Janet Napolitano
Governor

ARIZONA DEPARTMENT
OF
ENVIRONMENTAL QUALITY

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Assessment of Qualification for Treatment under the Arizona Natural and Exceptional Events Policy for the High Particulate (PM_{10}) Concentration Events in the Nogales, Arizona Area on November 19, 2007

Background

The Arizona Department of Environmental Quality (ADEQ) operates monitors at the Post Office in Nogales, Arizona for PM_{10} and $PM_{2.5}$ and at the Fire Station in Nogales, Sonora for PM_{10}. Federal Reference Method (FRM) filter-based samples are collected at both locations. Beta-Attenuation Monitor Systems (BAMS) collect hourly concentration data at the Post Office site.

During the evening of November 19, 2007, a strong night-time temperature inversion set up in the Nogales area. With no significant ventilating winds available to break up the surface inversion, the inversion intensified and set up a drainage flow from the higher terrain to the south in Mexico through Nogales, Sonora, and into Nogales, Arizona.

The event brought significant elevated ambient concentrations of PM_{10} that exceeded the National Ambient Air Quality Standards (NAAQS) at the ADEQ Nogales Post Office monitors (BAMS). The fact that ambient concentrations exceed the NAAQS satisfies the criteria in 40 CFR 50.1(j) that the event "affects air quality."

Preliminary indications were that emissions from sources in Mexico, which are not subject to control by the Arizona state implementation plan (SIP), may have contributed to the event.

A PM_{10} SIP exists for Nogales, Arizona. All appropriate SIP control measures were in place during the event demonstrating, per 40 CFR 50.1(j), that the event "is not reasonably controllable or preventable," if in fact emissions from Mexico caused the exceedance.

Elevated PM_{10} and $PM_{2.5}$ concentrations were measured in the Nogales area. The following are the key PM monitor readings for the monitors examined in this report:

Monitor (Operator/Type)	AQS ID*	24-hr Avg PM_{10} or $PM_{2.5}$	1-hr Max PM_{10} or $PM_{2.5}$	Time of Max 1-hr	Flag**
NOGALES AREA					
Nogales AZ Post Office PM_{10} (ADEQ/BAM)	**04-023-0004 (3)**	**177**	**510**	**1800**	**RL**
Nogales AZ Post Office $PM_{2.5}$ (ADEQ/BAM)	**04-023-0004 (3)**	**21.3**	**51**	**1800**	None

* EPA Air Quality System Identification Number
** 24-hr PM_{10} concentration influenced by exceptional event (international transport) to be flagged.
Type Abbreviations: BAM – Beta-Attenuation Mass Monitor (Continuous monitor)

The preliminary findings from this analysis were presented at a stakeholders meeting on June 11, 2008, in Phoenix, Arizona, and on June 17, 2008, in Nogales, Arizona. Public comment was solicited on the preliminary findings from May 28 through June 26, 2008. During that time, no comments were received from the public. ADEQ has finalized this demonstration, which was made available for public comment from August 11, 2008, through September 10, 2008. Any comments that were received were forwarded to EPA with this demonstration pursuant to 40 CFR 50.14(c)(3)(i).

CENTRAL PHOENIX

15-Phx Encanto

Hr	T(F)	RH	Rn	Spd	Max	Dir
1	53	83	-	0	1	NE
2	52	78	-	0	2	N
3	50	78	-	0	0	N
4	49	82	-	0	1	NE
5	49	78	-	1	2	N
6	50	68	-	0	1	N
7	49	69	-	0	1	N
8	52	61	-	1	4	E
9	62	40	-	2	6	E
10	68	32	-	3	7	E
11	73	24	-	3	6	E
12	77	22	-	2	6	SE
1	81	18	-	1	3	SW
2	84	16	-	1	4	S
3	86	14	-	1	4	NW
4	87	14	-	0	2	SE
5	84	18	-	0	1	SE
6	74	24	-	0	0	S
7	66	35	-	0	0	E
8	63	44	-	0	1	NE
9	60	53	-	0	2	NE
10	57	60	-	0	0	NE
11	56	65	-	0	2	N
12	43	65	-	3	7	E

