



MEMORANDUM

Pima County Department of Environmental Quality

DATE: June 18, 2009

TO: Raul Ochoa
Assistant Superintendent Operations & Facilities Planning

FROM: Teresa Sobolewski
Environmental Manager

RE: Pima County DEQ Beryllium Monitoring Report 3rd Quarter 2008

Attached is the Pima County Department of Environmental Quality's (PDEQ) Air Monitoring Division Beryllium Monitoring Network Summary for the 3rd Quarter of 2008.

Highlights:

- 110 samples collected resulting in 104 valid and 6 invalid samples (94.5% data recovery). EPA requires monitoring data recovery at 75%.
- No beryllium values were detected over the Practical Quantitation Level (PQL).

For additional information on this report, please contact me at Pima County Department of Environmental Quality at (520) 740-3340.

Attachment

Cc: Ursula Kramer, Pima County Department of Environmental Quality Director
Richard Grimaldi, Pima County Department of Environmental Deputy Director



Pima County

Department of Environmental Quality

Air Monitoring Division

Beryllium Monitoring Network Summary

3rd Quarter 2008



*Pima County Department of Environmental Quality
150 West Congress St., 1st Floor
Tucson, Arizona 85701*

Summary

The Pima County Department of Environmental Quality has contracted with the Pima County Regional Wastewater Reclamation Department (RWRD) to perform analysis on filters sampled in the Beryllium Monitoring Network located in the Sunnyside Unified School District. The Pima County RWRD will analyze all filters collected from June 1, 2008 and forward.

At the current time, there is a 3 month back-log on samples that need to be analyzed. PDEQs intent is to have the most current month's samples, along with one month of back-log samples analyzed every month.

For the 3rd quarter of 2008 there was a total of 110 samples collected resulting in 104 valid and 6 invalid samples; for a data recovery of 94.5%. Four samples were collected to be used as precision checks as recommended in *40 CFR, Part 58, Appendix A, Section 5.3.1*. All samples run for a 24-hour period as specified in *40 CFR, Part 50, Appendix B*.

There were a total of 104 samples analyzed for beryllium. Beryllium concentrations are reported as $<0.265 \text{ ng/m}^3$ PQL (Practical Quantitation Level. In the preamble to a November 13, 1985 rulemaking (50 FR 46906), the PQL was defined as "the lowest concentration of an analyte that can be reliably measured within specific limits of precision and accuracy during routine laboratory operating conditions." The Agency has used the PQL to estimate or evaluate the minimum concentration at which most laboratories can be expected to reliably measure a specific chemical contaminant during day-to-day analysis.

The following pages display the sampling dates, sampling locations, PM_{10} concentrations ($\mu\text{g/m}^3$) calculated in standard conditions, PM_{10} 24-hour NAAQS standard, precision measurements, Beryllium analysis results, accompanying graphs and a brief explanation of all invalid samples for the 3rd quarter of 2008.

PM₁₀ /Beryllium Concentrations

Monthly Summary of PM₁₀/Beryllium Data

July - 2008

Date	Location	Standard Concentration PM ₁₀ (µg/m ³)	24-hour NAAQS PM ₁₀ (µg/m ³)	Beryllium (ng/m ³)
07/01/08	Los Niños	19.7	150	<0.265
07/02/08	Chaparral M.S.	27.8	150	<0.265
07/03/08	Transportation Bldg	INVALID	150	<0.265
07/04/08	Sunnyside H.S.	29.4	150	<0.265
07/05/08	Ocotillo #1	14.2	150	<0.265
07/05/08	Ocotillo #2	19.1	150	<0.265
07/06/08	Los Amigos	17.2	150	<0.265
07/07/08	Los Niños	10.8	150	<0.265
07/08/08	Chaparral M.S.	10.9	150	<0.265
07/09/08	Transportation Bldg	10.2	150	<0.265
07/10/08	Sunnyside H.S.	11.7	150	<0.265
07/11/08	Ocotillo #1	9.1	150	<0.265
07/11/08	Ocotillo #2	10.0	150	<0.265
07/12/08	Los Amigos	18.1	150	<0.265
07/13/08	Los Niños	9.8	150	<0.265
07/14/08	Chaparral M.S.	14.5	150	<0.265
07/15/08	Transportation Bldg	15.2	150	<0.265
07/16/08	Sunnyside H.S.	25.1	150	<0.265
07/17/08	Ocotillo #1	16.2	150	<0.265
07/17/08	Ocotillo #2	INVALID	150	<0.265
07/18/08	Los Amigos	34.5	150	<0.265
07/19/08	Los Niños	12.5	150	<0.265
07/20/08	Chaparral M.S.	19.4	150	<0.265
07/21/08	Transportation Bldg	11.7	150	<0.265
07/22/08	Sunnyside H.S.	20.8	150	<0.265
07/23/08	Ocotillo #1	13.1	150	<0.265
07/23/08	Ocotillo #2	14.5	150	<0.265
07/24/08	Los Amigos	18.3	150	<0.265
07/25/08	Los Niños	16.5	150	<0.265
07/26/08	Chaparral M.S.	17.9	150	<0.265
07/27/08	Transportation Bldg	29.5	150	<0.265
07/28/08	Sunnyside H.S.	21.0	150	<0.265
07/29/08	Ocotillo #1	19.5	150	<0.265
07/29/08	Ocotillo #2	19.1	150	<0.265
07/30/08	Los Amigos	35.8	150	<0.265
07/31/08	Los Ninos	26.9	150	<0.265
07/03/08	Field Blank			<0.265

