N	193	Verification Start Time	2:11
Kame Ballard	Teledyne API T700 Primary Standard Dilution Calibrator S/N	191	Verification Stop Time	2:36
Date:	NIST Traceable Gas Conc.	40%	T100 Analyzer Range	500 PPM
10/10/2014		40.4 WR	Shelter Temperature (5-40 °C)	22.49

Biweekly Manual Level 2 Zero and Span Verification

SO₂ (WR)

Target Dilution (ppb)	Actual Target Dilution Generated	NO₂ Response	Analyzer Stability	Acceptance Criteria	Adjustment Required?
Zero Air	0	0.579	0.096	Zero Drift ≤ ±1.5 %	No
400 ppb	400	410.219	0.583	Span Drift ≤ ±10 %	NO WR

Real time Analyzer vs. Logger Data Comparison

Target Dilution (ppb)	Analyzer Response (ppb)	Logger Response (ppb)	Acceptance Criteria	Adjustment Required?
Zero Air	0.579	0.51	± 2 ppb	No
400 ppb	410.219	410.638	± 2 ppb	NO

Analyzer Parameters

Sample Flow (650 ± 65 cc/min)	626	Sample Press. (Ambient ± 2 in-Hg)	26.0
UV Lamp (1000 - 4800 mV)	2170.1	Lamp Ratio (30 - 120%)	91.9
Slope (1 ± 0.3)	1.082	BOX Temp. (Ambient ± 5°C)	32.0
Offset (< 250 mV)	24.2	HVPS (400 - 900 V)	614

Operator Comments:

Operator Signature: Kame Ballard



Resolution Copper Mining

East Plant Monitoring Station

SO₂ Level 1 Zero and Span Calibration

REVIEWED BY: RPA

AUDITED BY: WR

DATE: 10-29-14

DATE: 10-17-14



Operator: W.Rucker Date: <u>10-17-14</u>	Teledyne API T100 SO ₂ Analyzer S/N	193	Calibration Start Time	11:35
	Teledyne API T700 Primary Standard Dilution Calibrator S/N	191	Calibration Stop Time	13:36
			T100 Analyzer Range	500
	NIST Traceable Gas Conc.	40.4	Shelter Temperature (5-40 °C)	23.99

~~(AST)~~(MSI)
~~(AST)~~(MSI)

Biweekly Manual Level 1 Zero and Span Calibration

Target Dilution (ppb)	Actual Target Dilution Generated	SO ₂ Response	Analyzer Stability	Acceptance Criteria	Final Response
Zero Air	<u>zero</u>	<u>0.159</u>	<u>0.129</u>	Zero Drift $\leq \pm 1.5\%$	<u>-0.075</u>
400 ppb	<u>400</u>	<u>401.375</u>	<u>0.103</u>	Span Drift $\leq \pm 10\%$	<u>400.923</u>

Real time Analyzer vs. Logger Data Comparison

Target Dilution (ppb)	Analyzer Response (ppb)	Logger Response (ppb)	Acceptance Criteria	Adjustment Required?
Zero Air	<u>-0.075</u>	<u>-0.116</u>	± 2 ppb	<u>NO</u>
400 ppb	<u>400.923</u>	<u>409.691</u>	± 2 ppb	<u>NO</u>

Analyzer Parameters

Sample Flow (650 $\pm$ 65 cc/min)	<u>618</u>	Sample Press. (Ambient $\pm$ 2 in-Hg)	<u>25.7</u>
UV Lamp (1000 - 4800 mV)	<u>2163.5</u>	Lamp Ratio (30 - 120%)	<u>91.5</u>
Slope (1 $\pm$ 0.3)	<u>1.053</u>	BOX Temp. (Ambient $\pm$ 5°C)	<u>33.3</u>
Offset (< 250 mV)	<u>24.5</u>	HVPS (400 - 900 V)	<u>614</u>

Operator Comments: 1100-1400 hrs FIMMULATED RPA Operator Signature: _____





Resolution Copper Mining

East Plant Monitoring Station

SO₂ Level 1 Zero and Span Calibration

RPA

REVIEWED BY

WR

AUDITED BY

11/3/14

DATE

10/30/14

DATE

AIR SCIENCES INC.

DENVER • PORTLAND



Operator: W.Rucker Date: <i>10/30/14</i>	Teledyne API T100 SO ₂ Analyzer S/N	193	Calibration Start Time	<i>13:59</i>
	Teledyne API T700 Primary Standard Dilution Calibrator S/N	191	Calibration Stop Time	<i>14:30</i>
			T100 Analyzer Range	<i>500</i>
	NIST Traceable Gas Conc.	40.4	Shelter Temperature (5-40 ° C)	<i>21.85</i>

Biweekly Manual Level 1 Zero and Span Calibration

Target Dilution (ppb)	Actual Target Dilution Generated	SO ₂ Response	Analyzer Stability	Acceptance Criteria	Final Response
Zero Air	<i>Zero</i>	<i>-0.038</i> <i>-0.081</i>	<i>0.091</i> <i>0.167</i>	Zero Drift $\leq \pm 1.5\%$	<i>0.085</i>
400 ppb	<i>400</i>	<i>394.567</i>	<i>0.096</i>	Span Drift $\leq \pm 10\%$	

Real time Analyzer vs. Logger Data Comparison

Target Dilution (ppb)	Analyzer Response (ppb)	Logger Response (ppb)	Acceptance Criteria	Adjustment Required?
Zero Air	<i>0.085</i>	<i>0.0447</i>	± 2 ppb	<i>NO</i>
400 ppb	<i>400.632</i>	<i>401.40</i>	± 2 ppb	<i>NO</i>

Analyzer Parameters

Sample Flow (650 $\pm$ 65 cc/min)	<i>629</i>	Sample Press. (Ambient $\pm$ 2 in-Hg)	<i>26.1</i>
UV Lamp (1000 - 4800 mV)	<i>2156.9</i>	Lamp Ratio (30 - 120%)	<i>91.3</i>
Slope (1 $\pm$ 0.3)	<i>1.068</i>	BOX Temp. (Ambient $\pm$ 5°C)	<i>32.7</i>
Offset (< 250 mV)	<i>24.3</i>	HVPS (400 - 900 V)	<i>614</i>

Operator Comments: *IMMUNATED THE ISOVARS - RPA*

Operator Signature:





Resolution Copper Mining
East Plant Monitoring Station
SO₂ Level 2 Zero and Span Verification



DENVER • PORTLAND

REVIEWED BY:

WR

DATE

11-14-14

AUDITED BY:

DATE

Operator:	Teledyne API T100 SO ₂ Analyzer S/N	193	Verification Start Time	15:53
Date:	Teledyne API T700 Primary Standard Dilution Calibrator S/N	191	Verification Stop Time	16:05
	NIST Traceable Gas Conc.	40%	T100 Analyzer Range	500
			Shelter Temperature (5-40 °C)	22.15

Biweekly Manual Level 2 Zero and Span Verification

Target Dilution (ppb)	Actual Target Dilution Generated	NO₂ Response	Analyzer Stability	Acceptance Criteria	Adjustment Required?
Zero Air	0	006	0.387	Zero Drift $\leq \pm 1.5\%$	No
400 ppb	400	368.56	0.806	Span Drift $\leq \pm 10\%$	No

Real time Analyzer vs. Logger Data Comparison

Target Dilution (ppb)	Analyzer Response (ppb)	Logger Response (ppb)	Acceptance Criteria	Adjustment Required?
Zero Air	006	0.381	± 2 ppb	No
400 ppb	368.56	369.64	± 2 ppb	No

Analyzer Parameters

Sample Flow (650 $\pm$ 65 cc/min)	629	Sample Press. (Ambient $\pm$ 2 in-Hg)	26.0
UV Lamp (1000 - 4800 mV)	2136.2	Lamp Ratio (30 - 120%)	90.4
Slope (1 $\pm$ 0.3)	1.063	BOX Temp. (Ambient $\pm$ 5°C)	32.3
Offset (< 250 mV)	24.6	HVPS (400 - 900 V)	614

Operator Comments:

1600 & 1700 hrs

IMMEDIATE - RPA

Operator Signature:

Kami Ballard



Resolution Copper Mining East Plant Monitoring Station SO₂ Level 1 Zero and Span Calibration



WR 12-1-14
REVIEWED BY RPA DATE 11-20-14
AUDITED BY DATE

Operator: <i>R. ATTRIDGE</i>	Teledyne API T100 SO ₂ Analyzer S/N <i>193</i>	Calibration Start Time <i>0957</i>
Date: <i>11.20.2014</i>	Teledyne API T700 Primary Standard Dilution Calibrator S/N <i>191</i>	Calibration Stop Time <i>1057</i>
	NIST Traceable Gas Conc. <i>40.4</i>	T100 Analyzer Range <i>500 ppb</i>
		Shelter Temperature (5-40 ° C) <i>24.1</i>

Biweekly Manual Level 1 Zero and Span Calibration

Target Dilution (ppb)	Actual Target Dilution Generated	SO ₂ Response	Analyzer Stability	Acceptance Criteria	Final Response
Zero Air	<i>ZERO</i>	<i>-0.163</i>	<i>0.05</i>	Zero Drift $\leq \pm 1.5\%$	<i>-0.02</i>
400 ppb	<i>400</i>	<i>383.4</i>	<i>0.7</i>	Span Drift $\leq \pm 10\%$	<i>406.9</i>

Real time Analyzer vs. Logger Data Comparison

Target Dilution (ppb)	Analyzer Response (ppb)	Logger Response (ppb)	Acceptance Criteria	Adjustment Required?
Zero Air	<i>-0.02</i>	<i>0.4</i>	± 2 ppb	<i>NO</i>
400 ppb	<i>406.9</i>	<i>407.4</i>	± 2 ppb	<i>NO</i>

Analyzer Parameters

Sample Flow (50 ± 45 cc/min)	<i>620</i> -	Sample Press. (Ambient ± 2 in-Hg)	<i>25.8</i> -
UV Lamp (1000 - 4800 mV)	<i>2134.9</i> -	Lamp Ratio (30 - 120%)	<i>90.3</i> -
Slope (1 ± 0.3)	<i>1.107</i> -	BOX Temp. (Ambient $\pm 5^\circ\text{C}$)	<i>33.7</i> -
Offset (< 250 mV)	<i>24.3</i> -	HVPS (400 - 900 V)	<i>614</i> -

Operator Comments: *INVALIDATE DATA FROM 0900-1100HRS* Operator Signature:

R. Attridge



Resolution Copper Mining

East Plant Monitoring Station

SO₂ Level 2 Zero and Span Verification

REVIEWED: PPA

INITIALS: WR

DATE: 1/2/14

DATE: 12-2-14



Operator: W.Rucker Date: <u>12-2-2014</u>	Teledyne API T100 SO ₂ Analyzer S/N	193	Verification Start Time	12:10
	Teledyne API T700 Primary Standard Dilution Calibrator S/N	191	Verification Stop Time	12:41
	NIST Traceable Gas Conc.	40.4	T100 Analyzer Range	500
			Shelter Temperature (5-40 °C)	22.82

Biweekly Manual Level 2 Zero and Span Verification

Target Dilution (ppb)	Actual Target Dilution Generated	SO ₂ Response	Analyzer Stability	Acceptance Criteria	Adjustment Required?
Zero Air	<u>zero</u>	<u>0.58</u>	<u>0.046</u>	Zero Drift $\leq \pm 1.5\%$	<u>NO</u>
400 ppb	<u>400</u>	<u>408.167</u>	<u>0.776</u>	Span Drift $\leq \pm 10\%$	<u>NO</u>

Real time Analyzer vs. Logger Data Comparison

Target Dilution (ppb)	Analyzer Response (ppb)	Logger Response (ppb)	Acceptance Criteria	Adjustment Required?
Zero Air	<u>0.58</u>	<u>0.51</u>	± 2 ppb	<u>NO</u>
400 ppb	<u>408.167</u>	<u>409.194</u>	± 2 ppb	<u>NO</u>

Analyzer Parameters

Sample Flow (650 $\pm$ 65 cc/min)	<u>629</u>	Sample Press. (Ambient $\pm$ 2 in-Hg)	<u>26.1</u>
UV Lamp (1000 - 4800 mV)	<u>2128.5</u>	Lamp Ratio (30 - 120%)	<u>90.1</u>
Slope (1 $\pm$ 0.3)	<u>1.107</u>	BOX Temp. (Ambient $\pm$ 5°C)	<u>34.0</u>
Offset (< 250 mV)	<u>24.3</u>	HVPS (400 - 900 V)	<u>614</u>

Operator Comments: The 12:00 hour shall be invalidated.

Operator Signature:



1300 hrs INVALIDATED - PPA


AIR SCIENCES INC.
3-EMV & FORTIAND

Resolution Copper Mining
East Plant Monitoring Station
SO₂ Level 1 Zero and Span Calibration

REVIEWED BY WH DATE 1-2-15
AUDITED BY RPA DATE 12-9-14



Operator:	Teledyne API T100 SO ₂ Analyzer S/N	193	Calibration Start Time	1430
R. ATTRIDGE	Teledyne API T700 Primary Standard Dilution Calibrator S/N	191	Calibration Stop Time	1558
Date:	NIST Traceable Gas Conc.	40.4	T100 Analyzer Range	500 ppb
12-9-14			Shelter Temperature (5-40 °C)	24.0

Biweekly Manual Level 1 Zero and Span Calibration

Target Dilution (ppb)	Actual Target Dilution Generated	SO ₂ Response	Analyzer Stability	Acceptance Criteria	Final Response
Zero Air	ZERO	0.008	0.2	Zero Drift $\leq \pm 1.5\%$	0.019
400 ppb	400	401.15	0.2	Span Drift $\leq \pm 10\%$	400.07

Real time Analyzer vs. Logger Data Comparison

Target Dilution (ppb)	Analyzer Response (ppb)	Logger Response (ppb)	Acceptance Criteria	Adjustment Required?
Zero Air	0.019	0.062	± 2 ppb	NO
400 ppb	400.07	400.9	± 2 ppb	NO

Analyzer Parameters

Sample Flow (450 ± 45 cc/min)	621	Sample Press. (Ambient ± 2 in-Hg)	25.8
UV Lamp (1000 - 4800 mV)	2126.0	Lamp Ratio (30 - 120%)	90%
Slope (1 ± 0.3)	1.061	BOX Temp. (Ambient $\pm 5^\circ\text{C}$)	33.6
Offset (< 250 mV)	24.4	HVPS (400 - 900 V)	614

Operator Comments: 1500-1600 hrs CONCENTRATIONS shall be invalidated

Operator Signature:





Resolution Copper Mining East Plant Monitoring Station SO₂ Level 2 Zero and Span Verification



REVIEWED BY

AUDITED BY

RPA 12/14
WR 12-18-14
DATE

DESIGN • PORTLAND

Operator:	Teledyne API T100 SO ₂ Analyzer S/N	193	Verification Start Time	12.40
Date: 12/2/2014	Teledyne API T700 Primary Standard Dilution Calibrator S/N	191	Verification Stop Time	12.55
	NIST Traceable Gas Conc.	40%	T100 Analyzer Range	400 PPB
			Shelter Temperature (5-40 °C)	24.5