SOUTHEAST PHOENIX

22-Queen Creek

Hr	T(F)	RH	Rn	Spd	Max	Dir
1	47	74	-	2	4	S
2	48	70	-	3	6	SE
3	49	59	-	4	6	SE
4	47	64	-	3	5	SE
5	46	68	-	2	4	SE
6	43	75	-	2	4	SE
7	48	61	-	3	6	SE
8	48	63	-	3	5	SE
9	57	47	-	2	5	S
10	66	34	-	3	5	NE
11	75	21	-	1	5	NE
12	80	18	-	2	5	SW
1	85	14	-	2	6	SE
2	86	13	-	2	5	S
3	88	12	-	2	5	S
4	89	14	-	1	3	NW
5	81	24	-	2	3	NW
6	71	32	-	2	3	NW
7	66	40	-	2	3	N
8	63	46	-	2	3	NE
9	59	47	-	1	3	NE
10	56	53	-	2	4	SE
11	56	45	-	3	6	SE
12	51	55	-	3	5	SE

NOGALES AIRPORT

NWS-Nogales

Hr	T(F)	VR	Dust	Spd	Gust	Dir
1	49	10		3	3	NE
2	47	10		0	0	-
3	46	10		0	0	-
4	45	10		0	0	-
5	46	10		0	0	-
6	45	10		3	3	E
7	43	10		0	0	-
8	48	10		0	0	-
9	60	10		0	0	-
10	72	10		3	5	NE
11	78	10		5	6	S
12	80	10		5	6	SE
1	82	10		0	0	-
2	83	10		9	9	SW
3	82	10		3	3	W
4	82	10		8	8	W
5	79	10		3	3	W
6	68	10		3	3	NE
7	65	10		6	6	E
8	59	10		5	5	E
9	58	10		5	5	E
10	55	10		3	3	SE
11	56	10		0	0	-
12	53	10		3	3	N

Event Contrib. Analysis

Hourly PM_{10} Conc. (µg/m^3)

MONITORS:

1-NOG PO (BAMS)

24-Hr. Avg PM_{10}

Monitor:	with Event	w/o Event
1-NOG PO	177	88

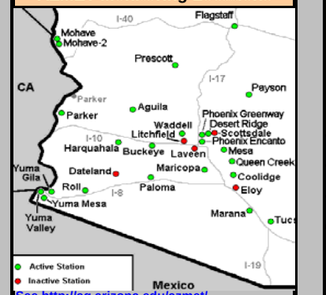
> NAAQS | < NAAQS

Pink=Event Contrib.

Conclusion: As shown above, the PM_{10} concentration would have been below the NAAQS "BUT FOR" the event contribution (hours highlighted in pink).

Hr	1
1	178
2	135
3	112
4	92
5	57
6	105
7	130
8	154
9	233
10	120
11	66
12	40
1	23
2	11
3	16
4	14
5	12
6	253
7	510
8	386
9	446
10	412
11	450
12	307

AZMET Monitoring Locations



See http://ag.arizona.edu/azmet/

wnd @3m agl / Dir corrected to true north

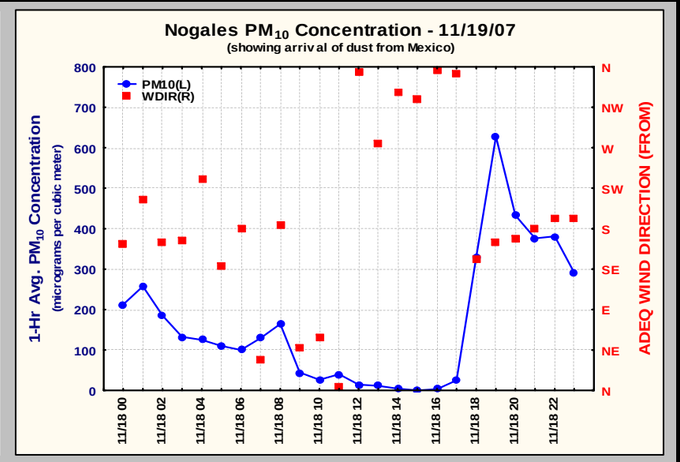
HIGHLIGHTING	Col.	Parameter
Max Wind	T(F)	Temp. (Deg. F.)
> 15 mph	RH	Rel Humidity %
>25 mph	Rn	Rain (Inches/hr)
HR - Time (End)	Spd	Avg Speed mph
A.M.	Max	Max Speed mph
P.M.	Dir	Wind Dir. (from)

Figure 1. Key Data for Event of November 19, 2007

MISC DATA	KEY	PM10 PLOT
CEN. AZ WINDS		SAT IMAGES
SO AZ WINDS		NOGALES MAP

SUMMARY OF EVENT

Drainage flow set up after sunset on the evening of 11/19 bringing heavy dust from Mexico into the United States that impacted the Nogales Post Office Monitor operated by ADEQ. Lack of high $PM_{2.5}$ confirms the impact was dust vs smoke.