Sample running on 07/03/08 invalid due to power failure.

Sample running on 07/17/08 invalid due to no post flow rate annotated on chart recorder resulting in PDEQ not being able to calculate the average sample flow rate.

NAAQS = National Ambient Air Quality Standard for PM₁₀

PM₁₀ /Beryllium Concentrations (continued)

Monthly Summary of PM₁₀/Beryllium Data

August - 2008

Date	Location	Standard Concentration PM ₁₀ (µg/m ³)	24-hour NAAQS PM ₁₀ (µg/m ³)	Beryllium (ng/m ³)
08/01/08	Chaparral M.S.	37.2	150	<0.265
08/02/08	Transportation Bldg	24.1	150	<0.265
08/03/08	Sunnyside H.S.	25.3	150	<0.265
08/04/08	Ocotillo #1	12.8	150	<0.265
08/04/08	Ocotillo #2	14.5	150	<0.265
08/05/08	Los Amigos	21.3	150	<0.265
08/06/08	Los Niños	14.1	150	<0.265
08/07/08	Chaparral M.S.	INVALID	150	<0.265
08/08/08	Transportation Bldg	11.6	150	<0.265
08/09/08	Sunnyside H.S.	16.3	150	<0.265
08/10/08	Ocotillo #1	20.0	150	<0.265
08/10/08	Ocotillo #2	21.4	150	<0.265
08/11/08	Los Amigos	21.9	150	<0.265
08/12/08	Los Niños	23.4	150	<0.265
08/13/08	Chaparral M.S.	24.3	150	<0.265
08/14/08	Transportation Bldg	7.8	150	<0.265
08/15/08	Sunnyside H.S.	17.2	150	<0.265
08/16/08	Ocotillo #1	12.3	150	<0.265
08/16/08	Ocotillo #2	13.8	150	<0.265
08/17/08	Los Amigos	11.2	150	<0.265
08/18/08	Los Niños	19.0	150	<0.265
08/19/08	Chaparral M.S.	21.2	150	<0.265
08/20/08	Transportation Bldg	16.6	150	<0.265
08/21/08	Sunnyside H.S.	25.3	150	<0.265
08/22/08	Ocotillo #1	23.4	150	<0.265
08/22/08	Ocotillo #2	25.5	150	<0.265
08/23/08	Los Amigos	17.7	150	<0.265
08/24/08	Los Niños	11.4	150	<0.265
08/25/08	Chaparral M.S.	15.5	150	<0.265
08/26/08	Transportation Bldg	6.8	150	<0.265
08/27/08	Sunnyside H.S.	INVALID	150	<0.265
08/28/08	Ocotillo #1	10.4	150	<0.265
08/28/08	Ocotillo #2	11.7	150	<0.265
08/29/08	Los Amigos	11.8	150	<0.265
08/30/08	Los Ninos	5.4	150	<0.265
08/31/08	Chaparral M.S.	6.4	150	<0.265
08/08/08	Field Blank			<0.265

Sample running on 08/07/08 invalid due to the filter not being installed by SUSD.

Sample running on 08/27/08 invalid due to sampler flow rate being <36-44 CFM.