Biweekly Manual Level 2 Zero and Span Verification

Target Dilution (ppb)	Actual Target Dilution Generated	SO ₂ Response	Analyzer Stability	Acceptance Criteria	Adjustment Required?
Zero Air	0	0.494	0.104	Zero Drift $\leq \pm 1.5\%$	No
400 ppb	400	393.67	0.225	Span Drift $\leq \pm 10\%$	NO WR

Real time Analyzer vs. Logger Data Comparison

Target Dilution (ppb)	Analyzer Response (ppb)	Logger Response (ppb)	Acceptance Criteria	Adjustment Required?
Zero Air	0.494	0.746	± 2 ppb	No
400 ppb	393.67	394.46	± 2 ppb	NO

Analyzer Parameters

Sample Flow (650 $\pm$ 65 cc/min)	630	Sample Press. (Ambient $\pm$ 2 in-Hg)	26.0
UV Lamp (1000 - 4800 mV)	2127.0	Lamp Ratio (30 - 120%)	90%
Slope (1 $\pm$ 0.3)	1.041	BOX Temp. (Ambient $\pm$ 5°C)	32.7
Offset (< 250 mV)	244	HVPS (400 - 900 V)	614

Operator Comments:

Inactivated the 13 ^{WR} ~~hrs~~ hours WR

Operator Signature:

Kami Ballard



Resolution Copper Mining East Plant Monitoring Station SO₂ Level 1 Zero and Span Calibration



REVIEWED BY: W.R. DATE: 12-19-14
AUDITED BY: W.R. DATE: 12-19-14

Operator: W.Rucker	Teledyne API T100 SO ₂ Analyzer S/N	193	Calibration Start Time	1052 (MST)
Date: 12-19-2014	Teledyne API T700 Primary Standard Dilution Calibrator S/N	191	Calibration Stop Time	
	NIST Traceable Gas Conc.	40.4	T100 Analyzer Range	500
			Shelter Temperature (5-40 °C)	24.23

Biweekly Manual Level 1 Zero and Span Calibration

Target Dilution (ppb)	Actual Target Dilution Generated	SO ₂ Response	Analyzer Stability	Acceptance Criteria	Final Response
Zero Air	Zero	0.376	0.038	Zero Drift $\leq \pm 1.5\%$	0.019
400 ppb	400	398.983	0.086	Span Drift $\leq \pm 10\%$	401.728

Real time Analyzer vs. Logger Data Comparison

Target Dilution (ppb)	Analyzer Response (ppb)	Logger Response (ppb)	Acceptance Criteria	Adjustment Required?
Zero Air	0.050	0.049	± 2 ppb	NO
400 ppb	401.604	401.604 402.013	± 2 ppb	NO

Analyzer Parameters

Sample Flow (650 $\pm$ 65 cc/min)	620	Sample Press. (Ambient $\pm$ 2 in-Hg)	25.9
UV Lamp (1000 - 4800 mV)	2121.6	Lamp Ratio (30 - 120%)	89.8
Slope (1 $\pm$ 0.3)	1.064	BOX Temp. (Ambient $\pm$ 5°C)	34.4
Offset (< 250 mV)	25.1	HVPS (400 - 900 V)	614

Operator Comments: Invalidated the 11:00 thru 13:00 hours for the calibration - WR

Operator Signature:



AIR SCIENCES INC.
ANALYSIS • CALIBRATION • MAINTENANCE

Resolution Copper Mining
East Plant Monitoring Station
SO₂ Level 2 Zero and Span Verification

RPA *1-6-15*

REVIEWED BY: *WR* DATE: *1-5-15*

AUDITED BY: _____ DATE: _____



Operator:	Teledyne API T100 SO ₂ Analyzer S/N	<i>193</i>	Verification Start Time	<i>10:37</i>
<i>Kami Ballard</i>	Teledyne API T700 Primary Standard Dilution Calibrator S/N	<i>191</i>	Verification Stop Time	<i>10:56</i>
Date:	NIST Traceable Gas Conc.	<i>140%</i>	T100 Analyzer Range	<i>500PPB</i>
<i>12/30/2014</i>			Shelter Temperature (5-40 °C)	<i>25.48</i>

Biweekly Manual Level 2 Zero and Span Verification

Target Dilution (ppb)	Actual Target Dilution Generated	NO ₂ Response	Analyzer Stability	Acceptance Criteria	Adjustment Required?
Zero Air	<i>0</i>	<i>-0.010</i>	<i>0.180</i>	Zero Drift $\leq \pm 1.5\%$	<i>No</i>
400 ppb	<i>400</i>	<i>394.641</i>	<i>0.862</i>	Span Drift $\leq \pm 10\%$	<i>No</i>

Real time Analyzer vs. Logger Data Comparison

Target Dilution (ppb)	Analyzer Response (ppb)	Logger Response (ppb)	Acceptance Criteria	Adjustment Required?
Zero Air	<i>- 0.010</i>	<i>0.232</i>	± 2 ppb	<i>No</i>
400 ppb	<i>394.64</i>	<i>395.578</i>	± 2 ppb	<i>No</i>

Analyzer Parameters

Sample Flow (650 $\pm$ 65 cc/min)	<i>624</i>	Sample Press. (Ambient $\pm$ 2 in-Hg)	<i>24.0</i>
UV Lamp (1000 - 4800 mV)	<i>2118.5</i>	Lamp Ratio (30 - 120%)	<i>89.7</i>
Slope (1 $\pm$ 0.3)	<i>1.064</i>	BOX Temp. (Ambient $\pm$ 5°C)	<i>23.5</i>
Offset (< 250 mV)	<i>25.1</i>	HVPS (400 - 900 V)	<i>614</i>

Operator Comments:

Invalidated the 11:00 hour for the verification. WR

Operator Signature:

Kami Ballard



AIR SCIENCES INC.
DENVER • PORTLAND

Resolution Copper Mining
East Plant Monitoring Station
NOx Level 1 Zero and Span Calibration

REVIEWED BY: *WR*
RPA

AUDITED BY: _____

DATE: *10-7-14*
10-7-14

DATE: _____



Operator: <i>R. Attridge</i>	Teledyne API T200 NOx Analyzer S/N	<i>197</i>	Calibration Start Time	<i>0725</i>
	Teledyne API T700 Primary Standard Dilution Calibrator S/N	<i>191</i>	Calibration Stop Time	<i>0810</i>
Date: <i>OCTOBER 3, 2014</i>	NIST Traceable Gas Conc.	<i>40.1</i>	T200 Analyzer Range	<i>0-500 ppb</i>
			Shelter Temperature (5-40 °C)	<i>23.3</i>

Biweekly Manual Level 1 Zero and Span Calibration

Target Dilution (ppb)	Actual Target Dilution Generated	NO Response	NO ₂ Response	NOx Response	Analyzer Stability	Acceptance Criteria	Final NOx / Zero Response
Zero Air	<i>0</i>	<i>-0.1</i>	<i>0.3</i>	<i>0.2</i>	<i>0.1</i>	Zero Drift $\leq \pm 1.5\%$	<i>0.3</i>
400 ppb	<i>400</i>	<i>378.5</i>	<i>0.6</i>	<i>379.2</i>	<i>0.7</i>	Span Drift $\leq \pm 10\%$	<i>397.8</i>

Real time Analyzer vs. Logger Data Comparison

Target Dilution (ppb)	Analyzer Response (ppb)		Logger Response (ppb)		Acceptance Criteria	Adjustment Required?
Zero Air	NO	<i>-0.2</i>	NO	<i>-0.3</i>	± 2 ppb	<i>NO</i>
	NO ₂	<i>0.5</i>	NO ₂	<i>0.3</i>		
	NO _x	<i>0.3</i>	NO _x	<i>0.2</i>		
400 ppb	NO	<i>396.2</i>	NO	<i>396.3</i>	± 2 ppb	<i>NO</i>
	NO ₂	<i>1.1</i>	NO ₂	<i>0.5</i>		
	NO _x	<i>397.8</i>	NO _x	<i>397.2</i>		

Analyzer Parameters

Sample Flow (500 $\pm$ 50 cc/min)	<i>485</i> ✓	Moly Temp. (315 $\pm$ 5°C)	<i>314.4</i> ✓
Ozone Flow (80 $\pm$ 15 cc/min)	<i>72</i> ✓	HVPS (400 - 900 V)	<i>643</i> ✓
NOx Slope (1 $\pm$ 0.3)	<i>1.107</i> ✓	NO Slope (1 $\pm$ 0.3)	<i>1.106</i> ✓
NOx Offset (0 $\pm$ 100)	<i>3.1</i> ✓	NO Offset (0 $\pm$ 100)	<i>0.1</i> ✓

Operator Comments:

Operator Signature:

*Hourly concentrations collected at 0800-0900 -
shall be invalidated as a result of Cal procedure.*
-RPA

Rory Attridge



Resolution Copper Mining East Plant Monitoring Station NOx Level 2 Zero and Span Verification



REVIEWED BY: RPA DATE: 10-29-14
 AUDITED BY: WR DATE: 10-17-14

ORVILLE • PORTLAND

Operator:	Teledyne API T200 NOx Analyzer S/N	197	Verification Start Time	1:52
<i>Kami Ballard</i>	Teledyne API T700 Primary Standard Dilution Calibrator S/N	191	Verification Stop Time	2:11
Date:	NIST Traceable Gas Conc.	40%	T200 Analyzer Range	500 PPB
10/10/2014			Shelter Temperature (5-40 ° C)	23.58

Biweekly Manual Level 2 Zero and Span Verification

Target Dilution (ppb)	Actual Target Dilution Generated	NO Response	NO ₂ Response	NOx Response	Analyzer Stability	Acceptance Criteria	Adjustment Required?
Zero Air	0	-0.1	4.4	4.3	0.5	Zero Drift $\leq \pm 1.5\%$	No ✓
400 ppb	400	381.8	-2.8	379.0	0.7	Span Drift $\leq \pm 10\%$	No ✓

Real time Analyzer vs. Logger Data Comparison

Target Dilution (ppb)	Analyzer Response (ppb)		Logger Response (ppb)		Acceptance Criteria	Adjustment Required?
Zero Air	NO	-0.1	NO	-0.06	± 2 ppb	No ✓
	NO ₂	4.4	NO ₂	4.31		
	NO _x	4.3	NO _x	4.47		
400 ppb	NO	381.8	NO	382.35	± 2 ppb	No ✓
	NO ₂	-2.8	NO ₂	-3.73		
	NO _x	379.0	NO _x	378.91		

Analyzer Parameters

Sample Flow (500 $\pm$ 50 cc/min)	482 ✓	Moly Temp. (315 $\pm$ 5°C)	315.0 ✓
Ozone Flow (80 $\pm$ 15 cc/min)	80 ✓	HVPS (400 - 900 V)	643 ✓
NOx Slope (1 $\pm$ 0.3)	1.107 ✓	NO Slope (1 $\pm$ 0.3)	1.106 ✓
NOx Offset (0 $\pm$ 100)	3.1 ✓	NO Offset (0 $\pm$ 100)	0.1 ✓

Operator Comments:

Operator Signature: *Kami Ballard*

Resolution Copper Mining
East Plant Monitoring Station
NOx Level 1 Zero and Span Calibration

AIR SCIENCES INC.

REVIEWED BY: RPA DATE: 10-29-14
 AUDITED BY: WR DATE: 10-17-14



Operator: W.Rucker Date: <u>10/17/14</u>	Teledyne API T200 NOx Analyzer S/N	197	Calibration Start Time	<u>10:13 (PST)</u>	(MST)
	Teledyne API T700 Primary Standard Dilution Calibrator S/N	191	Calibration Stop Time	<u>10:50 (PST)</u>	
			T200 Analyzer Range	<u>500 (MST)</u>	
	NIST Traceable Gas Conc.	40.1	Shelter Temperature (5-40 °C)	<u>23.15</u>	

Biweekly Manual Level 1 Zero and Span Calibration

Target Dilution (ppb)	Actual Target Dilution Generated	NO Response	NO ₂ Response	NOx Response	Analyzer Stability	Acceptance Criteria	Final NOx / Zero Response
Zero Air	<u>Zero</u>	<u>0.1</u>	<u>2.0</u>	<u>2.0</u>	<u>0.2</u>	Zero Drift $\leq \pm 1.5\%$	<u>WR 1.0</u>
400 ppb	<u>400</u>	<u>386.7</u>	<u>-0.0</u>	<u>386.8</u>	<u>0.5</u>	Span Drift $\leq \pm 10\%$	<u>404.1</u>

Real time Analyzer vs. Logger Data Comparison

Target Dilution (ppb)	Analyzer Response (ppb)		Logger Response (ppb)		Acceptance Criteria	Adjustment Required?
Zero Air	NO	<u>0.0</u>	NO	<u>-0.29 WR -0.29</u>	± 2 ppb	NO
	NO ₂	<u>1.0</u>	NO ₂	<u>0.86</u>		
	NO _x	<u>1.0</u>	NO _x	<u>1.04</u>		
400 ppb	NO	<u>403.0</u>	NO	<u>403.28</u>	± 2 ppb	NO
	NO ₂	<u>1.7</u>	NO ₂	<u>1.19</u>		
	NO _x	<u>404.1</u>	NO _x	<u>404.91</u>		

Analyzer Parameters

Sample Flow (500 $\pm$ 50 cc/min)	<u>484</u>	Moly Temp. (315 $\pm$ 5°C)	<u>314.8</u>
Ozone Flow (80 $\pm$ 15 cc/min)	<u>81</u>	HVPS (400 - 900 V)	<u>643</u>
NOx Slope (1 $\pm$ 0.3)	<u>1.152</u>	NO Slope (1 $\pm$ 0.3)	<u>1.145</u>
NOx Offset (0 $\pm$ 100)	<u>7.0</u>	NO Offset (0 $\pm$ 100)	<u>0.3</u>

Operator Comments:

1100 hrs CONCENTRATIONS EVALUATED - RPA

Operator Signature:

Resolution Copper Mining
East Plant Monitoring Station
NOx Level 1 Zero and Span Calibration

AIR SCIENCES INC.