PARKER

08-Parker

Hr	T(F)	RH	Rn	Spd	Max	Dir
1	53	61	-	1	3	NE
2	51	66	-	2	3	N
3	50	66	-	2	5	N
4	50	67	-	3	4	NE
5	50	64	-	2	4	NE
6	48	66	-	2	4	NE
7	47	66	-	2	3	NE
8	49	60	-	3	5	E
9	53	57	-	2	5	N
10	60	47	-	1	3	NE
11	68	35	-	2	6	N
12	73	29	-	4	7	N
1	76	26	-	3	6	E
2	82	21	-	1	4	S
3	84	18	-	2	6	SW
4	85	19	-	3	6	SW
5	84	23	-	1	3	N
6	78	30	-	1	2	W
7	67	46	-	2	5	SE
8	63	52	-	2	8	N
9	60	51	-	2	4	E
10	58	55	-	1	4	W
11	53	69	-	1	4	NE
12	54	64	-	4	7	E

BUCKEYE

26-Buckeye

Hr	T(F)	RH	Rn	Spd	Max	Dir
1	53	37	-	1	3	N
2	52	38	-	2	5	N
3	51	40	-	1	5	N
4	49	50	-	1	4	E
5	49	46	-	1	5	N
6	47	49	-	0	1	NE
7	46	54	-	2	6	E
8	54	48	-	5	8	E
9	59	36	-	2	7	E
10	68	29	-	3	9	E
11	75	22	-	4	12	E
12	79	17	-	10	15	E
1	81	15	-	9	13	SE
2	82	15	-	7	13	SE
3	84	14	-	5	9	SE
4	84	14	-	4	8	SE
5	83	17	-	2	7	SE
6	76	21	-	1	2	E
7	71	21	-	3	5	NE
8	66	23	-	5	7	NE
9	64	24	-	5	7	NE
10	62	25	-	5	7	NE
11	58	28	-	2	5	N
12	56	34	-	2	4	E

MARICOPA

06-Maricopa

Hr	T(F)	RH	Rn	Spd	Max	Dir
1	53	54	-	4	7	S
2	53	54	-	2	4	S
3	47	64	-	1	3	NE
4	45	66	-	0	2	N
5	44	68	-	0	1	SE
6	45	67	-	2	4	W
7	43	66	-	2	4	N
8	44	67	-	1	4	N
9	53	51	-	1	4	NE
10	60	43	-	2	5	NW
11	67	31	-	2	6	W
12	72	26	-	3	6	N
1	77	20	-	3	6	N
2	80	17	-	2	6	N
3	83	15	-	2	6	N
4	84	14	-	3	6	N
5	84	14	-	2	4	NW
6	76	21	-	0	1	NW
7	68	30	-	2	4	S
8	64	37	-	2	4	S
9	60	43	-	3	5	S
10	59	41	-	3	6	S
11	57	44	-	4	6	S
12	55	44	-	2	7	S

Historical Distribution

5-Yr. Dist. of Values (µg/m^3)

MONITORS:

1-NOG PO (BAMS)

Column Index

Yr - All Data (5-Yrs)

Sea - Data for Autumn season only (5-Yrs)

Cum. Freq.	Mon 1 Yr	Mon 1 Sea
Min	4	4
0.5%	8	8
1.0%	8	10
2.5%	13	18
5%	17	21
10%	22	27
25%	35	44
50%	56	75
75%	96	130
90%	146	177
95%	180	199
97.5%	213	216
99.0%	244	231
99.5%	291	238
Max	351	284
Flagged Value	177	

Conclusion: Flagged Value is exceptional in nature (eg. greater than 95% of all data)