NAAQS = National Ambient Air Quality Standard for PM₁₀

PM₁₀ /Beryllium Concentrations (continued)

Monthly Summary of PM₁₀/Beryllium Data

September - 2008

Date	Location	Standard Concentration PM₁₀ (µg/m³)	24-hour NAAQS PM₁₀ (µg/m³)	Beryllium (ng/m³)
09/01/08	Transportation Bldg	INVALID	150	<0.265
09/02/08	Sunnyside H.S.	16.2	150	<0.265
09/03/08	Ocotillo #1	14.0	150	<0.265
09/03/08	Ocotillo #2	14.9	150	<0.265
09/04/08	Los Amigos	16.9	150	<0.265
09/05/08	Los Niños	18.4	150	<0.265
09/06/08	Chaparral M.S.	17.5	150	<0.265
09/07/08	Transportation Bldg	11.7	150	<0.265
09/08/08	Sunnyside H.S.	28.3	150	<0.265
09/09/08	Ocotillo #1	19.1	150	<0.265
09/09/08	Ocotillo #2	20.8	150	<0.265
09/10/08	Los Amigos	18.3	150	<0.265
09/11/08	Los Niños	15.3	150	<0.265
09/12/08	Chaparral M.S.	20.8	150	<0.265
09/13/08	Transportation Bldg	14.1	150	<0.265
09/14/08	Sunnyside H.S.	18.2	150	<0.265
09/15/08	Ocotillo #1	17.2	150	<0.265
09/15/08	Ocotillo #2	INVALID	150	<0.265
09/16/08	Los Amigos	17.5	150	<0.265
09/17/08	Los Niños	14.5	150	<0.265
09/18/08	Chaparral M.S.	27.6	150	<0.265
09/19/08	Transportation Bldg	23.2	150	<0.265
09/20/08	Sunnyside H.S.	24.8	150	<0.265
09/21/08	Ocotillo #1	14.0	150	<0.265
09/21/08	Ocotillo #2	12.8	150	<0.265
09/22/08	Los Amigos	22.0	150	<0.265
09/23/08	Los Niños	20.7	150	<0.265
09/24/08	Chaparral M.S.	33.6	150	<0.265
09/25/08	Transportation Bldg	37.0	150	<0.265
09/26/08	Sunnyside H.S.	18.8	150	<0.265
09/27/08	Ocotillo #1	11.3	150	<0.265
09/27/08	Ocotillo #2	12.2	150	<0.265
09/28/08	Los Amigos	15.2	150	<0.265
09/29/08	Los Ninos	25.9	150	<0.265
09/30/08	Chaparral M.S.	37.0	150	<0.265
09/08/08	Field Blank			<0.265

Sample running on 09/01/08 invalid due to ink from the chart recorder transferring onto the filter causing an incorrect post-sampling representative weight.

Sample running on 09/15/08 invalid due to no post flow rate annotated on chart recorder resulting in PDEQ not being able to calculate the average sample flow rate.