REVIEWED BY: RAT DATE: 11/3/14
AUDITED BY: WR DATE: 10/30/14

Operator: W.Rucker	Teledyne API T200 NOx Analyzer S/N	197	Calibration Start Time	0857 (MST)
	Teledyne API T700 Primary Standard Dilution Calibrator S/N	191	Calibration Stop Time	0929 (MST)
	NIST Traceable Gas Conc.	40.1	T200 Analyzer Range	500
Date: 10/30/2014			Shelter Temperature (5-40 ° C)	21.9

Biweekly Manual Level 1 Zero and Span Calibration

Target Dilution (ppb)	Actual Target Dilution Generated	NO Response	NO ₂ Response	NOx Response	Analyzer Stability	Acceptance Criteria	Final NOx / Zero Response
Zero Air	Zero	-0.2	-1.4	-1.6	0.6	Zero Drift $\leq \pm 1.5\%$	0.7
400 ppb	400	379.5	0.1	379.4	0.3	Span Drift $\leq \pm 10\%$	410.6

Real time Analyzer vs. Logger Data Comparison

Target Dilution (ppb)	Analyzer Response (ppb)		Logger Response (ppb)		Acceptance Criteria	Adjustment Required?
Zero Air	NO	0.6	NO	-0.346	± 2 ppb	
	NO ₂	-0.5	NO ₂	-0.663		
	NO _x	-0.4	NO _x	-0.51		
400 ppb	NO	407.0	NO	406.91	± 2 ppb	NO
	NO ₂	3.2	NO ₂	2.80		
	NO _x	408.4	NO _x	408.87		

Analyzer Parameters

Sample Flow (500 $\pm$ 50 cc/min)	485	Moly Temp. (315 $\pm$ 5°C)	314.6
Ozone Flow (80 $\pm$ 15 cc/min)	80	HVPS (400 - 900 V)	643
NOx Slope (1 $\pm$ 0.3)	1.209	NO Slope (1 $\pm$ 0.3)	1.207
NOx Offset (0 $\pm$ 100)	4.4	NO Offset (0 $\pm$ 100)	0.0

Operator Comments: Failed to record the analyzer vs zero response. Performed a zero verification later to get these values. Start 13:46 Stop 13:55

Operator Signature: 

1000 hrs AND 1400 hrs INACTIVATED - RAT



AIR SCIENCES INC.
 KPM SERVER - PORTLAND

Resolution Copper Mining
East Plant Monitoring Station
NOx Level 2 Zero and Span Verification

REVIEWED BY: KPM

ADDED BY: WR

DATE: 11-14-14

DATE: 11-14-14



Operator:	Teledyne API T200 NOx Analyzer S/N	197	Verification Start Time	15:15
Date: <u>11/13/2014</u>	Teledyne API T700 Primary Standard Dilution Calibrator S/N	191	Verification Stop Time	15:52
	NIST Traceable Gas Conc.	40%	T200 Analyzer Range	500 PPM
			Shelter Temperature (5-40 °C)	21.71

Biweekly Manual Level 2 Zero and Span Verification

Target Dilution (ppb)	Actual Target Dilution Generated	NO Response	NO ₂ Response	NO _x Response	Analyzer Stability	Acceptance Criteria	Adjustment Required?
Zero Air	0	0.3	1.4	1.7	0.9	Zero Drift $\leq \pm 1.5\%$	No
400 ppb	400	370.7	1.0	371.7	0.5	Span Drift $\leq \pm 10\%$	No

Real time Analyzer vs. Logger Data Comparison

Target Dilution (ppb)	Analyzer Response (ppb)		Logger Response (ppb)		Acceptance Criteria	Adjustment Required?
Zero Air	NO	0.3	NO	0.1	± 2 ppb	No
	NO ₂	1.4	NO ₂	1.6		
	NO _x	1.7	NO _x	2.0		
400 ppb	NO	370.7	NO	370.52	± 2 ppb	No
	NO ₂	1.0	NO ₂	0.81		
	NO _x	371.7	NO _x	371.74		

Analyzer Parameters

Sample Flow (500 $\pm$ 50 cc/min)	492	Moly Temp. (315 $\pm$ 5°C)	315
Ozone Flow (80 $\pm$ 15 cc/min)	81	HVPS (400 - 900 V)	643
NO _x Slope (1 $\pm$ 0.3)	1.189	NO Slope (1 $\pm$ 0.3)	1.193
NO _x Offset (0 $\pm$ 100)	1.2	NO Offset (0 $\pm$ 100)	0.5

Operator Comments:

1600 hrs ENHANCED-RPA

Operator Signature:

K. BALLARD



Resolution Copper Mining

East Plant Monitoring Station

NOx Level 1 Zero and Span Calibration

REVIEWED BY: *WA*

AUDITED BY: *RPA*

DATE: *12-1-14*

DATE: *11-20-14*



Operator: <i>R. ATTREDGE</i>	Teledyne API T200 NOx Analyzer S/N	<i>197</i>	Calibration Start Time	<i>0957</i>
	Teledyne API T700 Primary Standard Dilution Calibrator S/N	<i>191</i>	Calibration Stop Time	<i>1029</i>
Date: <i>11.20.2014</i>			T200 Analyzer Range	<i>500 ppb</i>
	NIST Traceable Gas Conc.	<i>40.1</i>	Shelter Temperature (5-40 ° C)	<i>24.1</i>

Biweekly Manual Level 1 Zero and Span Calibration

Target Dilution (ppb)	Actual Target Dilution Generated	NO Response	NO ₂ Response	NOx Response	Analyzer Stability	Acceptance Criteria	Final NOx / Zero Response
Zero Air	<i>2520</i>	<i>0.4</i>	<i>0.2</i>	<i>0.6</i>	<i>0.1</i>	Zero Drift $\leq \pm 1.5 \%$	<i>0.0</i>
400 ppb	<i>400</i>	<i>382.8</i>	<i>1.4</i>	<i>382.2</i>	<i>0.6</i>	Span Drift $\leq \pm 10 \%$	<i>407.2</i>

Real time Analyzer vs. Logger Data Comparison

Target Dilution (ppb)	Analyzer Response (ppb)		Logger Response (ppb)		Acceptance Criteria	Adjustment Required?
Zero Air	NO	<i>-0.0</i>	NO	<i>-0.2</i>	± 2 ppb	<i>NO</i>
	NO ₂	<i>0.0</i>	NO ₂	<i>-0.0</i>		
	NO _x	<i>0.0</i>	NO _x	<i>-0.1</i>		
400 ppb	NO	<i>406.6</i>	NO	<i>407.2</i>	± 2 ppb	<i>NO</i>
	NO ₂	<i>-0.8</i>	NO ₂	<i>-0.6</i>		
	NO _x	<i>406.5</i>	NO _x	<i>406.2</i>		

Analyzer Parameters

Sample Flow (500 $\pm$ 50 cc/min)	<i>475</i>	Moly Temp. (315 $\pm$ 5°C)	<i>313.8</i>
Ozone Flow (80 $\pm$ 15 cc/min)	<i>81</i>	HVPS (400 - 900 V)	<i>643</i>
NOx Slope (1 $\pm$ 0.3)	<i>1.245</i>	NO Slope (1 $\pm$ 0.3)	<i>1.253</i>
NOx Offset (0 $\pm$ 100)	<i>2.2</i>	NO Offset (0 $\pm$ 100)	<i>0.4</i>

Operator Comments: *NOx Hourly Data shall be invalidated* Operator Signature:

From 0900-1100 hrs - RPA -

R. Attredge

Resolution Copper Mining
East Plant Monitoring Station
NOx Level 2 Zero and Span Verification



REVIEWED BY: *WR* DATE: *12/2/14*
 AUDITED BY: *WR* DATE: *12-2-14*

Operator: W.Rucker Date: <i>12/2/2014</i>	Teledyne API T200 NOx Analyzer S/N	197	Verification Start Time	11:47
	Teledyne API T700 Primary Standard Dilution Calibrator S/N	191	Verification Stop Time	12:08
			T200 Analyzer Range	500
	NIST Traceable Gas Conc.	40.1	Shelter Temperature (5-40 °C)	23.86

Biweekly Manual Level 2 Zero and Span Verification

Target Dilution (ppb)	Actual Target Dilution Generated	NO Response	NO ₂ Response	NOx Response	Analyzer Stability	Acceptance Criteria	Adjustment Required?
Zero Air	<i>Zero</i>	<i>-0.5</i>	<i>0.7</i>	<i>0.2</i>	<i>0.2</i>	Zero Drift $\leq \pm 1.5\%$	<i>NO</i>
400 ppb	<i>400</i>	<i>396.3</i>	<i>-3.6</i>	<i>393.0</i>	<i>0.7</i>	Span Drift $\leq \pm 10\%$	<i>NO</i>

Real time Analyzer vs. Logger Data Comparison

Target Dilution (ppb)	Analyzer Response (ppb)		Logger Response (ppb)		Acceptance Criteria	Adjustment Required?
Zero Air	NO	<i>-0.5</i>	NO	<i>-0.67</i>	± 2 ppb	<i>NO</i>
	NO ₂	<i>-0.8</i>	NO ₂	<i>0.61</i>		
	NO _x	<i>0.3</i>	NO _x	<i>0.34</i>		
400 ppb	NO	<i>396.3</i>	NO	<i>396.78</i>	± 2 ppb	<i>NO</i>
	NO ₂	<i>-3.6</i>	NO ₂	<i>-3.56</i>		
	NO _x	<i>393.0</i>	NO _x	<i>393.87</i>		

Analyzer Parameters

Sample Flow (500 $\pm$ 50 cc/min)	<i>476</i>	Moly Temp. (315 $\pm$ 5°C)	<i>314.5</i>
Ozone Flow (80 $\pm$ 15 cc/min)	<i>80</i>	HVPS (400 - 900 V)	<i>643</i>
NOx Slope (1 $\pm$ 0.3)	<i>1.245</i>	NO Slope (1 $\pm$ 0.3)	<i>1.253</i>
NOx Offset (0 $\pm$ 100)	<i>2.2</i>	NO Offset (0 $\pm$ 100)	<i>0.4</i>

Operator Comments: *WR Invalidate the 11:00 & 12:00 Hours for the verification.*

Operator Signature: *[Signature]*

1100-1300 Hrs Concentrations FWAUATED - RPA

Resolution Copper Mining
East Plant Monitoring Station
NOx Level 1 Zero and Span Calibration


AIR SCIENCES INC.

 AIR SCIENCES INC. LITTLE ROCK, AR		1-2-2015
REVIEWED BY: <i>WR</i>	DATE: 12-9-15	
AUDITED BY: <i>RPA</i>	DATE:	

Operator: <i>R. ATTRIDGE</i>	Teledyne API T200 NOx Analyzer S/N	<i>197</i>	Calibration Start Time	<i>1430</i>
	Teledyne API T700 Primary Standard Dilution Calibrator S/N	<i>191</i>	Calibration Stop Time	<i>1530</i>
Date: <i>12-9-14</i>			T200 Analyzer Range	<i>500ppb</i>
	NIST Traceable Gas Conc.	<i>40.1</i>	Shelter Temperature (5-40 °C)	<i>24.3</i>

Biweekly Manual Level 1 Zero and Span Calibration

Target Dilution (ppb)	Actual Target Dilution Generated	NO Response	NO ₂ Response	NOx Response	Analyzer Stability	Acceptance Criteria	Final NOx / Zero Response
Zero Air	<i>ZERO</i>	<i>-0.7</i>	<i>0.9</i>	<i>0.3</i>	<i>0.4</i>	Zero Drift $\leq \pm 1.5\%$	<i>0.1</i>
400 ppb	<i>400</i>	<i>391.0</i>	<i>4.8</i>	<i>389.4</i>	<i>1.0</i>	Span Drift $\leq \pm 10\%$	<i>392.1</i>

Real time Analyzer vs. Logger Data Comparison

Target Dilution (ppb)	Analyzer Response (ppb)		Logger Response (ppb)		Acceptance Criteria	Adjustment Required?
Zero Air	NO	<i>0.0</i>	NO	<i>-0.1</i>	± 2 ppb	<i>NO</i>
	NO ₂	<i>0.1</i>	NO ₂	<i>0.0</i>		
	NO _x	<i>0.1</i>	NO _x	<i>0.2</i>		
400 ppb	NO	<i>392.7</i>	NO	<i>392.8</i>	± 2 ppb	<i>NO</i>
	NO ₂	<i>-0.5</i>	NO ₂	<i>-1.6</i>		
	NO _x	<i>392.1</i>	NO _x	<i>391.5</i>		

Analyzer Parameters

Sample Flow (500 $\pm$ 50 cc/min)	<i>474</i>	Moly Temp. (315 $\pm$ 5°C)	<i>314.7</i>
Ozone Flow (80 $\pm$ 15 cc/min)	<i>81</i>	HVPS (400 - 900 V)	<i>643</i>
NOx Slope (1 $\pm$ 0.3)	<i>1.244</i>	NO Slope (1 $\pm$ 0.3)	<i>1.246</i>
NOx Offset (0 $\pm$ 100)	<i>2.9</i>	NO Offset (0 $\pm$ 100)	<i>-0.6</i>

Operator Comments: *1500-1600 HRS DATA SHALL BE* Operator Signature: *R. Attridge*

INVALIDATED -



Resolution Copper Mining
East Plant Monitoring Station
NOx Level 2 Zero and Span Verification

REVIEWED BY: RAT

AUDITED BY: WR

DATE: 12/14

DATE: 12-18-14



Operator:	Teledyne API T200 NOx Analyzer S/N	197	Verification Start Time	12:17
<i>Karin Ballard</i>	Teledyne API T700 Primary Standard Dilution Calibrator S/N	191	Verification Stop Time	12:39
Date:	NIST Traceable Gas Conc.	40%	T200 Analyzer Range	500 PPB
12/12/2014			Shelter Temperature (5-40 °C)	12.8

Biweekly Manual Level 2 Zero and Span Verification

Target Dilution (ppb)	Actual Target Dilution Generated	NO Response	NO ₂ Response	NOx Response	Analyzer Stability	Acceptance Criteria	Adjustment Required?
Zero Air	0	0.2	0.4	0.6	0.1	Zero Drift $\leq \pm 1.5\%$	No
400 ppb	400	387.6	-1.5	386.2	0.7	Span Drift $\leq \pm 10\%$	No

Real time Analyzer vs. Logger Data Comparison

Target Dilution (ppb)	Analyzer Response (ppb)		Logger Response (ppb)		Acceptance Criteria	Adjustment Required?
Zero Air	NO	0.2	NO	0.04	± 2 ppb	No
	NO ₂	0.4	NO ₂	0.23		
	NO _x	0.6	NO _x	0.50		
400 ppb	NO	387.6	NO	388.2	± 2 ppb	No
	NO ₂	-1.5	NO ₂	-1.79		
	NO _x	386.2	NO _x	386.77		

Analyzer Parameters

Sample Flow (500 $\pm$ 50 cc/min)	484	Moly Temp. (315 $\pm$ 5°C)	315.0
Ozone Flow (80 $\pm$ 15 cc/min)	81	HVPS (400 - 900 V)	1043
NOx Slope (1 $\pm$ 0.3)	1.24	NO Slope (1 $\pm$ 0.3)	1.24
NOx Offset (0 $\pm$ 100)	29	NO Offset (0 $\pm$ 100)	0.6

Operator Comments: Invalidated the 13:00 hours. WR

Operator Signature: *Karin Ballard*



Resolution Copper Mining East Plant Monitoring Station NOx Level 1 Zero and Span Calibration