YUMA

02-YumaValley

Hr	T(F)	RH	Rn	Spd	Max	Dir
1	59	58	-	0	1	N
2	58	57	-	0	1	NE
3	57	58	-	0	2	N
4	55	65	-	2	4	NW
5	55	62	-	0	0	N
6	54	63	-	1	2	NE
7	52	65	-	1	3	NE
8	53	65	-	3	5	NE
9	60	55	-	2	5	NE
10	69	42	-	4	9	NE
11	73	34	-	6	9	E
12	79	27	-	7	10	NE
1	81	25	-	6	9	E
2	84	22	-	4	7	E
3	86	19	-	3	6	E
4	86	21	-	2	4	S
5	83	30	-	4	6	S
6	77	38	-	2	4	SW
7	72	41	-	1	2	W
8	67	52	-	0	2	E
9	62	62	-	1	4	S
10	61	68	-	1	3	NE
11	58	71	-	2	4	E
12	57	71	-	1	4	N

PALOMA

19-Paloma

Hr	T(F)	RH	Rn	Spd	Max	Dir
1	52	61	-	2	6	E
2	52	63	-	5	6	SE
3	48	74	-	1	6	SE
4	48	72	-	3	7	SE
5	50	61	-	5	7	SE
6	50	61	-	5	7	SE
7	49	63	-	5	6	E
8	48	67	-	4	6	E
9	54	61	-	4	7	SE
10	62	49	-	3	5	E
11	67	43	-	3	5	NE
12	74	31	-	2	4	NE
1	79	29	-	1	3	E
2	83	27	-	1	3	E
3	83	30	-	1	3	E
4	86	25	-	0	0	E
5	80	38	-	3	5	SW
6	77	25	-	1	2	SW
7	73	24	-	2	4	S
8	67	30	-	2	5	SE
9	62	40	-	3	5	S
10	56	61	-	3	6	NE
11	55	64	-	1	5	W
12	54	62	-	1	3	SE