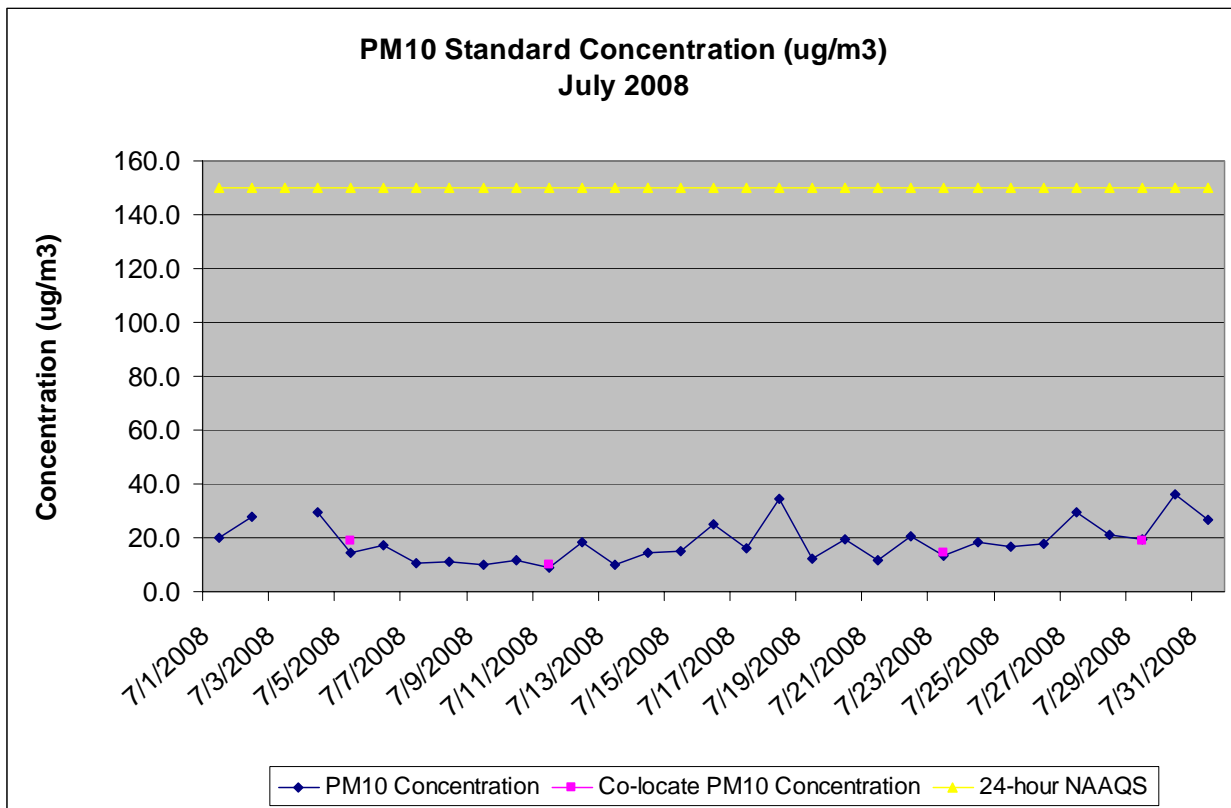
NAAQS = National Ambient Air Quality Standard for PM₁₀

Precision of Duplicate Pairs – PM10

At low concentrations, agreement between the measurements of collocated samplers, expressed as relative percent difference, may be relatively poor. For this reason, collocated measurement pairs are selected for use in the precision and bias calculations only when both measurement pairs are equal to or above $15\mu\text{g}/\text{m}^3$ (40CFR58, Appendix A, Section 4c).

Sample Date	Primary Sampler Number	Measured PM ₁₀ ($\mu\text{g}/\text{m}^3$)	Duplicate Sampler Number	Measured PM ₁₀ ($\mu\text{g}/\text{m}^3$)	Difference ($\mu\text{g}/\text{m}^3$)	Percent Difference %
7/29/08	1	19.5	2	19.1	0.4	-2.07
8/10/08	1	20.0	2	21.4	1.4	6.76
8/22/08	1	23.4	2	25.5	2.1	8.59
9/9/08	1	19.1	2	20.8	1.7	8.52