REVIEWED BY

RPH

DATE

1-2-15

AUDITED BY

WR

DATE

12-19-14

Operator: W.Rucker Date: 12-19-2014	Teledyne API T200 NOx Analyzer S/N	197	Calibration Start Time	0942 (AST)
	Teledyne API T700 Primary Standard Dilution Calibrator S/N	191	Calibration Stop Time	1049 (MST)
			T200 Analyzer Range	500
	NIST Traceable Gas Conc.	40.1	Shelter Temperature (5-40 °C)	15.56 23.74 WR

Biweekly Manual Level 1 Zero and Span Calibration

Target Dilution (ppb)	Actual Target Dilution Generated	NO Response	NO ₂ Response	NOx Response	Analyzer Stability	Acceptance Criteria	Final NOx/Zero Response
Zero Air	Zero	0.5	0.8	1.3	0.2	Zero Drift $\leq \pm 1.5\%$	-0.1
400 ppb	400	385.1	-0.2	384.7	0.4	Span Drift $\leq \pm 10\%$	401.7

Real time Analyzer vs. Logger Data Comparison

Target Dilution (ppb)	Analyzer Response (ppb)		Logger Response (ppb)		Acceptance Criteria	Adjustment Required?
Zero Air	NO	0.0	NO	0.41	± 2 ppb	No
	NO ₂	-0.1	NO ₂	-0.46		
	NO _x	-0.2	NO _x	-0.28		
400 ppb	NO	401.8	NO	401.84	± 2 ppb	No
	NO ₂	0.1	NO ₂	-0.099		
	NO _x	401.7	NO _x	401.92		

Analyzer Parameters

Sample Flow (500 $\pm$ 50 cc/min)	485	Moly Temp. (315 $\pm$ 5°C)	315.3
Ozone Flow (80 $\pm$ 15 cc/min)	81	HVPS (400 - 900 V)	643
NOx Slope (1 $\pm$ 0.3)	1.292	NO Slope (1 $\pm$ 0.3)	1.282
NOx Offset (0 $\pm$ 100)	5.9	NO Offset (0 $\pm$ 100)	0.6

Operator Comments:

Invalidated the 10:00+11:00 hours for the calibration - WR

Operator Signature:

[Signature]



Resolution Copper Mining
East Plant Monitoring Station
NOx Level 2 Zero and Span Verification

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ORANGE - PORTLAND

REVIEWED BY: RPA DATE: 1-6-15

AUDITED BY: WR DATE: 1-5-15



Operator:	Teledyne API T200 NOx Analyzer S/N	197 -	Verification Start Time	10:20 -
<u>Kami Ballard</u>	Teledyne API T700 Primary Standard Dilution Calibrator S/N	191 -	Verification Stop Time	10:37 -
Date:	NIST Traceable Gas Conc.	40% -	T200 Analyzer Range	500 PPB
<u>12/30/2014</u>			Shelter Temperature (5-40 °C)	24.75 -

Biweekly Manual Level 2 Zero and Span Verification

Target Dilution (ppb)	Actual Target Dilution Generated	NO Response	NO ₂ Response	NOx Response	Analyzer Stability	Acceptance Criteria	Adjustment Required?
Zero Air	0	0.4	-2.5	-2.2	0.9	Zero Drift $\leq \pm 1.5\%$	No -
400 ppb	400	385.6	-0.2	385.8	0.7	Span Drift $\leq \pm 10\%$	No -

Real time Analyzer vs. Logger Data Comparison

Target Dilution (ppb)	Analyzer Response (ppb)			Logger Response (ppb)			Acceptance Criteria	Adjustment Required?
Zero Air	NO	0.4		NO	0.13		± 2 ppb	No -
	NO ₂	-2.5		NO ₂	-2.75			
	NO _x	-2.2		NO _x	-2.25			
400 ppb	NO	385.6		NO	386.16		± 2 ppb	No -
	NO ₂	-0.2		NO ₂	0.49			
	NO _x	385.8		NO _x	386.98			

Analyzer Parameters

Sample Flow (500 $\pm$ 50 cc/min)	492 -	Moly Temp. (315 $\pm$ 5°C)	315.4 -
Ozone Flow (80 $\pm$ 15 cc/min)	80 -	HVPS (400 - 900 V)	643 -
NOx Slope (1 $\pm$ 0.3)	1.292 -	NO Slope (1 $\pm$ 0.3)	1.282 -
NOx Offset (0 $\pm$ 100)	5.9 -	NO Offset (0 $\pm$ 100)	0.6 -

Operator Comments:

Operator Signature:

Inaugurated the 4:00 hour for the verification - WR

Kami Ballard

Resolution Copper Mining

East Plant Monitoring Station

O₃ Level 1 Zero and Span Calibration

WR
REVIEWED BY RPA
AUDITED BY
DATE 10-7-14
DATE 10-7-14

Operator: <i>R. Arridge</i>	Teledyne API T400 O ₃ Analyzer S/N <i>224</i>	Calibration Start Time <i>0730</i>
Date: <i>10-7-14</i>	Teledyne API T700 Primary Standard Dilution Calibrator S/N <i>191</i>	Calibration Stop Time <i>0834</i>
		T400 Analyzer Range <i>0-500 ppb</i>
		Shelter Temperature (5-40 °C) <i>24.2</i>

Biweekly Manual Level 1 Zero and Span Calibration

Target Dilution (ppb)	Actual Target Dilution Generated	O ₃ Response	Analyzer Stability	Acceptance Criteria	Final Response
Zero Air	<i>ZERO</i>	<i>0.3</i>	<i>0.5</i>	Zero Drift $\leq \pm 1.5\%$	<i>0.1</i>
400 ppb	<i>400</i>	<i>399.0</i>	<i>0.9</i>	Span Drift $\leq \pm 7\%$	<i>400.2</i>

Real time Analyzer vs. Logger Data Comparison

Target Dilution (ppb)	Analyzer Response (ppb)	Logger Response (ppb)	Acceptance Criteria	Adjustment Required?
Zero Air	<i>0.1</i>	<i>0.9</i>	± 2 ppb	<i>NO</i>
400 ppb	<i>400.2</i>	<i>401.1</i>	± 2 ppb	<i>NO WR</i>

Analyzer Parameters

Sample Flow (550 $\pm$ 55 cc/min) <i>800 $\pm$ 80</i>	<i>750</i>	Sample Temp. (10 - 50 °C)	<i>41.5</i>
Photo Lamp (58 $\pm$ 1 °C)	<i>58.0</i>	BOX Temp. (30 $\pm$ 20 °C)	<i>29.1</i>
Slope (1 $\pm$ 0.15)	<i>1.054</i>	O ₃ Measure (2500 - 4800 mV)	<i>2879.2</i>
Offset (0.0 $\pm$ 5 PPB)	<i>-3.4</i>	O ₃ Reference (2500 - 4800 mV)	<i>2880.2</i>

Operator Comments:

Operator Signature:

*Hourly concentrations collected from 0800-0900
shall be invalidated - RPA*




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102914

Resolution Copper Mining
East Plant Monitoring Station
O₃ Level 2 Zero and Span Verification

REVIEWED BY: *RPA*
DATE: *10-29-14*

INITIALS: *WR*
DATE: *10-17-14*



DENVER • PORTLAND

Operator:	Teledyne API T400 O ₃ Analyzer S/N	<i>224</i> ✓	Verification Start Time	<i>2:36</i> ✓
<i>Kanu Ballad</i>	Teledyne API T700 Primary Standard Dilution Calibrator S/N	<i>191</i> ✓	Verification Stop Time	<i>2:53</i> ✓
Date:			T400 Analyzer Range	<i>500</i> ✓
<i>10/10/2014</i>			Shelter Temperature (5-40 °C)	<i>21.41</i> ✓

Biweekly Manual Level 2 Zero and Span Verification

Target Dilution (ppb)	Actual Target Dilution Generated	O ₃ Response	Analyzer Stability	Acceptance Criteria	Adjustment Required?
Zero Air	<i>0</i>	<i>-0.4</i>	<i>0.7</i>	Zero Drift ≤ ±1.5 %	<i>No</i> ✓
400 ppb	<i>400</i>	<i>395.8</i>	<i>0.5</i>	Span Drift ≤ ±7 %	<i>No</i> ✓

Real time Analyzer vs. Logger Data Comparison

Target Dilution (ppb)	Analyzer Response (ppb)	Logger Response (ppb)	Acceptance Criteria	Adjustment Required?
Zero Air	<i>-0.4</i>	<i>0.21</i>	± 2 ppb	<i>No</i> ✓
400 ppb	<i>395.8</i>	<i>396.74</i>	± 2 ppb	<i>No</i> ✓

Analyzer Parameters

Sample Flow (800 ± 80 cc/min)	<i>763</i> ✓	Sample Temp. (10 - 50 °C)	<i>26.3</i> <i>39.2</i> ✓
Photo Lamp (58 ± 1 °C)	<i>58</i> ✓	BOX Temp. (30 ± 20 °C)	<i>27.4</i> ✓
Slope (1 ± 0.15)	<i>1.054</i> ✓	O ₃ Measure (2500 - 4800 mV)	<i>2877.5</i> ✓
Offset (0.0 ± 5 PPB)	<i>3.4</i> ✓	O ₃ Reference (2500 - 4800 mV)	<i>2879.3</i> ✓

Operator Comments: *Gigantic Spider*

Operator Signature: *Kanu Ballad*

Hiding inside enclosure!!
Not coming back until somebody
finds it & kills it!! ✓


AIR SCIENCES INC.
11111 1111111111

Resolution Copper Mining
East Plant Monitoring Station
O₃ Level 1 Zero and Span Calibration

REVIEWED BY: RPA DATE: 10-29-14
AUDITED BY: WR DATE: 10-17-14



Operator: W.Rucker	Teledyne API T400 O ₃ Analyzer S/N	224	Calibration Start Time	13:30
	Teledyne API T700 Primary Standard Dilution Calibrator S/N	191	Calibration Stop Time	14:15 15:04
Date: 10/17/14			T400 Analyzer Range	500
			Shelter Temperature (5-40 °C)	21.51

Biweekly Manual Level 1 Zero and Span Calibration

Target Dilution (ppb)	Actual Target Dilution Generated	O ₃ Response	Analyzer Stability	Acceptance Criteria	Final Response
Zero Air	Zero	-0.5	0.5	Zero Drift ≤ ± 1.5 %	0.3
400 ppb	400	402.2	0.6	Span Drift ≤ ± 7 %	404.8

Real time Analyzer vs. Logger Data Comparison

Target Dilution (ppb)	Analyzer Response (ppb)	Logger Response (ppb)	Acceptance Criteria	Adjustment Required?
Zero Air	0.3	1.213	± 2 ppb	NO
400 ppb	404.8	405.36	± 2 ppb	NO

Analyzer Parameters

Sample Flow (800 ± 80 cc/min)	744	Sample Temp. (10 - 50 °C)	40.8
Photo Lamp (58 ± 1 °C)	58.0	BOX Temp. (30 ± 20 °C)	28.7
Slope (1 ± 0.15)	1.046	O ₃ Measure (2500 - 4800 mV)	2871.7
Offset (0.0 ± 5 PPB)	3.8	O ₃ Reference (2500 - 4800 mV)	2872.4

Operator Comments:

400-1600 hrs FURNISHED - RPA

Operator Signature:



Resolution Copper Mining

East Plant Monitoring Station

O₃ Level 1 Zero and Span Calibration

REVIEWED BY: *WR*

AUDITED BY: *WR*

DATE: *11/4/14*

DATE: *10/30/14*



Operator: W.Rucker Date: <i>10/30/14</i>	Teledyne API T400 O ₃ Analyzer S/N	224	Calibration Start Time	14:30
	Teledyne API T700 Primary Standard Dilution Calibrator S/N	191	Calibration Stop Time	<i>1600</i>
			T400 Analyzer Range	500
			Shelter Temperature (5-40 °C)	21.75

Biweekly Manual Level 1 Zero and Span Calibration

Target Dilution (ppb)	Actual Target Dilution Generated	O ₃ Response	Analyzer Stability	Acceptance Criteria	Final Response
Zero Air	<i>Zero</i>	<i>0.9</i>	<i>0.6</i>	Zero Drift $\leq \pm 1.5\%$	<i>0.1</i>
400 ppb	<i>400</i>	<i>409.5</i>	<i>0.5</i>	Span Drift $\leq \pm 7\%$	<i>401.03</i>

Real time Analyzer vs. Logger Data Comparison

Target Dilution (ppb)	Analyzer Response (ppb)	Logger Response (ppb)	Acceptance Criteria	Adjustment Required?
Zero Air	<i>0.1</i>	<i>-0.99</i>	± 2 ppb	<i>NO</i>
400 ppb	<i>400</i>	<i>401.03</i>	± 2 ppb	<i>NO</i>

Analyzer Parameters

Sample Flow (800 $\pm$ 80 cc/min)	<i>767</i>	Sample Temp. (10 - 50 °C)	<i>39.8</i>
Photo Lamp (58 $\pm$ 1 °C)	<i>58.0</i>	BOX Temp. (30 $\pm$ 20 °C)	<i>28.0</i>
Slope (1 $\pm$ 0.15)	<i>1.025</i>	O ₃ Measure (2500 - 4800 mV)	<i>2854.2</i>
Offset (0.0 $\pm$ 5 PPB)	<i>-3.0</i>	O ₃ Reference (2500 - 4800 mV)	<i>2684.3</i>

Operator Comments:

Operator Signature:

FINALIZED 1500-1600 hrs - RPA




AIR SCIENCES INC.