MARANA

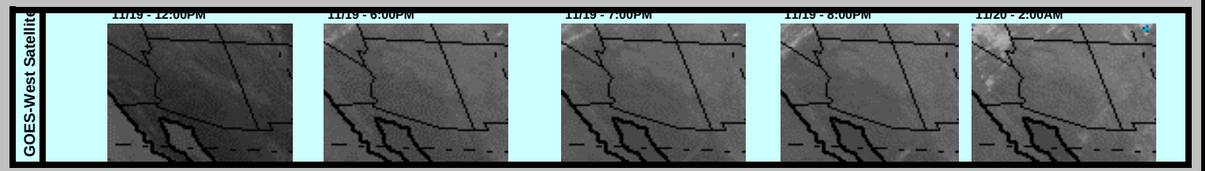
13-Marana

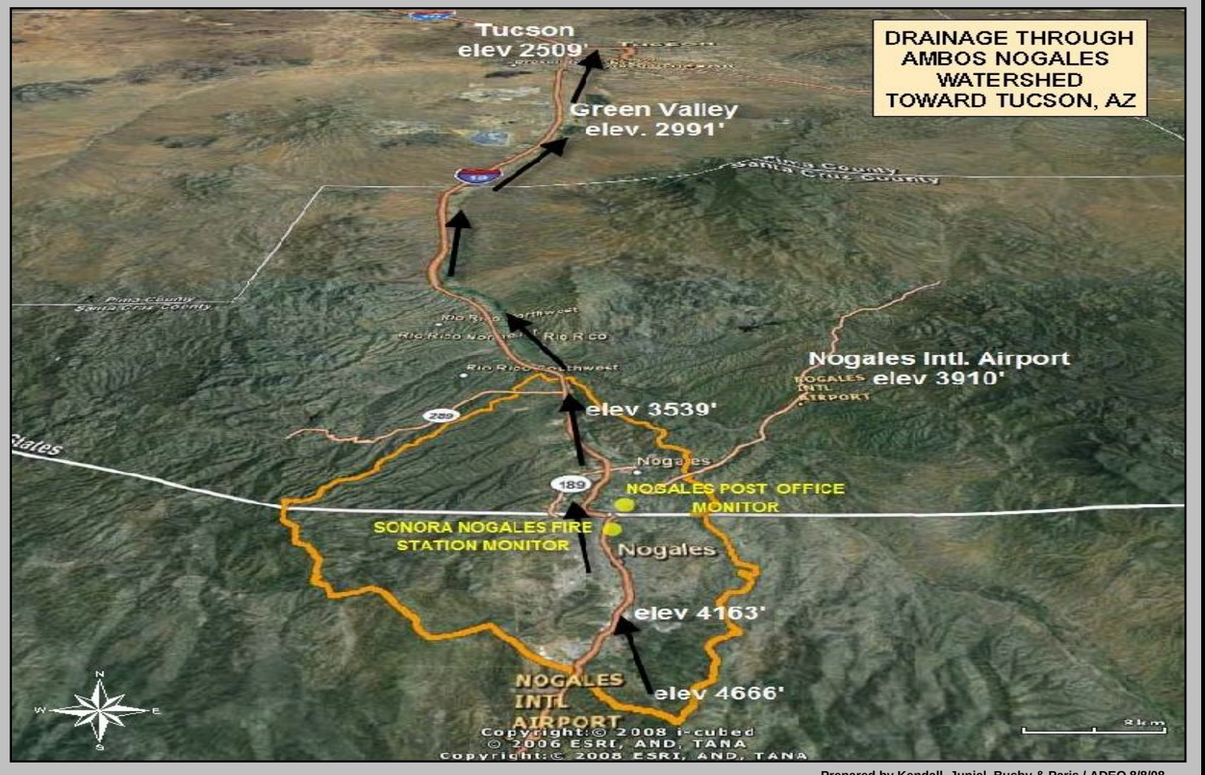
Hr	T(F)	RH	Rn	Spd	Max	Dir
1	55	42	-	5	7	E
2	55	39	-	5	7	E
3	53	42	-	6	11	SE
4	54	39	-	5	9	SE
5	53	42	-	7	13	SE
6	52	42	-	10	16	SE
7	53	37	-	6	12	SE
8	55	36	-	10	15	SE
9	62	27	-	10	18	SE
10	71	21	-	9	17	SE
11	77	17	-	6	14	SE
12	83	14	-	6	10	S
1	87	11	-	5	10	SE
2	90	10	-	2	7	W
3	89	10	-	4	9	NW
4	89	10	-	4	9	NW
5	88	10	-	3	7	NW
6	81	13	-	4	7	NW
7	75	16	-	2	5	N
8	67	23	-	1	6	S
9	64	25	-	1	6	S
10	62	25	-	2	4	SE
11	59	28	-	3	6	E
12	58	30	-	6	9	E

TUCSON

01-Tucson

Hr	T(F)	RH	Rn	Spd	Max	Dir
1	50	53	-	2	3	SE
2	47	58	-	1	4	E
3	47	56	-	2	5	E
4	44	62	-	2	3	E
5	46	58	-	2	4	E
6	47	52	-	2	3	E
7	47	52	-	3	5	E
8	51	46	-	3	6	E
9	59	34	-	4	6	E
10	67	30	-	3	5	E
11	76	21	-	2	5	E
12	80	18	-	2	5	E
1	84	14	-	3	6	E
2	86	12	-	3	6	NW
3	88	11	-	2	6	E
4	87	12	-	2	8	NW
5	85	11	-	6	10	NW
6	79	14	-	2	6	NW
7	69	23	-	1	4	SW
8	62	31	-	1	3	SE
9	58	42	-	2	5	E
10	56	45	-	2	4	E
11	57	35	-	2	5	E
12	56	34	-	2	4	E





Prepared by Kendall, Juniel, Busby & Paris / ADEQ 8/8/08

Assessment Under the Technical Criteria Document (TCD)

1. Properly qualify and validate the air quality measurement to be flagged. As this was not a filter sampling date (1-in-6 run day), only data from the continuous analyzers were examined. The air quality monitoring data were reviewed by ADEQ, the agency responsible for operation of the monitor. All hourly PM_{10} and $PM_{2.5}$ readings from the Nogales BAMS monitors were found to be valid for November 19th. No specific local sources were reported as significantly contributing to the air quality episode.

2. Review suspected contributing sources. The event began on the evening of November 19th. There was not a significant fraction of $PM_{2.5}$ measured during this episode. This is typical for the arid southwest, except when smoke from smoldering fires can be a significant source of $PM_{2.5}$. Lack of any significant transport winds would indicate that the emissions are from nearby the monitor. The plot of hourly PM_{10} concentration data in the upper right corner of Figure 1, in conjunction with the wind direction data, confirms the identical timing of the transport from the south across the U.S. / Mexico border when the elevated PM concentrations began. It is clear from the $PM_{2.5}$ data presented in the table in the Background section of this report that smoke was not a major contributor to this event.