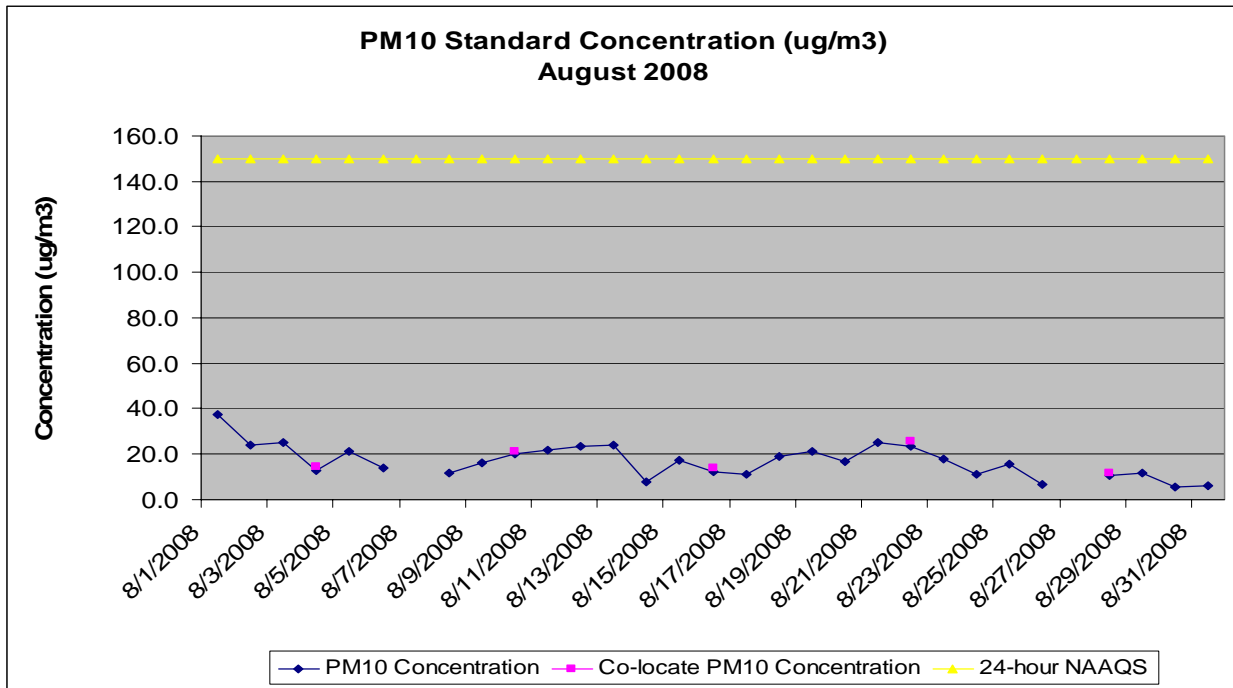
PM₁₀ Concentration Charts



Sample running on 07/03/08 invalid due to power failure.

Sample running on 07/17/08 invalid due to no post flow rate annotated by SUSD on chart recorder, resulting in PDEQ not being able to calculate an average flow rate.

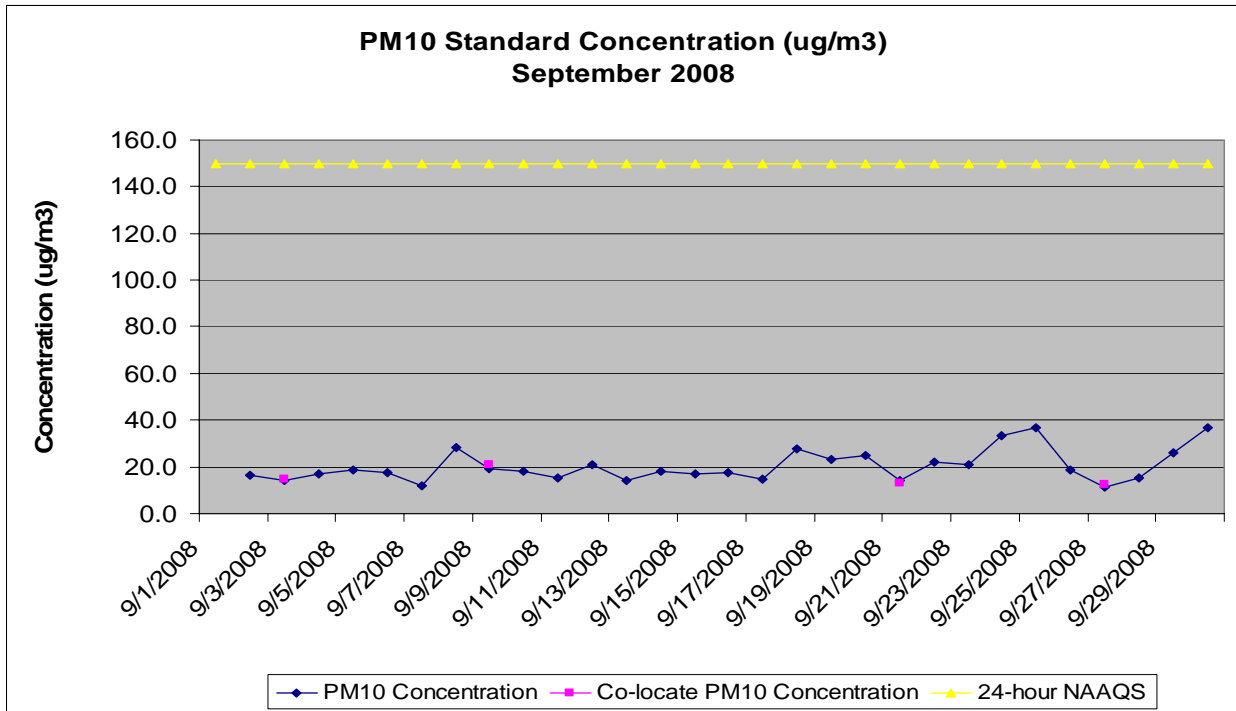
NAAQS = National Ambient Air Quality Standards for PM₁₀



Sample running on 8/07/08 invalid due to the filter not being installed by SUSD.

Sample running on 8/27/08 invalid due to the sampler flow being out of specifications (flow range = 36-44 CFM).