Resolution Copper Mining
East Plant Monitoring Station
11-20-14 O₃ Level 2 Zero and Span Verification

REVIEWED BY: *RPA* DATE: *11-14-14*
APPROVED BY: *WR* DATE: *11-14-14*

Operator: William Rucker Date: 11/14/2014	Teledyne API T400 O ₃ Analyzer S/N	224	Verification Start Time	10:40
	Teledyne API T700 Primary Standard Dilution Calibrator S/N	191	Verification Stop Time	11:43
			T400 Analyzer Range	500
			Shelter Temperature (5-40 ° C)	23.84

Biweekly Manual Level 2 Zero and Span Verification

Target Dilution (ppb)	Actual Target Dilution Generated	O ₃ Response	Analyzer Stability	Acceptance Criteria	Adjustment Required?
Zero Air	0.00	0.3	0.3	Zero Drift $\leq \pm 1.5 \%$	No
400 ppb	401	400.5	0.6	Span Drift $\leq \pm 7 \%$	No

Real time Analyzer vs. Logger Data Comparison

Target Dilution (ppb)	Analyzer Response (ppb)	Logger Response (ppb)	Acceptance Criteria	Adjustment Required?
Zero Air	0.300	0.474	± 2 ppb	No
400 ppb	400.400	400.900	± 2 ppb	No

Analyzer Parameters

Sample Flow (800 $\pm$ 80 cc/min)	748	Sample Temp. (10 - 50 °C)	40.7
Photo Lamp (58 $\pm$ 1 °C)	58.0	BOX Temp. (30 $\pm$ 20 °C)	28.8
Slope (1 $\pm$ 0.15)	1.025	O ₃ Measure (2500 - 4800 mV)	2850.1
Offset (0.0 $\pm$ 5 PPB)	3.0	O ₃ Reference (2500 - 4800 mV)	2850.9

Operator Comments: *1700-1200 hrs INVALIDATED - RPA* Operator Signature: 



Resolution Copper Mining

East Plant Monitoring Station

O₃ Level 1 Zero and Span Calibration

WR

REVIEWED BY: RPA

ADDED BY:

12-1-14

DATE: 11-20-14

DATE:



Operator:	Teledyne API T400 O ₃ Analyzer S/N	224	Calibration Start Time	0957
Date:	Teledyne API T700 Primary Standard Dilution Calibrator S/N	191	Calibration Stop Time	1120
			T400 Analyzer Range	500 ppb
			Shelter Temperature (5-40 °C)	24.1

Biweekly Manual Level 1 Zero and Span Calibration

Target Dilution (ppb)	Actual Target Dilution Generated	O ₃ Response	Analyzer Stability	Acceptance Criteria	Final Response
Zero Air	2520	-0.6	0.4	Zero Drift $\leq \pm 1.5\%$	0.5
400 ppb	400	402.3	0.4	Span Drift $\leq \pm 7\%$	400.7

Real time Analyzer vs. Logger Data Comparison

Target Dilution (ppb)	Analyzer Response (ppb)	Logger Response (ppb)	Acceptance Criteria	Adjustment Required?
Zero Air	0.5	0.9	± 2 ppb	NO
400 ppb	400.7	401.2	± 2 ppb	NO

Analyzer Parameters

Sample Flow (50 ± 55 cc/min)	750 /	Sample Temp. (10 - 50 °C)	40.9 /
Photo Lamp (58 ± 1 °C)	58.0 /	BOX Temp. (30 ± 20 °C)	29.0 /
Slope (1 ± 0.15)	1.015 /	O ₃ Measure (2500 - 4800 mV)	2838.0 /
Offset (0.0 ± 5 PPB)	-3.6 /	O ₃ Reference (2500 - 4800 mV)	2847.4 /

Operator Comments: INVALIDATE DATA FROM 0900-1200 hrs

Operator Signature:

R. Attridge


AIR SCIENCES INC.

Resolution Copper Mining
East Plant Monitoring Station
O₃ Level 2 Zero and Span Verification

REVIEWED BY: W.R. DATE: 12-2-14

APPROVED BY: W.R. DATE: 12-2-14



Operator: W.Rucker	Teledyne API T400 O ₃ Analyzer S/N	224	Verification Start Time	12:44
	Teledyne API T700 Primary Standard Dilution Calibrator S/N	191	Verification Stop Time	13:19
Date: 12-2-14			T400 Analyzer Range	500
			Shelter Temperature (5-40 °C)	24.75

Biweekly Manual Level 2 Zero and Span Verification

Target Dilution (ppb)	Actual Target Dilution Generated	O ₃ Response	Analyzer Stability	Acceptance Criteria	Adjustment Required?
Zero Air	Zero	-0.2	0.6	Zero Drift $\leq \pm 1.5\%$	NO
400 ppb	400	402.1	0.6	Span Drift $\leq \pm 7\%$	NO

Real time Analyzer vs. Logger Data Comparison

Target Dilution (ppb)	Analyzer Response (ppb)	Logger Response (ppb)	Acceptance Criteria	Adjustment Required?
Zero Air	-0.2	0.51	± 2 ppb	NO
400 ppb	402.1	402.34	± 2 ppb	NO

Analyzer Parameters

Sample Flow (800 $\pm$ 80 cc/min)	750	Sample Temp. (10 - 50 °C)	41.0
Photo Lamp (58 $\pm$ 1 °C)	58.0	BOX Temp. (30 $\pm$ 20 °C)	29.5
Slope (1 $\pm$ 0.15)	1.105	O ₃ Measure (2500 - 4800 mV)	2842.6
Offset (0.0 $\pm$ 5 PPB)	3.6	O ₃ Reference (2500 - 4800 mV)	2843.4

Operator Comments: Invalidated by 12:00 & 13:00 Hours.

Operator Signature: 

1300-1400 Hrs INVALIDATED - RPA


AIR SCIENCES INC.
SERVICE CONTRACT

WR
REVIEWED BY
AUDITED BY RPA

1-2-15
DATE
12-9-15
DATE

Resolution Copper Mining East Plant Monitoring Station O₃ Level 1 Zero and Span Calibration



Operator: <i>R. ATTRELOE</i>	Teledyne API T400 O ₃ Analyzer S/N <i>224</i>	Calibration Start Time <i>1430</i>
Date: <i>12-9-14</i>	Teledyne API T700 Primary Standard Dilution Calibrator S/N <i>191</i>	Calibration Stop Time <i>1615</i>
		T400 Analyzer Range <i>500 ppb</i>
		Shelter Temperature (5-40 °C) <i>23.2</i>

Biweekly Manual Level 1 Zero and Span Calibration

Target Dilution (ppb)	Actual Target Dilution Generated	O ₃ Response	Analyzer Stability	Acceptance Criteria	Final Response
Zero Air	<i>ZERO</i>	<i>0.1</i>	<i>0.2</i>	Zero Drift $\leq \pm 1.5\%$	<i>0.1</i>
400 ppb	<i>400</i>	<i>396.8</i>	<i>0.5</i>	Span Drift $\leq \pm 7\%$	<i>402.1</i>

Real time Analyzer vs. Logger Data Comparison

Target Dilution (ppb)	Analyzer Response (ppb)	Logger Response (ppb)	Acceptance Criteria	Adjustment Required?
Zero Air	<i>0.1</i>	<i>0.4</i>	± 2 ppb	<i>NO</i>
400 ppb	<i>402.1</i>	<i>402.8</i>	± 2 ppb	<i>NO</i>

Analyzer Parameters

Sample Flow (<i>800 ± 80</i> 500 ± 50 cc/min)	<i>746</i>	Sample Temp. (10 - 50 °C)	<i>40.9</i>
Photo Lamp (58 ± 1 °C)	<i>58</i>	BOX Temp. (30 ± 20 °C)	<i>28.8</i>
Slope (1 ± 0.15)	<i>1.026</i>	O ₃ Measure (2500 - 4800 mV)	<i>2834.8</i>
Offset (0.0 ± 5 PPB)	<i>* -3.2</i>	O ₃ Reference (2500 - 4800 mV)	<i>2835.7</i>

Operator Comments: *INVALIDATE THE 1500-1700 HRS CONCENTRATIONS*

Operator Signature:

** offset slightly below recommendations, WR*

OFFSET (0.0 ± 5 PPB) -3.2 IS WITHIN THE RECOMMENDED TOLERANCE - RPA



AIR SCIENCES INC.
DESIGN • CONSTRUCT • COMMISSION

Resolution Copper Mining
East Plant Monitoring Station
O₃ Level 2 Zero and Span Verification

REVIEWED BY: WR

AUDITED BY: WR

DATE: 12-18-14

DATE: 12-18-14



Operator:	Teledyne API T400 O ₃ Analyzer S/N	224	Verification Start Time	12:55
<u>Karen Ballou</u>	Teledyne API T700 Primary Standard Dilution Calibrator S/N	191	Verification Stop Time	<u>WR</u>
Date:			T400 Analyzer Range	400 PPB
<u>12/12/2014</u>			Shelter Temperature (5-40 °C)	24.62

Biweekly Manual Level 2 Zero and Span Verification

Target Dilution (ppb)	Actual Target Dilution Generated	O ₃ Response	Analyzer Stability	Acceptance Criteria	Adjustment Required?
Zero Air	0	0.0	0.8	Zero Drift $\leq \pm 1.5\%$	No
400 ppb	400	402.0	0.8	Span Drift $\leq \pm 7\%$	No <u>WR</u>

Real time Analyzer vs. Logger Data Comparison

Target Dilution (ppb)	Analyzer Response (ppb)	Logger Response (ppb)	Acceptance Criteria	Adjustment Required?
Zero Air	0.0	0.58	± 2 ppb	No
400 ppb	402.0	403.3	± 2 ppb	No

Analyzer Parameters

Sample Flow (800 $\pm$ 80 cc/min)	770 -	Sample Temp. (10 - 50 °C)	40.4 -
Photo Lamp (58 $\pm$ 1 °C)	58.0 -	BOX Temp. (30 $\pm$ 20 °C)	28.1 -
Slope (1 $\pm$ 0.15)	1.024 -	O ₃ Measure (2500 - 4800 mV)	2835.0 -
Offset (0.0 $\pm$ 5 PPB)	3.2 -	O ₃ Reference (2500 - 4800 mV)	2834.2 -

Operator Comments: Invalidated the 1300 + 1400 hrs. WR

Operator Signature:

Karen Ballou



AIR SCIENCES INC.
ELMIST • PORTLAND

Resolution Copper Mining
East Plant Monitoring Station
O₃ Level 1 Zero and Span Calibration

REVIEWED BY: WR

AUDITED BY: RMA

DATE: 1-2-14

DATE: 12-19-14

DATE: 12-29-14



Operator: W.Rucker Date: <u>12-19-14</u>	Teledyne API T400 O ₃ Analyzer S/N	224	Calibration Start Time	1324 (MST)
	Teledyne API T700 Primary Standard Dilution Calibrator S/N	191	Calibration Stop Time	15:48 (MST)
			T400 Analyzer Range	500
			Shelter Temperature (5-40 °C)	24.20

Biweekly Manual Level 1 Zero and Span Calibration

Target Dilution (ppb)	Actual Target Dilution Generated	O ₃ Response	Analyzer Stability	Acceptance Criteria	Final Response
Zero Air	<u>Zero</u>	<u>-0.1</u>	<u>0.3</u>	Zero Drift $\leq \pm 1.5\%$	<u>-0.3</u>
400 ppb	<u>399</u>	<u>401.9</u>	<u>0.7</u>	Span Drift $\leq \pm 7\%$	<u>401.2</u>

Real time Analyzer vs. Logger Data Comparison

Target Dilution (ppb)	Analyzer Response (ppb)	Logger Response (ppb)	Acceptance Criteria	Adjustment Required?
Zero Air	<u>-0.3</u>	<u>0.0049</u>	± 2 ppb	<u>NO</u>
400 ppb	<u>401.2</u>	<u>401.96</u>	± 2 ppb	

Analyzer Parameters

Sample Flow (800 $\pm$ 80 cc/min)	<u>742</u>	Sample Temp. (10 - 50 °C)	<u>42.3</u>
Photo Lamp (58 $\pm$ 1 °C)	<u>58.0</u>	BOX Temp. (30 $\pm$ 20 °C)	<u>30.4</u>
Slope (1 $\pm$ 0.15)	<u>1.024</u>	O ₃ Measure (2500 - 4800 mV)	<u>2826.3</u>
Offset (0.0 $\pm$ 5 PPB)	<u>-2.0</u>	O ₃ Reference (2500 - 4800 mV)	<u>2827.1</u>

Operator Comments: Invalidated the 13:00 thru 16:00 hours for the calibration - WR

Operator Signature: [Signature]


AIR SCIENCES INC.
VENUE • PORTLAND

RAA 1-6-15
WR 1-5-15
DATE DATE

POWERED BY
(PTEI P)

Resolution Copper Mining
East Plant Monitoring Station
O₃ Level 2 Zero and Span Verification



Operator:	Teledyne API T400 O ₃ Analyzer S/N	224 -	Verification Start Time	10:57 -
Date:	Teledyne API T700 Primary Standard Dilution Calibrator S/N	191 -	Verification Stop Time	11:12 -
			T400 Analyzer Range	500 PPB
			Shelter Temperature (5-40 °C)	25.65
12/30/2014				

Biweekly Manual Level 2 Zero and Span Verification

Target Dilution (ppb)	Actual Target Dilution Generated	O ₃ Response	Analyzer Stability	Acceptance Criteria	Adjustment Required?
Zero Air	0	-1.1	0.4	Zero Drift $\leq \pm 1.5\%$	No -
400 ppb	400	401.4	0.8	Span Drift $\leq \pm 7\%$	No -

Real time Analyzer vs. Logger Data Comparison

Target Dilution (ppb)	Analyzer Response (ppb)	Logger Response (ppb)	Acceptance Criteria	Adjustment Required?
Zero Air	-1.1	-0.28	± 2 ppb	No -
400 ppb	401.4	401.95	± 2 ppb	No -

Analyzer Parameters

Sample Flow (800 $\pm$ 80 cc/min)	762 -	Sample Temp. (10 - 50 °C)	41.6 -
Photo Lamp (58 $\pm$ 1 °C)	58.0 -	BOX Temp. (30 $\pm$ 20 °C)	29.6 -
Slope (1 $\pm$ 0.15)	1.024 -	O ₃ Measure (2500 - 4800 mV)	2821.6 -
Offset (0.0 $\pm$ 5 PPB)	2.0 -	O ₃ Reference (2500 - 4800 mV)	2821.4 -

Operator Comments:

Operator Signature: *Karin Ballard*

Invalidated the 11:00 & 12:00 hours
for the verification - WR

Appendix I: Audits and Calibrations



AIR SCIENCES INC.

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**Air Quality
Audit and
Calibration Report
Resolution Copper
East Plant
Monitoring Station**

PREPARED FOR:
RESOLUTION COPPER
MINING



PREPARED BY:
AIR SCIENCES INC.