3. Examine all air quality monitoring information. Data from all monitors in the network were reviewed. Monitors from the Nogales area are summarized in the table in the Background section of this assessment. Pursuant to 40 CFR 50.14(c)(3)(iii)(C), the "Historical Distribution" Table in Figure 1 has been included to demonstrate that the event is associated with measured concentrations in excess of normal historical fluctuations, including background (i.e., concentrations greater than the 95th percentile).

4. Examine the meteorological conditions before and during the event. Figure 1 includes a map showing the terrain and drainage patterns of the Nogales area. Cold air forming in the mountains south of the U.S. / Mexico border will flow northward into the Santa Cruz River Drainage Basin. National Weather Service data from the Nogales Airport, northeast of the city, showed calm to light and variable winds in the evening hours from the east or south. The data from ADEQ's wind monitor are included in the PM daily report sheet (see attachments). At the Post Office, winds shifted to being from the south at approximately 5:00 p.m. at 1-2 miles per hour. The concentrations picked up on the evening of November 19th when the winds shifted and started moving out of the south. It appears the source is coming from Mexico, since there are no sources in the United States between the monitor and the border.

5. Perform a qualitative attribution to emission source(s). All evidence indicates the elevated PM_{10} and $PM_{2.5}$ concentrations in the Nogales, Arizona, area can be attributed to dust emissions from sources south of Nogales, Arizona, in Nogales, Sonora. The data available for this analysis do not allow for development of a source-specific emission allocation. The hourly concentration data do not show any significant source other than the drainage dust and smoke associated with the event.

6. Estimation of Contribution from Source or Event. The primary source appears to be drainage dust from Mexico for which there is no effective or efficient method to estimate the relative contributions from specific sources. The demonstration analysis contained in this report establishes the linkage between the measurements to be flagged and the event, thus satisfying the requirement in 40 CFR 50.14(c)(3)(iii)(B). Pursuant to 40 CFR 50.14(c)(3)(iii)(D), the "Event Contrib. Analysis" Table in Figure 1 has been included to demonstrate that there would have been no exceedances or violations but for the event (i.e., the contribution during the event overwhelmed the 24-hour average).

7. Determination that a Natural or Exceptional Event Contributed To an Exceedance. Based on this analysis, the event satisfies the requirement in 40 CFR 50.1(j) that the elevated concentration at the Nogales Post Office monitor was attributed to an exceptional event caused by international transport of emissions into the United States.

Conclusion

International transport of emissions. The elevated PM_{10} event on November 19, 2007, in Nogales, Arizona was the result of emissions from Mexico which were transported into the United States in a slow moving drainage flow originating in the mountains south of Nogales, Sonora.

The fact that all appropriate SIP control measures were in place and emissions from international transport caused the exceedance demonstrates that, per 40 CFR 50.1(j), that the event "is not reasonably controllable or preventable."

The "other" flag (RL) was applied to the PM_{10} measurements, as the monitors would have been below the NAAQS but for the contribution of the event.

U.S. Department of Commerce
National Oceanic & Atmospheric Administration

QUALITY CONTROLLED LOCAL CLIMATOLOGICAL DATA (final) HOURLY OBSERVATIONS TABLE NOGALES INTERNATIONAL ARPT (03196) NOGALES , AZ (11/2007)

National Climatic Data Center
Federal Building
151 Patton Avenue
Asheville, North Carolina 28801

Elevation: 3908 ft. above sea level
Latitude: 31.421
Longitude: -110.846
Data Version: VER2