NAAQS = National Ambient Air Quality Standards for PM₁₀



Sample running on 9/01/08 invalid due to ink from the chart recorder transferring onto the filter causing an incorrect post-sampling representative weight.

Sample running on 07/17/08 invalid due to no post flow rate annotated by SUSD on chart recorder, resulting in PDEQ not being able to calculate an average flow rate.

NAAQS = National Ambient Air Quality Standards for PM₁₀

Audit Results

Audits were performed on all of the samplers with the audit flow rate percent difference being at or below 5% for all samplers. If the audit flow rate percent difference is $\leq \pm 10\%$, the sampler calibration is accepted. Differences exceeding $\pm 10\%$ require sampler recalibration. Differences exceeding $\pm 15\%$ will result in invalidation of all data subsequent to the last calibration or valid flow check. The following pages display the audit results for each sampling location.

AUDIT SPREADSHEET FOR PARTICULATES

Month	Ts	Ps
Jan	288.8	693.9
Feb	292.4	693.2
Mar	296.0	692.8
Apr	298.9	692.9
May	300.6	692.9
June	300.3	693.4
Jul	297.6	694.0
Aug	293.8	694.5
Sep	290.1	694.9
Oct	287.2	695.3
Nov	285.8	695.2
Dec	286.5	694.7

Sampler: Chaparral M.S. **Ts =** 290.1
Audit Date: 09/23/08 **Ps =** 694.9
Motor: 1424 **Temp c =** 32.50
Temp f: 90.5 **Ta =** 305.5
Press: 27.362 **Pa =** 695.0
Altim: 30.037 **Orifice Calibration Relationship**
 m= 1.31700 **b= -0.05774**

Plate No.	Orifice dH2O	Qa Orifice	Sampler dPex	Sampler dPext
18	3.83	36.3	2.06	0.95
13	3.31	33.9	1.81	0.89
10	2.80	31.3	1.54	0.82
7	1.91	26.1	1.12	0.70
5	1.24	21.3	0.81	0.60

Orifice dH2O 2.618
 Sample dPex 1.5
 Orifice Qa(m3/m) 0.858381
 Sample Qa dPex 30.23129

Orifice		
dH2O	Qa(CFM)	Qa(M3/m)
2.618	30.30	0.86

Sampler w/Orifice		
dPex	Qa(CFM)	Qa(M3/m)
1.47	31.85	0.90

Sampler Audit Relationship		
m =	0.024	
b =	0.086	
r =	0.999	
	pm10	tsp
Set Point (cfm)	42.1	52.6
Set Point (H2O)	2.7	4.1

Audit flow rate % diff: 5.10 %

AUDIT SPREADSHEET FOR PARTICULATES

Month	Ts	Ps
Jan	288.8	693.9
Feb	292.4	693.2
Mar	296.0	692.8
Apr	298.9	692.9
May	300.6	692.9
June	300.3	693.4
Jul	297.6	694.0
Aug	293.8	694.5
Sep	290.1	694.9
Oct	287.2	695.3
Nov	285.8	695.2
Dec	286.5	694.7

Sampler: Sunnyside H.S. **Ts =** 296.1
Audit Date: 09/23/08 **Ps =** 694.9
Motor: 1418 **Temp c =** 33.60
Temp f: 92.48 **Ta =** 306.6
Press: 27.402 **Pa =** 696.0
Altim: 30.080 **Orifice Calibration Relationship**
 m= 1.31700 **b= -0.05774**

Plate No.	Orifice dH2O	Qa Orifice	Sampler dPex	Sampler dPext
18	3.29	33.8	1.88	0.91
13	2.84	31.5	1.69	0.86
10	2.39	29.1	1.44	0.80
7	1.59	24.0	1.04	0.68
5	1.10	20.2	0.75	0.57

Orifice dH2O 2.242
 Sample dPex 1.4
 Orifice Qa(m3/m) 0.798429
 Sample Qa dPex 28.12128

Orifice		
dH2O	Qa(CFM)	Qa(M3/m)
2.242	28.18	0.80

Sampler w/Orifice		
dPex	Qa(CFM)	Qa(M3/m)
1.36	29.62	0.84

Sampler Audit Relationship		
m =	0.025	
b =	0.080	
r =	0.999	
	pm10	tsp
Set Point (cfm)	42.2	52.1
Set Point (H2O)	2.9	4.3