PROJECT NO. 262-9-02
OCTOBER 2014

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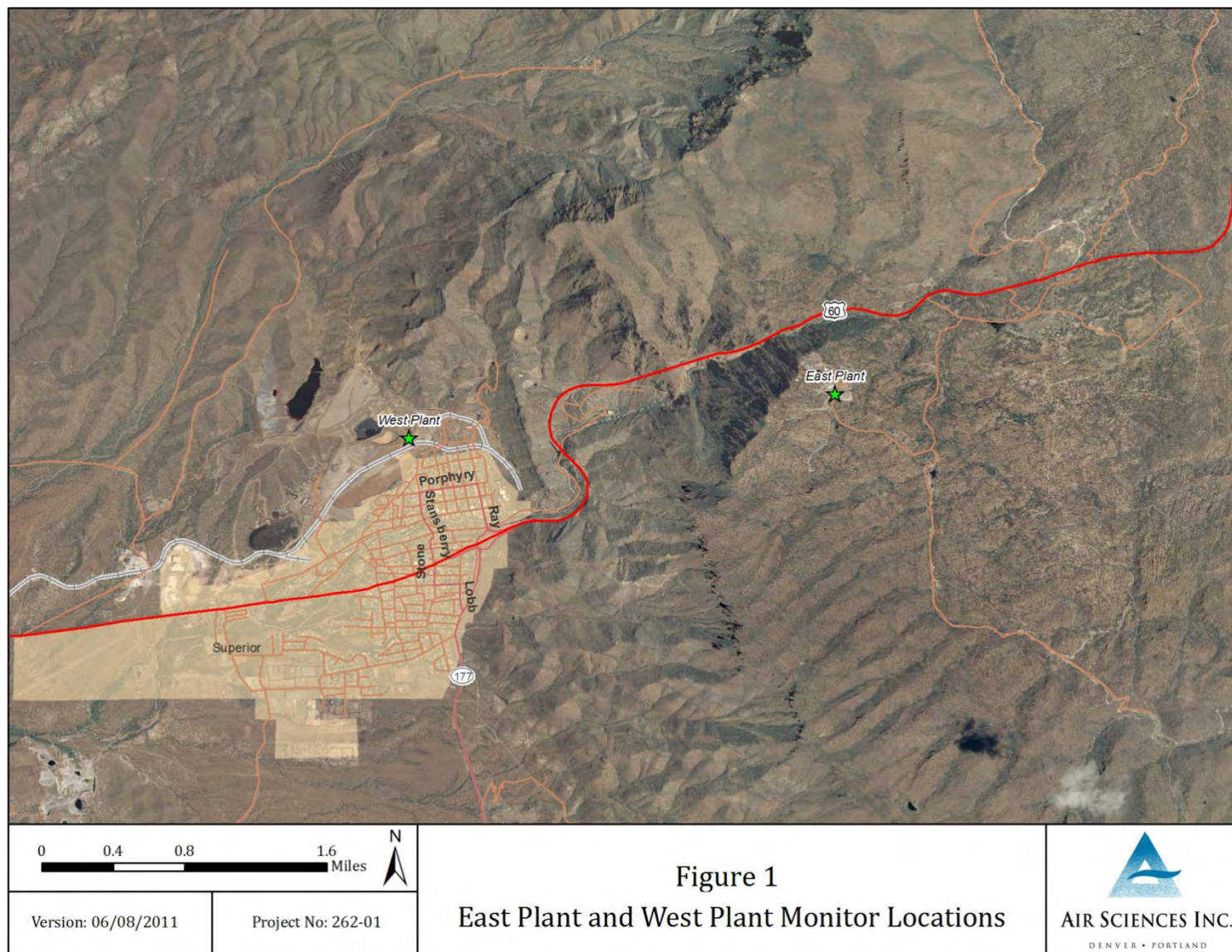
1.0 INTRODUCTION

On October 20, 2014, particulate monitoring instrumentation was audited and/or calibrated at the Resolution Copper East Plant near Superior, AZ. The East Plant monitoring station is operated by the Resolution Copper Mining Company and is located approximately two miles east of the West Plant (see Figure 1).

The purpose of this document is to provide a brief synopsis of the air quality monitoring system and of the audit and/or calibration procedures for the meteorological, particulate, and ambient gas instrumentation at the East Plant monitoring station. The audit/calibration activities described in this report were conducted in accordance with the applicable guideline documents:

- EPA-450/4-87-007, Ambient Monitoring Guidelines for Prevention of Significant Deterioration (PSD), May 1987
- EPA-454/R-99-005, Meteorological Monitoring Guidance for Regulatory Modeling Applications, Section 8.4, February 2000
- EPA-454/B-13-003, Quality Assurance Handbook for Air Pollution Measurement Systems, Volume II: Ambient Air Quality Monitoring Program, May 2013
- EPA-454/B-08-002, Quality Assurance Handbook for Air Pollution Measurement Systems, Volume IV: Meteorological Measurements Version 2.0, March 2008
- EPA-454/B-13-004, Transfer Standards for the Audit of Ambient Air Monitoring Analyzers for Ozone
- Code of Federal Regulations (40 CFR Parts 50 and 58)

Figure 1. Project Location Map – Resolution Copper East Plant and West Plant Monitoring Station Locations



2.0 SYSTEM DESCRIPTION

The instrumentation at the East Plant monitoring site measures wind speed, wind direction, ambient temperature, vertical height temperature difference (delta temperature), solar radiation, relative humidity, precipitation, barometric pressure, particulate matter less than 10 and 2.5 microns in diameter (PM₁₀ & PM_{2.5}), nitrogen dioxide (NO₂), sulfur dioxide (SO₂), and ozone (O₃).

The meteorological sensors are mounted to a 35-foot, open-lattice, aluminum drop tower, and the particulate and gaseous analyzers are housed in a 60-square-foot climate-controlled trailer. The sensor and particulate inlet heights are listed in Table 1 (as measured from ground-level).

**Table 1. Sensors and Sample Inlet Heights
(meters above the ground)**

Parameter	Approximate Height(meters)
Wind Speed	10
Wind Direction	10
Ambient Temperature	2
Delta Temperature	2, 10
Solar Radiation	2
Relative Humidity	2
Precipitation	1
Barometric Pressure	1.5
PM ₁₀	3
PM _{2.5}	3
NO ₂	3
SO ₂	3
O ₃	3

The meteorological and ambient gas data are recorded via analog inputs on two Campbell Scientific CR3000 dataloggers, each powered independently by either DC solar or by locally supplied AC line power. All meteorological sensors are programmed on a one-second scan interval, and the output is digitally processed and recorded into 15-minute averages. The raw 15-minute averages are temporarily stored on the datalogger memory, and a local computer is automatically configured to permanently back up datalogger files on a 15-minute interval. The raw 15-minute data averages are securely transmitted, via cellular broadband Internet services, to the Air Sciences Inc. server and processed into the Data Acquisition and Storage System

(DASS) for quality assurance checks. These raw 15-minute averages are used as input for the calculation of one-hour averages.

PM₁₀ and PM_{2.5} are measured by two Met One Instruments model BAM-1020 particulate monitors. The BAM-1020 is a continuous monitoring device that produces 1-hour averages and a 24-hour average concentration for the period of 12:00 a.m. (midnight) through 11:59 p.m. for each calendar day. Particulate data are downloaded every hour onto the on-site datalogger via serial communications and are transported via wireless broadband modem directly to the DASS.

3.0 AUDIT AND CALIBRATION METHODOLOGY

This section provides the audit and/or calibration procedures for the particulate instrumentation at the Resolution Copper East Plant monitoring site. Copies of the completed audit and/or calibration forms are included in Appendix A.

3.1 Particulate Matter Audit Procedures

The BAM-1020 PM₁₀ and PM_{2.5} monitors were audited by comparing and then adjusting the temperature, barometric pressure, and internal flow to a certified deltaCal Volumetric Air Flow Calibrator. All required maintenance was performed on the instruments to assure optimal operations. The temperature, barometric pressure, and flow output readings from the deltaCal and the BAM-1020 monitor were recorded on a standardized form.

4.0 RESULTS AND RECOMMENDATIONS

On October 20, 2014, Air Sciences Inc. (Air Sciences) personnel discovered The BAM-1020 PM₁₀ and PM_{2.5} monitors to be clean, serviceable, and within their recommended tolerance parameters.

The on-site cellular broadband communications signal has been improved by cellular signal booster installation.

Particulate data collected during the on-site audit and calibration activities described in this report will be invalidated.

Appendix A – Audit and Calibration Forms

East Plant BAM-1020 PM₁₀ Audit Sheet

Model: BAM-1020

Serial Number: M8714

Audit Date: 10/20/14

Audited By: G. Gyls

Audit Time: 15:34 - 17:18

Firmware: 3236-06 V3.6.3

Flow Audits

Flow Reference Standard Used:	Model: Delta Cal	Serial No: 723	Calibration Date: 8/24/2014
Temperature Standard Used:	Model: Delta Cal	Serial No: 723	Calibration Date: 8/24/2014
Barometric Pressure Standard Used:	Model: Delta Cal	Serial No: 723	Calibration Date: 8/24/2014

Leak Check Value: as found: 0.6 LPM Should Be: <1.0 as left: 0.5 LPM Should Be: <1.0

	as found:	BAM	Ref. Std.	as left:	BAM	Ref. Std.	Adjusted	
Ambient Temperature (°C):	23.5	23.5	23.3	22.2	22.2	Adjusted	X	
Barometric Pressure (mmHg):	662	662	652.5	653	652.5	Adjusted	X	
Flow Rate (15.0 LPM):	15.0	15.0	15.86	15.0	14.98	Adjusted	X	
Flow Rate (18.4 LPM):	18.3	18.3	19.36	18.4	18.39	Adjusted	X	
Flow Rate (16.7 LPM):	16.7	16.7	17.59	16.7	16.66	Adjusted	X	

Audit Notes: Cleaned reference membrane and assembly, nozzle components.

Mechanical Audits

Pump muffler unclogged:	As found	X	As left		PM10 particle trap clean:	As found		As left	X	N/A	
Sample nozzle clean:	As found		As left	X	PM10 drip jar empty:	As found		As left	X	N/A	
Tape support vane clean:	As found		As left	X	PM10 bug screen clear:	As found		As left	X	N/A	
Capstan shaft clean:	As found		As left	X	PM2.5 particle trap clean:	As found		As left		N/A	X
Rubber pinch rollers clean:	As found		As left	X	Inlet tube water-tight seal OK:	As found	X	As left			
Chassis ground wire installed:	As found	X	As left		Inlet tube perpendicular to BAM:	As found	X	As left			

Signature:



East Plant BAM-1020 PM_{2.5} Audit Sheet

Model: **BAM-1020**

Serial Number: **M6466**

Audit Date: **10/20/2014**

Audited By: **G. Gylys**

Audit Time: **15:25 - 16:29**

Firmware: 3236-06 V3.6.3

Flow Audits

Flow Reference Standard Used:	Model: Delta Cal	Serial No: 723	Calibration Date: 8/24/2014
Temperature Standard Used:	Model: Delta Cal	Serial No: 723	Calibration Date: 8/24/2014
Barometric Pressure Standard Used:	Model: Delta Cal	Serial No: 723	Calibration Date: 8/24/2014

Leak Check Value: as found: **0.7 LPM** Should Be: **<1.0** as left: **0.7 LPM** Should Be: **<1.0**

	as found:	BAM	Ref. Std.	as left:	BAM	Ref. Std.	Adjusted	
Ambient Temperature (°C):		24.6	26.7		23.3	22.6	Adjusted	X
Barometric Pressure (mmHg):		645	652.5		653	652.5	Adjusted	X
Flow Rate (15.0 LPM):		15.0	15.57		14.9	14.92	Adjusted	X
Flow Rate (18.4 LPM):		18.3	18.45		18.3	18.26	Adjusted	X
Flow Rate (16.7 LPM):		16.6	17.03		16.6	16.6	Adjusted	X

Audit Notes: Cleaned reference membrane and assembly, nozzle components.

Mechanical Audits

Pump muffler unclogged:	As found	X	As left	X	PM10 particle trap clean:	As found		As left		N/A	X
Sample nozzle clean:	As found		As left	X	PM10 drip jar empty:	As found		As left	X	N/A	
Tape support vane clean:	As found		As left	X	PM10 bug screen clear:	As found		As left	X	N/A	
Capstan shaft clean:	As found		As left	X	PM2.5 particle trap clean:	As found		As left	X	N/A	
Rubber pinch rollers clean:	As found		As left	X	Inlet tube water-tight seal OK:	As found		As left	X		
Chassis ground wire installed:	As found	X	As left	X	Inlet tube perpendicular to BAM:	As found	X	As left			

Signature:





AIR SCIENCES INC.

DENVER • PORTLAND

**Air Quality
Audit and
Calibration Report
Resolution Copper
East Plant
Monitoring Station**

PREPARED FOR:
RESOLUTION COPPER
MINING



PREPARED BY:
AIR SCIENCES INC.

PROJECT NO. 262-9-02
NOVEMBER 2014

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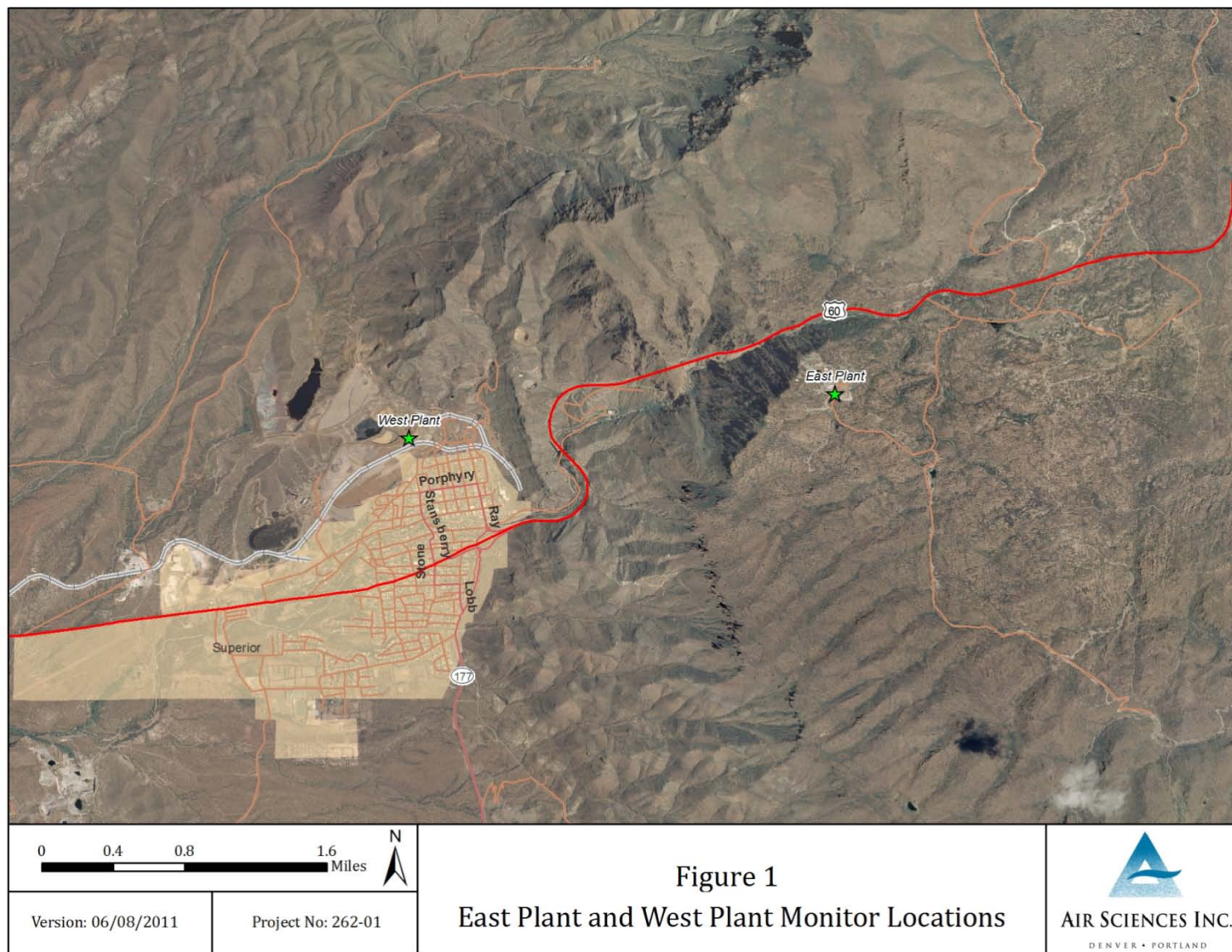
1.0 INTRODUCTION

On November 5, 2014, the ambient gas instrumentation was audited and/or calibrated at the Resolution Copper East Plant near Superior, AZ. The East Plant monitoring station is operated by the Resolution Copper Mining Company and is located approximately two miles east of the West Plant (see Figure 1).