Date	Time (LST)	Station Type	Sky Conditions	Visibility (SM)	Weather Type	Dry Bulb Temp		Wet Bulb Temp		Dew Point Temp		Rel Humd %	Wind Speed (MPH)	Wind Dir	Wind Gusts (MPH)	Station Pressure (in. hg)	Press Tend	Net 3-hr Chg (mb)	Sea Level Pressure (in. hg)	Report Type	Precip. Total (in)	Alti-meter (in. hg)
						(F)	(C)	(F)	(C)	(F)	(C)											
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
19	0054	12	CLR	10.00		49	9.4	40	4.2	28	-2.2	44	3	050		26.08			29.98	AA		30.12
19	0154	12	CLR	10.00		47	8.3	39	3.7	28	-2.2	48	0	000		26.08	8	001	29.98	AA		30.12
19	0254	12	CLR	10.00		46	7.8	38	3.2	27	-2.8	48	0	000		26.09			29.98	AA		30.13
19	0354	12	CLR	10.00		45	7.2	37	2.9	27	-2.8	49	0	000		26.09			29.99	AA		30.13
19	0454	12	CLR	10.00		46	7.8	38	3.2	27	-2.8	48	0	000		26.09	1	004	30.00	AA		30.13
19	0554	12	CLR	10.00		45	7.2	37	2.9	27	-2.8	49	3	090		26.10			30.03	AA		30.14
19	0654	12	CLR	10.00		43	6.1	36	2.3	27	-2.8	53	0	000		26.12			30.05	AA		30.16
19	0754	12	CLR	10.00		48	8.9	39	4.0	28	-2.2	46	0	000		26.13	3	012	30.07	AA		30.17
19	0854	12	CLR	10.00		60	15.6	45	7.4	29	-1.7	31	0	000		26.15			30.06	AA		30.19
19	0954	12	CLR	10.00		72	22.2	51	10.3	29	-1.7	20	0	000		26.14			30.03	AA		30.18
19	1054	12	CLR	10.00		78	25.6	53	11.5	28	-2.2	16	6	170		26.13	8	002	30.02	AA		30.17
19	1154	12	CLR	10.00		80	26.7	53	11.7	26	-3.3	14	6	140		26.10			29.99	AA		30.14
19	1254	12	CLR	10.00		82	27.8	54	12.1	26	-3.3	13	0	000		26.07			29.95	AA		30.10
19	1354	12	CLR	10.00		83	28.3	54	12.2	25	-3.9	12	9	230		26.05	6	025	29.93	AA		30.08
19	1454	12	CLR	10.00		82	27.8	54	11.9	25	-3.9	12	3	260		26.04			29.92	AA		30.07
19	1554	12	CLR	10.00		82	27.8	53	11.7	23	-5.0	11	8	250		26.03			29.92	AA		30.06
19	1654	12	CLR	10.00		79	26.1	52	10.8	22	-5.6	12	3	270		26.02	6	009	29.91	AA		30.05
19	1754	12	CLR	10.00		68	20.0	48	8.7	25	-3.9	20	3	050		26.03			29.94	AA		30.06
19	1854	12	CLR	10.00		65	18.3	46	8.0	25	-3.9	22	6	080		26.04			29.97	AA		30.07
19	1954	12	CLR	10.00		59	15.0	44	6.6	26	-3.3	28	5	070		26.05	3	008	29.98	AA		30.08
19	2054	12	CLR	10.00		58	14.4	43	6.3	26	-3.3	29	5	090		26.06			29.96	AA		30.09
19	2154	12	CLR	10.00		55	12.8	42	5.5	26	-3.3	33	3	120		26.07			29.96	AA		30.10
19	2254	12	CLR	10.00		56	13.3	43	5.8	26	-3.3	32	0	000		26.06	0	004	29.93	AA		30.09
19	2354	12	CLR	10.00		53	11.7	41	5.0	26	-3.3	35	3	010		26.06			29.93	AA		30.09

Dynamically generated Fri Apr 11 13:18:03 EDT 2008 via http://cdo.ncdc.noaa.gov/qclcd/QCLCD