Audit flow rate % diff: 5.06 %

AUDIT SPREADSHEET FOR PARTICULATES

Month	Ts	Ps
Jan	288.8	693.9
Feb	292.4	693.2
Mar	296.0	692.8
Apr	298.9	692.9
May	300.6	692.9
June	300.3	693.4
Jul	297.6	694.0
Aug	293.8	694.5
Sep	290.1	694.9
Oct	287.2	695.3
Nov	285.8	695.2
Dec	286.5	694.7

Sampler: Los Amigos **Ts =** 290.1
Audit Date: 09/23/08 **Ps =** 694.9
Motor: 1419 **Temp c =** 31.00
Temp f: 87.80 **Ta =** 304.0
Press: 27.441 **Pa =** 697.0
Altim: 30.122 **Orifice Calibration Relationship**
m= 1.31700 b= -0.05774

Plate No.	Orifice dH2O	Qa Orifice	Sampler dPex	Sampler dPext
18	2.86	31.5	1.26	0.74
13	2.47	29.4	1.03	0.67
10	2.08	27.1	0.82	0.60
7	1.44	22.8	0.49	0.46
5	0.95	18.8	0.27	0.34

Orifice dH2O 1.960
Sample dPex 0.80
Orifice Qa(m3/m) 0.745882
Sample Qa dPex 26.48522

Audit flow rate % diff: 3.95 %

Orifice		
dH2O	Qa(CFM)	Qa(M3/m)
1.960	26.33	0.75

Sampler w/Orifice		
dPex	Qa(CFM)	Qa(M3/m)
0.77	27.38	0.78

Sampler Audit Relationship		
m =	0.031	
b =	-0.249	
r =	1.000	
	pm10	tsp
Set Point (cfm)	41.8	52.2
Set Point (H2O)	2.6	4.4

AUDIT SPREADSHEET FOR PARTICULATES

Month	Ts	Ps
Jan	288.8	693.9
Feb	292.4	693.2
Mar	296.0	692.8
Apr	298.9	692.9
May	300.6	692.9
June	300.3	693.4
Jul	297.6	694.0
Aug	293.8	694.5
Sep	290.1	694.9
Oct	287.2	695.3
Nov	285.8	695.2
Dec	286.5	694.7

Sampler: Los Niños **Ts =** 290.1
Audit Date: 09/24/08 **Ps =** 694.9
Motor: 1421 **Temp c =** 33.50
Temp f: 92.3 **Ta =** 306.5
Press: 27.402 **Pa =** 696.0
Altim: 30.080 **Orifice Calibration Relationship**
m= 1.3700 b= -0.05774

Plate No.	Orifice dH2O	Qa Orifice	Sampler dPex	Sampler dPext
18	2.83	31.5	1.12	0.70
13	2.40	29.1	0.91	0.63
10	2.03	26.9	0.73	0.57
7	1.39	22.5	0.44	0.44
5	0.93	18.7	0.22	0.31

Orifice dH2O 1.916
Sample dPex 0.70
Orifice Qa(m3/m) 0.7413
Sample Qa dPex 26.33789

Audit flow rate % diff: 3.92 %

Orifice		
dH2O	Qa(CFM)	Qa(M3/m)
1.916	26.17	0.74

Sampler w/Orifice		
dPex	Qa(CFM)	Qa(M3/m)
0.68	27.20	0.77

Sampler Audit Relationship		
m =	0.030	
b =	-0.252	
r =	0.999	
	pm10	tsp
Set Point (cfm)	42.2	52.7
Set Point (H2O)	2.4	4.1

AUDIT SPREADSHEET FOR PARTICULATES

Month	Ts	Ps
Jan	288.8	693.9
Feb	292.4	693.2
Mar	296.0	692.8
Apr	298.9	692.9
May	300.6	692.9
June	300.3	693.4
Jul	297.6	694.0
Aug	293.8	694.5
Sep	290.1	694.9
Oct	287.2	695.3
Nov	285.8	695.2
Dec	286.5	694.7

Sampler: Ocotillo #1 **Ts =** 290.1
Audit Date: 09/23/08 **Ps =** 694.9
Motor: 1420 **Temp c =** 28.20
Temp f: 82.76 **Ta =** 301.2
Press: 27.441 **Pa =** 697.0
Altim: 30.122 **Orifice Calibration Relationship**
 m= 1.31700 b= -0.05774