The purpose of this document is to provide a brief synopsis of the air quality monitoring system and of the audit and/or calibration procedures for the meteorological, particulate, and ambient gas instrumentation at the East Plant monitoring station. The audit/calibration activities described in this report were conducted in accordance with the applicable guideline documents:

- EPA-450/4-87-007, Ambient Monitoring Guidelines for Prevention of Significant Deterioration (PSD), May 1987
- EPA-454/R-99-005, Meteorological Monitoring Guidance for Regulatory Modeling Applications, Section 8.4, February 2000
- EPA-454/B-13-003, Quality Assurance Handbook for Air Pollution Measurement Systems, Volume II: Ambient Air Quality Monitoring Program, May 2013
- EPA-454/B-08-002, Quality Assurance Handbook for Air Pollution Measurement Systems, Volume IV: Meteorological Measurements Version 2.0, March 2008
- EPA-454/B-13-004, Transfer Standards for the Audit of Ambient Air Monitoring Analyzers for Ozone
- Code of Federal Regulations (40 CFR Parts 50 and 58)

Figure 1. Project Location Map – Resolution Copper East Plant and West Plant Monitoring Station Locations



2.0 SYSTEM DESCRIPTION

The instrumentation at the East Plant monitoring site measures wind speed, wind direction, ambient temperature, vertical height temperature difference (delta temperature), solar radiation, relative humidity, precipitation, barometric pressure, particulate matter less than 10 and 2.5 microns in diameter (PM₁₀ & PM_{2.5}), nitrogen dioxide (NO₂), sulfur dioxide (SO₂), and ozone (O₃).

The meteorological sensors are mounted to a 35-foot, open-lattice, aluminum drop tower, and the particulate and gaseous analyzers are housed in a 60-square-foot climate-controlled trailer. The sensor and particulate inlet heights are listed in Table 1 (as measured from ground-level).

**Table 1. Sensors and Sample Inlet Heights
(meters above the ground)**

Parameter	Approximate Height(meters)
Wind Speed	10
Wind Direction	10
Ambient Temperature	2
Delta Temperature	2, 10
Solar Radiation	2
Relative Humidity	2
Precipitation	1
Barometric Pressure	1.5
PM ₁₀	3
PM _{2.5}	3
NO ₂	3
SO ₂	3
O ₃	3

The meteorological and ambient gas data are recorded via analog inputs on two Campbell Scientific CR3000 dataloggers, each powered independently by either DC solar or by locally supplied AC line power. All meteorological sensors are programmed on a one-second scan interval, and the output is digitally processed and recorded into 15-minute averages. The raw 15-minute averages are temporarily stored on the datalogger memory, and a local computer is automatically configured to permanently back up datalogger files on a 15-minute interval. The raw 15-minute data averages are securely transmitted, via cellular broadband Internet services, to the Air Sciences Inc. server and processed into the Data Acquisition and Storage System

(DASS) for quality assurance checks. These raw 15-minute averages are used as input for the calculation of one-hour averages.

PM₁₀ and PM_{2.5} are measured by two Met One Instruments model BAM-1020 particulate monitors. The BAM-1020 is a continuous monitoring device that produces 1-hour averages and a 24-hour average concentration for the period of 12:00 a.m. (midnight) through 11:59 p.m. for each calendar day. Particulate data are downloaded every hour onto the on-site datalogger via serial communications and are transported via wireless broadband modem directly to the DASS.

3.0 AUDIT AND CALIBRATION METHODOLOGY

This section provides the audit and/or calibration procedures for the ambient gas instrumentation at the Resolution Copper East Plant monitoring site. Copies of the completed audit and/or calibration forms are included in Appendix A.

3.1 Ambient Gas Audit Procedures

The audit of the Teledyne T100 SO₂ and T200 NO_x analyzers involved a Multi-Point Audit (MPA). The MPA was performed by using a Transfer Standard Teledyne API T700 Dilution Calibrator to dilute certified multi-component EPA-protocol audit gas with a clean zero-air source. The T100 SO₂ and T200 NO_x analyzer was challenged at zero, and at five points within the instruments range – typically a point from 100 to 500 parts per billion (ppb) of SO₂ or NO_x.

The audit of the Teledyne T400 O₃ analyzer involved an MPA. The MPA was performed by using a Transfer Standard Teledyne API T700 Dilution Calibrator to generate O₃ gas to audit the T400 analyzer at zero, and at a single point within the instrument range – typically a point from 100 to 500 ppb of O₃.

3.2 Ambient Gas Calibration Procedures

The calibration of the Teledyne T100 SO₂ and T200 NO_x analyzers involved a Multi-Point Calibration (MPC). The MPC was performed by using the Primary Standard Teledyne API T700 Dilution Calibrator to dilute certified multi-component EPA-protocol calibration gas with a clean zero-air source. The T100 SO₂ and T200 NO_x analyzer was challenged at zero, and at five points within the instruments range – typically from 100 to 500 parts per billion (ppb) of SO₂ or NO_x.

The calibration of the Teledyne T400 O₃ analyzer involved an MPC. The MPC was performed by using Primary Standard Teledyne API T700 Dilution Calibrator to generate O₃ gas and calibrate the T400 analyzer at zero, and at a five points within the instrument range – typically from 100 to 500 ppb of O₃.

4.0 RESULTS AND RECOMMENDATIONS

On November 5, 2014, Air Sciences Inc. (Air Sciences) personnel determined the ambient gas analyzers to be serviceable, and within their recommended tolerance parameters.

Ambient gas data collected during the on-site audit and calibration activities described in this report will be invalidated.

Appendix A – Audit and Calibration Forms

Resolution Copper Mining
East Plant Monitoring Station
NO_x Multipoint Audit



AIR SCIENCES INC.

01/05/2014 10:00:00

Operator: R. Attridge	Teledyne API T200 NO _x Analyzer S/N	197	Multipoint Start Time	0710
	Teledyne API T700 Transfer Standard Dilution Calibrator S/N	816	Multipoint Stop Time	1015
Date: 11/05/2014	NIST Traceable Gas Conc.	40.9 NO ppm	T200 Analyzer Range	500ppb
			Shelter Temperature (5-40 ° C)	25.1

Multipoint Audit (Quarterly, or as needed):

Check the analyzer response over 0 - 500 ppb range using the Transfer Standard Dilution Calibrator.

Transfer Standard:

Target (PPB)	Actual Generated T200 (PPB)	NO Response	NO ₂ Response	NO _x Response	Best Fit Line	Acceptable Criteria (± 2% from BFL)
Zero Air	0.0	0.2	0.0	0.2	-1.8	PASS, 0 ± 5
100	100	91.4	-0.7	90.7	90.4	PASS, 0.4%
200	200	181.8	-1.4	180.2	182.5	PASS, 1.3%
300	300	277.8	-1.8	276.0	274.7	PASS, 0.5%
400	400	363.0	-2.7	360.1	366.9	PASS, 1.8%
500	500	465.9	-1.0	464.5	459.0	PASS, 1.2%

Best Fit Line (BFL)

$$Y = 0.9216x + -1.7762$$

$$R^2 = 0.99942$$

Analyzer Parameters

Sample Flow (500 ± 50 cc/min)	485	Moly Temp. (315 ± 5°C)	316.3
Ozone Flow (80 ± 15 cc/min)	81	HVPS (400 - 900 V)	643
NO _x Slope (1 ± 0.3)	1.025	NO Slope (1 ± 0.3)	1.211
NO _x Offset (0 ± 100)	3.8	NO Offset (0 ± 100)	0.4

Operator Comments: *NONE*

Operator Signature:

Rory Attridge

Resolution Copper Mining
East Plant Monitoring Station
SO₂ Multipoint Audit



016550.8-00001-0000

Operator: R. Attridge	Teledyne API T100 SO ₂ Analyzer S/N	193	Multipoint Start Time	1000
	Teledyne API T700 Transfer Standard Dilution Calibrator S/N	816	Multipoint Stop Time	1100
Date: 11/05/2014			T100 Analyzer Range	500ppb
	NIST Traceable Gas Conc.	40.0	Shelter Temperature (5-40 ° C)	22.8

Multipoint Audit (Quarterly, or as needed):

Check analyzer response between 0 – 500 ppb range using the Transfer Standard Dilution Calibrator.

Transfer Standard:

Target (PPB)	Actual Generated SO ₂ (PPB)	SO ₂ Response (PPB)	Best Fit Line (PPB)	Acceptable Criteria (± 2% from BFL)
Zero Air	0.0	-0.9	-3.7	PASS, <2% FS
100	100.0	88.3	88.1	PASS, 0.3%
200	200.0	178.8	180.0	PASS, 0.7%
300	300.0	267.3	271.9	PASS, 1.7%
400	400.0	358.6	363.8	PASS, 1.4%
500	500.0	462.5	455.6	PASS, 1.5%

Best Fit Line (BFL)

$$Y = 0.9187X + -3.7177$$

$$R^2 = 0.99913$$

Analyzer Parameters

Sample Flow (450 ± 45 cc/min)	633	Sample Press. (Ambient ± 2 in-Hg)	26.8
UV Lamp (1000 - 4800 mV)	2155.2	Lamp Ratio (30 - 120%)	91.2
Slope (1 ± 0.3)	1.068	BOX Temp. (Ambient ± 5°C)	32.8
Offset (< 250 mV)	24.3	HVPS (400 - 900 V)	614

Operator Comments: *NONE*

Operator Signature:

Resolution Copper Mining
East Plant Monitoring Station
O₃ Multipoint Audit



AIR SCIENCES INC.

GENESEE COUNTY, ARIZONA

Operator: R. Attridge	Teledyne API T400 O ₃ Analyzer S/N	224	Multipoint Start Time	1100
	Teledyne API T700 Transfer Standard Dilution Calibrator S/N	816	Multipoint Stop Time	1200
Date: 11/5/2014			T400 Analyzer Range	500ppb
			Shelter Temperature (5-40 ° C)	24.3

Multipoint Audit (Quarterly, or as needed):

Check the analyzer response over 0 - 500 ppb range using the Transfer Standard Dilution Calibrator.

Transfer Standard:

Target (PPB)	Actual Generated O ₃ (PPB)	O ₃ Response (PPB)	Best Fit Line (PPB)	Acceptable Criteria (± 2% from BFL)
Zero Air	0.0	-0.5	1.0	PASS, <2%FS
100	100	105.3	104.4	PASS, 1.5%
200	200	208.2	207.7	PASS, 0.4%
300	300	314.4	311.0	PASS, 0.2%
400	400	415.3	414.3	PASS, 0%
500	500	514.8	517.6	PASS, 0.1%

Best Fit Line (BFL)

$$Y=1.0331x + 0.0571$$

$$R^2= 0.99985$$

Analyzer Parameters

Sample Flow (550 ± 55 cc/min)	546	Sample Temp. (10 - 50 °C)	40.5
Photo Lamp (58 ± 1 °C)	58.0	BOX Temp. (30 ± 20 °C)	28.4
Slope (1 ± 0.15)	1.025	O ₃ Measure (2500 - 4800 mV)	2852.6
Offset (0.0 ± 5 PPB)	-3.0	O ₃ Reference (2500 - 4800 mV)	2853.4

Operator Comments: *NONE*

Operator Signature:

Rory Attridge

Resolution Copper Mining
East Plant Monitoring Station
NOx Multipoint Calibration



AIR SCIENCES INC.

01/01/14 • 01/01/14

Operator: B. Rucker	Teledyne API T200 NOx Analyzer S/N	197	Multipoint Start Time	1015
	Teledyne API T700 Primary Standard Dilution Calibrator S/N	191	Multipoint Stop Time	1243
Date: 11/5/2014			T200 Analyzer Range	500ppb
	NIST Traceable Gas Conc.	40.1ppm	Shelter Temperature (5-40 ° C)	25.1

Multipoint Calibration (Quarterly, or as needed):

Check the analyzer response over 0 - 500 ppb range using the Primary Standard Dilution Calibrator.

Primary Standard:

Target (PPB)	Actual Generated T200 (PPB)	NO Response	NO ₂ Response	NO _x Response	Best Fit Line	Acceptable Criteria (± 2% from BFL)
Zero Air	0.0	0.3	-0.5	-0.2	-0.6	PASS, 0 ± 5
100	101	101.2	-0.4	100.9	100.7	PASS, 0.2%
200	200	202.3	-2.3	200.1	199.9	PASS, 0.1%
300	300	304.2	-2.5	301.8	300.2	PASS, 0.5%
400	400	394.9	-1.3	393.9	400.4	PASS, 1.6%
500	500	504.7	-0.3	504.8	500.7	PASS, 0.8%

Best Fit Line (BFL)

Y= 1.0025x + -0.5727

R= 0.99964

Analyzer Parameters

Sample Flow (500 ± 50 cc/min)	485	Moly Temp. (315 ± 5°C)	316.3
Ozone Flow (80 ± 15 cc/min)	81	HVPS (400 - 900 V)	643
NOx Slope (1 ± 0.3)	1.207	NO Slope (1 ± 0.3)	1.211
NOx Offset (0 ± 100)	3.8	NO Offset (0 ± 100)	0.4

Operator Comments: Replaced particle filter.

Operator Signature:

Resolution Copper Mining
East Plant Monitoring Station
SO₂ Multipoint Calibration



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Operator: B. Rucker	Teledyne API T100 SO ₂ Analyzer S/N	193	Multipoint Start Time	1300
	Teledyne API T700 Transfer Standard Dilution Calibrator S/N	191	Multipoint Stop Time	1400
Date: 11/05/2014			T100 Analyzer Range	500ppb
	NIST Traceable Gas Conc.	40.4	Shelter Temperature (5-40 ° C)	21.8

Multipoint Calibration (Quarterly, or as needed):

Check analyzer response between 0 - 500 ppb range using the Transfer Standard Dilution Calibrator.

Transfer Standard:

Target (PPB)	Actual Generated SO ₂ (PPB)	SO ₂ Response (PPB)	Best Fit Line (PPB)	Acceptable Criteria (± 2% from BFL)
Zero Air	0.0	-0.1	-0.7	PASS, <2%FS
100	101.0	99.8	101.1	PASS, 1.3%
200	200.0	200.6	200.8	PASS, 0.1%
300	300.0	300.3	301.5	PASS, 0.4%
400	400.0	402.0	402.2	PASS, 0%
500	500.0	503.8	502.9	PASS, 0.2%

Best Fit Line (BFL)

$$Y = 1.0071x + -0.6627$$

$$R^2 = 0.99998$$

Analyzer Parameters

Sample Flow (450 ± 45 cc/min)	631	Sample Press. (Ambient ± 2 in-Hg)	25.9
UV Lamp (1000 - 4800 mV)	2153.3	Lamp Ratio (30 - 120%)	91.1
Slope (1 ± 0.3)	1.063	BOX Temp. (Ambient ± 5°C)	33.9
Offset (< 250 mV)	24.6	HVPS (400 - 900 V)	614

Operator Comments: Changed particle filter.