Arizona Department of Environmental Quality

AIR QUALITY DIVISION

AAATEOM_GRAPH

04/10/2008

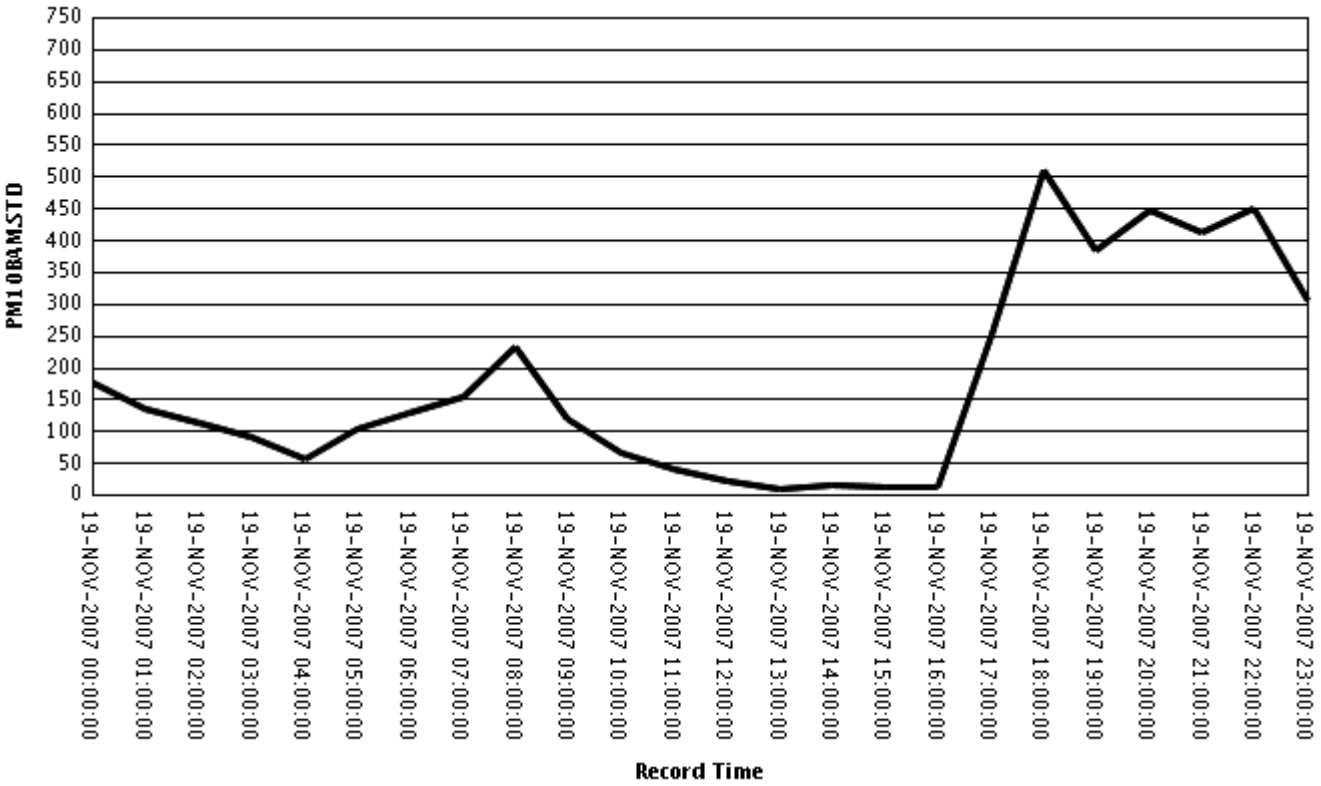
PM10BAM.STD Daily Concentration Report (ug/m3)

For 11/19/2007

Preliminary Data QA LEVEL - 2

Place ID: **16511**

Name: **NOGALES POST OFFICE**



Record Time	PM Average	Wind Speed (MPH)	Wind Direction	Temperature(F)	Relative Humidity
19-NOV-2007 00:00:00	178	1.1	176		
19-NOV-2007 01:00:00	135	.9	172		
19-NOV-2007 02:00:00	112	1.6	179		
19-NOV-2007 03:00:00	92	1.3	183		
19-NOV-2007 04:00:00	57	.9	160		
19-NOV-2007 05:00:00	105	1.1	173		
19-NOV-2007 06:00:00	130	1.1	186		
19-NOV-2007 07:00:00	154	.7	121		
19-NOV-2007 08:00:00	233	.7	147		
19-NOV-2007 09:00:00	120	.7	1		
19-NOV-2007 10:00:00	66	1.6	5		
19-NOV-2007 11:00:00	40	3.4	144		
19-NOV-2007 12:00:00	23	4.7	200		
19-NOV-2007 13:00:00	11	4.7	242		
19-NOV-2007 14:00:00	16	4.5	224		
19-NOV-2007 15:00:00	14	3.6	264		
19-NOV-2007 16:00:00	12	3.1	267		
19-NOV-2007 17:00:00	253	2.2	206		
19-NOV-2007 18:00:00	510	1.8	181		
19-NOV-2007 19:00:00	386	1.6	167		
19-NOV-2007 20:00:00	446	2.5	202		
19-NOV-2007 21:00:00	412	1.8	198		
19-NOV-2007 22:00:00	450	1.3	167		
19-NOV-2007 23:00:00	307	1.1	151		