Plate No.	Orifice dH20	Qa Orifice	Sampler dPex	Sampler dPext
18	2.67	30.3	1.02	0.66
13	2.28	28.2	0.84	0.60
10	1.98	26.3	0.66	0.53
7	1.36	22.1	0.40	0.42
5	0.90	18.3	0.18	0.28

Orifice dH2O 1.838
 Sample dPex 0.62
 Orifice Qa(m3/m) 0.720544
 Sample Qa dPex 25.63256

Orifice		
dH2O	Qa(CFM)	Qa(M3/m)
1.838	25.44	0.72

Sampler w/Orifice		
dPex	Qa(CFM)	Qa(M3/m)
0.62	26.43	0.75

Sampler Audit Relationship		
m =	0.032	
b =	-0.294	
r =	0.998	
	pm10	tsp
Set Point (cfm)	41.4	51.8
Set Point (H2O)	2.4	4.2

Audit flow rate % diff: 3.87 %

AUDIT SPREADSHEET FOR PARTICULATES

Month	Ts	Ps
Jan	288.8	693.9
Feb	292.4	693.2
Mar	296.0	692.8
Apr	298.9	692.9
May	300.6	692.9
June	300.3	693.4
Jul	297.6	694.0
Aug	293.8	694.5
Sep	290.1	694.9
Oct	287.2	695.3
Nov	285.8	695.2
Dec	286.5	694.7

Sampler: Ocotillo #2 **Ts =** 290.1
Audit Date: 09/23/08 **Ps =** 694.9
Motor: 1417 **Temp c =** 28.20
Temp f: 82.76 **Ta =** 301.2
Press: 27.441 **Pa =** 697.0
Altim: 30.122 **Orifice Calibration Relationship**
 m= 1.31700 b= -0.05774

Plate No.	Orifice dH20	Qa Orifice	Sampler dPex	Sampler dPext
18	3.03	32.2	1.32	0.76
13	2.57	29.8	1.04	0.67
10	2.17	27.5	0.89	0.62
7	1.48	23.0	0.59	0.50
5	1.00	19.2	0.32	0.37

Orifice dH2O 2.05
 Sample dPex 0.83
 Orifice Qa(m3/m) 0.758505
 Sample Qa dPex 26.87307

Orifice		
dH2O	Qa(CFM)	Qa(M3/m)
2.05	26.78	0.76

Sampler w/Orifice		
dPex	Qa(CFM)	Qa(M3/m)
0.83	27.90	0.79

Sampler Audit Relationship		
m =	0.028	
b =	-0.162	
r =	0.994	
	pm10	tsp
Set Point (cfm)	41.4	51.8
Set Point (H2O)	2.4	3.9

Audit flow rate % diff: 4.18 %

AUDIT SPREADSHEET FOR PARTICULATES

Month	Ts	Ps
Jan	288.8	693.9
Feb	292.4	693.2
Mar	296.0	692.8
Apr	298.9	692.9
May	300.6	692.9
June	300.3	693.4
Jul	297.6	694.0
Aug	293.8	694.5
Sep	290.1	694.9
Oct	287.2	695.3
Nov	285.8	695.2
Dec	286.5	694.7

Sampler: Transportation **Ts =** 290.1
Audit Date: 09/23/08 **Ps =** 694.9
Motor: 1422 **Temp c =** 33.30
Temp f: 91.94 **Ta =** 306.3
Press: 27.402 **Pa =** 696.0
Altim: 30.080 **Orifice Calibration Relationship**
 m= 1.31700 b= -0.05774

Plate No.	Orifice dH2O	Qa Orifice	Sampler dPex	Sampler dPext
18	3.34	34.1	1.42	0.79
13	2.79	31.1	1.18	0.72
10	2.36	28.9	0.95	0.65
7	1.60	24.0	0.65	0.53
5	1.08	20.0	0.39	0.41

Orifice dH2O 2.234
 Sample dPex 0.92
 Orifice Qa(m3/m) 0.796713
 Sample Qa dPex 28.18749

Audit flow rate % diff: 4.26 %

Orifice		
dH2O	Qa(CFM)	Qa(M3/m)
2.234	28.12	0.80

Sampler w/Orifice		
dPex	Qa(CFM)	Qa(M3/m)
0.92	29.33	0.83

Sampler Audit Relationship		
m =	0.027	
b =	-0.113	
r =	0.998	
	pm10	tsp
Set Point (cfm)	42.2	52.7
Set Point (H2O)	2.3	3.8