Operator Signature:

Resolution Copper Mining
East Plant Monitoring Station
O₃ Multipoint Calibration



AIR SCIENCES INC.

01/05/2014 11:05 AM

Operator: B. Rucker	Teledyne API T400 O ₃ Analyzer S/N	224	Multipoint Start Time	1200
	Teledyne API T700 Primary Standard Dilution Calibrator S/N	191	Multipoint Stop Time	1700
Date: 11/05/2014			T400 Analyzer Range	500 ppb
			Shelter Temperature (5-40 ° C)	24.6

Multipoint Calibration (Quarterly, or as needed):

Check the analyzer response over 0 - 500 ppb range using the Primary Standard Dilution Calibrator.

Primary Standard:

Target (PPB)	Actual Generated O ₃ (PPB)	O ₃ Response (PPB)	Best Fit Line (PPB)	Acceptable Criteria (± 2% from BFL)
Zero Air	0.0	-0.8	-1.0	PASS, <2%FS
100	100	100.6	99.7	PASS, 0.9%
200	200	201.6	200.5	PASS, 0.6%
300	300	300.4	301.3	PASS, 0.3%
400	400	402.5	402.0	PASS, 0.1%
500	500	502.9	502.8	PASS, 0%

Best Fit Line (BFL)

$$Y = 1.0076x + -1.0429$$

$$R^2 = 0.99999$$

Analyzer Parameters

Sample Flow (550 ± 55 cc/min)	558	Sample Temp. (10 - 50 °C)	40.2
Photo Lamp (58 ± 1 °C)	58.0	BOX Temp. (30 ± 20 °C)	28.7
Slope (1 ± 0.15)	1.025	O ₃ Measure (2500 - 4800 mV)	2852.6
Offset (0.0 ± 5 PPB)	-3.0	O ₃ Reference (2500 - 4800 mV)	2853.6

Operator Comments: Observed minimal analyzer drift since the last level 1 Zero/Span calibration performed on 10/30/2014 therefore the slope and offset values remained the same. Replaced the particle filter.

Operator Signature:



AIR SCIENCES INC.

DENVER • PORTLAND

**Air Quality
Audit and
Calibration Report
Resolution Copper
West Plant
Monitoring Station**

PREPARED FOR:
RESOLUTION COPPER
MINING



PREPARED BY:
AIR SCIENCES INC.

PROJECT NO. 262-9-02
OCTOBER 2014

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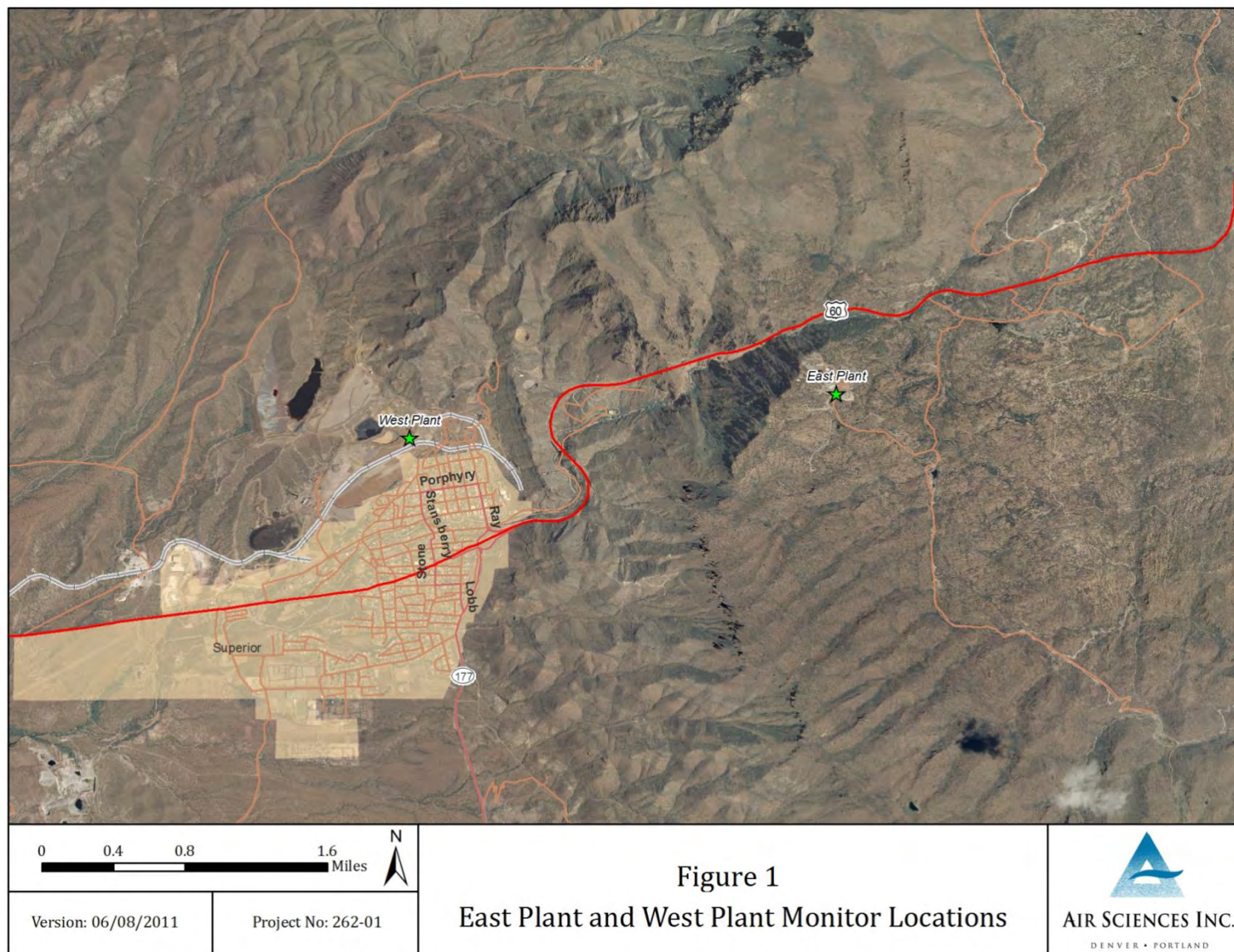
Appendix A – Audit and Calibration Forms	
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1.0 INTRODUCTION

On October 20, 2014, particulate monitoring instrumentation was audited and/or calibrated at the Resolution Copper West Plant near Superior, AZ. The West Plant monitoring station is operated by the Resolution Copper Mining Company and is located approximately one quarter mile west of the administration buildings (see Figure 1). The audit/calibration activities described in this report were conducted in accordance with the applicable guideline documents:

- EPA-450/4-87-007, Ambient Monitoring Guidelines for Prevention of Significant Deterioration (PSD), May 1987
- EPA-454/R-99-005, Meteorological Monitoring Guidance for Regulatory Modeling Applications, Section 8.4, February 2000
- EPA-454/B-13-003, Quality Assurance Handbook for Air Pollution Measurement Systems, Volume II: Ambient Air Quality Monitoring Program, May 2013
- EPA-454/B-08-002, Quality Assurance Handbook for Air Pollution Measurement Systems, Volume IV: Meteorological Measurements Version 2.0, March 2008
- Code of Federal Regulations (40 CFR Parts 50 and 58)

Figure 1. Project Location Map – Resolution Copper East Plant and West Plant Monitoring Station Locations



2.0 SYSTEM DESCRIPTION

The instrumentation at the West Plant monitoring site measures wind speed, wind direction, ambient temperature, vertical height temperature difference (delta temperature), solar radiation, relative humidity, precipitation, barometric pressure, and particulate matter less than 10 and 2.5 microns in diameter (PM₁₀ & PM_{2.5}).

The meteorological sensors are mounted to a 35-foot, open-lattice, aluminum drop tower. The particulate monitors are housed in a climate-controlled enclosure. The sensor and particulate inlet heights are listed in Table 1 (as measured from ground-level).

**Table 1. Sensor and Particulate Inlet Heights
(meters above the ground)**

Parameter	Approximate Height (meters)
Wind Speed	10
Wind Direction	10
Ambient Temperature	2
Delta Temperature	2, 10
Solar Radiation	2
Relative Humidity	2
Precipitation	1
Barometric Pressure	1.5
PM ₁₀	2
PM _{2.5}	2

Monitored data are recorded via analog inputs on two Campbell Scientific CR3000 dataloggers, each powered independently by either DC solar or by locally supplied AC line power. All meteorological sensors are programmed on a one-second scan interval, and the output is digitally processed and recorded into 15-minute averages. The raw 15-minute averages are temporarily stored on the datalogger memory, and a local computer is automatically configured to permanently back up datalogger files on a 15-minute interval. The raw 15-minute data averages are securely transmitted, via cellular broadband Internet services, to the Air Sciences Inc. server and processed into the Data Acquisition and Storage System (DASS) for quality assurance checks. These raw 15-minute averages are used as input for the calculation of one-hour averages.

PM₁₀ and PM_{2.5} are measured by two Met One Instruments model BAM-1020 particulate monitors. The BAM-1020 is a continuous monitoring device that produces 1-hour averages and a 24-hour average concentration for the period of 12:00 a.m. (midnight) through 11:59 p.m. for each calendar day. Particulate data are downloaded every hour onto the on-site datalogger via serial communications and are transported via wireless broadband modem directly to the DASS.

3.0 AUDIT AND CALIBRATION METHODOLOGY

This section provides the audit and/or calibration procedures for the particulate instrumentation at the Resolution Copper West Plant monitoring site. Copies of the completed audit and/or calibration forms are included in Appendix A.

3.1 Particulate Matter Audit Procedures

The BAM-1020 PM₁₀ and PM_{2.5} monitors were audited by comparing and then adjusting the temperature, barometric pressure, and internal flow to a certified deltaCal Volumetric Air Flow Calibrator. All required maintenance was performed on the instruments to assure optimal operations. The temperature, barometric pressure, and flow output readings from the deltaCal and the instrument were recorded on a standardized form.

4.0 RESULTS AND RECOMMENDATIONS

On October 20, 2014, Air Sciences Inc. (Air Sciences) personnel discovered The BAM-1020 PM₁₀ and PM_{2.5} monitors to be clean, serviceable, and within their recommended tolerance parameters.

Particulate data collected during the on-site audit and calibration activities described in this report will be invalidated.

Appendix A – Audit and Calibration Forms

West Plant BAM-1020 PM₁₀ Audit Sheet

Model:

BAM-1020

Serial
Number:

M8712

Audit Date:

10/20/2014

Audited By:

W.Rucker

Audit Time:

10:00 - 13:30

Firmware: 3236-06 V3.6.3

Flow Audits

Flow Reference Standard Used:	Model: DeltaCal	Serial No: 723	Calibration Date: 8/24/2014
Temperature Standard Used:	Model: DeltaCal	Serial No: 723	Calibration Date: 8/24/2014
Barometric Pressure Standard Used:	Model: DeltaCal	Serial No: 723	Calibration Date: 8/24/2014

Leak Check Value:

as found:

0.4

Should Be:

<1.0

as left:

0.5

Should Be:

<1.0

Ambient Temperature:

as found:

24.5

23.0

as left:

26.0

26.1

Adjusted

X

Barometric Pressure:

as found:

683

683.5

as left:

683

683

Adjusted

X

Flow Rate (15.0 lpm):

as found:

15.1

15.26

as left:

15.0

15.02

Adjusted

X

Flow Rate (18.4 lpm):

as found:

18.4

18.57

as left:

18.4

18.41

Adjusted

X

Flow Rate (16.7 lpm):

as found:

16.7

16.90

as left:

16.7

16.69

Adjusted

X

Calibration Notes: Inspected and cleaned all nozzle components, and adjusted proper nozzle spring tension.

Mechanical Audits

Pump muffler unclogged:	As found	☒	As left	☒	PM10 particle trap clean:	As found	☐	As left	☒	N/A	☐
Sample nozzle clean:	As found	☐	As left	☒	PM10 drip jar empty:	As found	☒	As left	☒	N/A	☐
Tape support vane clean:	As found	☐	As left	☒	PM10 bug screen clear:	As found	☒	As left	☒	N/A	☐
Capstan shaft clean:	As found	☐	As left	☒	PM2.5 particle trap clean:	As found	☐	As left	☐	N/A	☒
Rubber pinch rollers clean:	As found	☐	As left	☒	Inlet tube water-tight seal OK:	As found	☒	As left	☒		
Chassis ground wire installed:	As found	☒	As left	☐	Inlet tube perpendicular to BAM:	As found	☒	As left	☒		

Signature:



West Plant BAM-1020 PM_{2.5} Audit Sheet

Model: **BAM-1020**

Serial Number: **M8193**

Audit Date: **10/20/2014**

Audited By: **G. Gylys**

Audit Time: **1000-1330 hrs**

Firmware: 3236-06 V3.6.3

Flow Audits

Flow Reference Standard Used:	Model: Delta Cal	Serial No: 723	Calibration Date: 8/24/2014
Temperature Standard Used:	Model: Delta Cal	Serial No: 723	Calibration Date: 8/24/2014
Barometric Pressure Standard Used:	Model: Delta Cal	Serial No: 723	Calibration Date: 8/24/2014

Leak Check Value: as found: **0.4 LPM** Should Be: **<1.0** as left: **0.2 LPM** Should Be: **<1.0**

		BAM	Ref. Std.		BAM	Ref. Std.		
Ambient Temperature (°C):	as found:	24.4	23.2	as left:	25.4	25.3	Adjusted	X
Barometric Pressure (mmHg):	as found:	685	683.5	as left:	684	683.5	Adjusted	X
Flow Rate (15.0 LPM):	as found:	15.0	15.22	as left:	15.0	15.05	Adjusted	X
Flow Rate (18.4 LPM):	as found:	18.4	18.72	as left:	18.4	18.38	Adjusted	X
Flow Rate (16.7 LPM):	as found:	16.7	16.99	as left:	16.7	16.74	Adjusted	X

Audit Notes: Cleaned reference membrane and assembly; nozzle components.

Mechanical Audits

Pump muffler unclogged:	As found	X	As left		PM10 particle trap clean:	As found		As left		N/A	X
Sample nozzle clean:	As found		As left	X	PM10 drip jar empty:	As found		As left	X	N/A	
Tape support vane clean:	As found		As left	X	PM10 bug screen clear:	As found		As left	X	N/A	
Capstan shaft clean:	As found		As left	X	PM2.5 particle trap clean:	As found		As left	X	N/A	
Rubber pinch rollers clean:	As found		As left	X	Inlet tube water-tight seal OK:	As found		As left	X		
Chassis ground wire installed:	As found	X	As left		Inlet tube perpendicular to BAM:	As found	X	As left			

Signature:



