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Benjamin H. Grumbles
Director

JUL 13 2009

Ms. Laura Yoshii, Acting Regional Administrator
U.S. Environmental Protection Agency, Region IX
Mail Code: ORA-1
75 Hawthorne Street
San Francisco, CA 94105

RE: Maintenance of the PM₁₀ NAAQS and Limited Maintenance Plan design values for the Payson PM₁₀ maintenance area – 2004 - 2008

Dear Ms. Yoshii:

The purpose of this letter is to provide EPA 2008 monitoring data for the Payson PM₁₀ maintenance area in order to:

1. Demonstrate that the area continues to meet the PM₁₀ national ambient air quality standards (NAAQS), and
2. Demonstrate that the area continues to meet the design value criteria for a Limited Maintenance Plan (LMP).

On February 7, 2002, the Arizona Department of Environmental Quality (ADEQ) submitted a LMP for the Payson PM₁₀ nonattainment area and a request for redesignation to attainment. Effective August 26, 2002 (67 FR 43020; June 26, 2002), EPA redesignated Payson to attainment for the 24-hour and revoked annual PM₁₀ NAAQS. As part of the LMP, ADEQ committed to monitor the area's air quality and submit annual reports to EPA regarding the air quality status of the Payson area.

The accompanying analysis demonstrates that the Payson PM₁₀ maintenance area continued to meet the LMP design value criteria in 2008 (see Enclosure 1). The ambient air concentrations, attached as Enclosure 2, demonstrate that the Payson PM₁₀ maintenance area continued to meet the 24-hour PM₁₀ NAAQS in 2008. This analysis is based on the five years of monitoring data beginning in 2004 and ending in 2008. Payson continues to qualify for a LMP.

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Ms. Yoshii
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If you have any questions regarding this submittal, please contact Nancy Wrona, Director, Air Quality Division, at (602) 771-2308 or Diane L. Arnst, Air Quality Planning Section Manager, at (602) 771-2375.

Sincerely,



Benjamin H. Grumbles
Director

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Enclosures (2)

cc: The Honorable Shirley Dawson, Chairman, Gila County Board of Supervisors
The Honorable Kenny Evans, Mayor, Town of Payson
Colleen McKaughan, EPA Region IX
Wienke Tax, EPA Region IX
Ray Erlandsen, Acting Community Development Director, Town of Payson
Debra Galbraith, Town Manager, Town of Payson
Steven Besich, Gila County
Joe Mendoza, Gila County

**Payson 2004-2008 PM₁₀ Design Values and
Demonstration for Continued Eligibility of Limited Maintenance Plan**

Arizona Department of Environmental Quality
Air Quality Division
1110 West Washington
Phoenix, AZ 85007

June 23, 2009

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Summary

EPA's *Limited Maintenance Plan (LMP) Option for Moderate PM₁₀ Nonattainment Areas* guidance requires an annual demonstration of the 24-hour PM₁₀ Design Value (DV) for each LMP area to determine if the area continues to meet the eligibility requirements for an LMP rather than a full maintenance plan.

Data from the five year period 2004-2008 were used to determine continued eligibility for the Payson PM₁₀ Maintenance Area. Data from this period demonstrate that Payson continued to meet EPA's 24-hour PM₁₀ Standard in 2008.

Procedure

The Air Quality System (AQS) database is checked to verify that sample data for each year of the selected period have been reported to the AQS. To satisfy EPA requirements, data completeness for each calendar quarter must be 75 percent or greater. If data completeness is between 50 percent and 75 percent for any quarter, a substitution procedure may be followed to enable use of the data for LMP compliance demonstration (see EPA's *Guideline on Exceptions to Data Requirements for Determining Attainment of the Particulate Matter Standards*.) If data completeness is less than 50 percent, use of data substitutions is prohibited.

Calculations should be based on the most recent five years of monitoring data, for this report the five-year period spans 2004-2008. Data from this period are then categorized into three-year periods, in this case 2004-2006, 2005-2007, and 2006-2008. To determine eligibility, data completeness for each of the three-year periods must be verified. After completeness has been verified, the highest 24-hour sample for each calendar quarter is identified. The highest sample of the four calendar quarters is then identified. Next, the highest sample for each year in the three-year period is identified. The highest of the three samples is then identified as the period's DV and selected for testing against the LMP limit, 98 ug/m³.

If the DV is equal to or less than 98 ug/m³, the maintenance area continues to qualify as an LMP. If the DV exceeds this limit, then the site-specific Critical Design Value (CDV) must be calculated (see Attachment A of the LMP guidance). If the DV is less than the CDV, the maintenance area still qualifies as an LMP.

Results

The highest 24-hour PM₁₀ values for each three-year period are listed in Table 1. The DV for the 5-year period of record is 81ug/m³, below the 98 ug/m³ criteria used to qualify for a LMP. Therefore, Payson remained eligible for LMP status in 2008.

3-Year period	24-hour Max (ug/m ³)
2004-2006	81
2005-2007	81
2006-2008	66
2004-2008 DV	81

References

1. EPA. *Guideline on Exceptions to Data Requirements for Determining Attainment of the Particulate Matter Standards*, 1987.
2. Chu, Shao-Hang, "Attachment A. Critical Design Value Estimation and Its Applications", EPA Memorandum: Limited Maintenance Plan Option for Moderate PM₁₀ Nonattainment Areas.

**Payson 24-hour PM₁₀ Standard Design Values
Three-Year Period Summary Statistics
AQS # 04-007-0008 AAAD # 16317**

Year	Quarter	No. of Days in Quarter	No. of Possible Samples	No. Of Actual Samples	% Data Completeness	Average PM ₁₀ (ug/m ³)	Max 24-hr. Sample	2nd Highest Sample	No. of Actual Exceedances	3-year Annual Average	Max 24-hr. Sample in 3-Year Period
2004-2006 Design Values											
2004	1	91	15	15	100	15.7	37	32	0		
	2	91	15	14	93	19.4	32	24	0		
	3	92	16	14	88	20.4	53	49	0		
	4	92	15	14	93	20.6	36	30	0		
	Annual			61	57	93	19.0	53	49	0	
2005	1	90	15	7	47	22.9	81	24	0		
	2	91	16	15	94	19.7	33	29	0		
	3	92	15	14	93	19.6	33	30	0		
	4	92	16	14	88	26.2	47	47	0		
	Annual			62	50	81				0	
2006	1	90	15	15	100	32.3	66	62	0		
	2	91	15	15	100	21.4	32	29	0		
	3	92	15	14	93	14.6	41	22	0		
	4	92	17	16	94	26.3	43	40	0		
	Annual			62	60	97	23.7	66	62	0	
										2004-2006 Design Value =	81

* EPA guidelines prohibit the use of data substitutions when completeness for a quarter is less than 50%. Calculation of the three-year annual average is not possible with incomplete data.
 For Q1 2005, less than 50% data completeness, use of substitutions is not an option.
 For Q2 2005, extra run on 6/13/05, so possible samples 16 instead of the scheduled 15.
 For Q4 2006 extra run on 11/15/06, so possible samples 17 instead of the scheduled 16.

**Payson 24-hour PM₁₀ Standard Design Values
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Year	Quarter	No. of Days in Quarter	No. of Possible Samples	No. Of Actual Samples	% Data Completeness	Average PM ₁₀ (ug/m ³)	Max 24-hr. Sample	2nd Highest Sample	# of Actual Exceedances	3-year Annual Average	Max 24-hr. Sample in 3-Year Period
2005-2007 Design Values											
2005	1	90	15	7	47	22.9	81	24	0		
	2	91	16	15	94	19.7	33	29	0		
	3	92	15	14	93	19.6	33	30	0		
	4	92	16	14	88	26.2	47	47	0		
	Annual		62	50	81					0	
2006	1	90	15	15	100	32.3	66	62	0		
	2	91	15	15	100	21.4	32	29	0		
	3	92	15	14	93	14.6	41	22	0		
	4	92	17	16	94	26.3	43	40	0		
	Annual		62	60	97	23.7	66	62	0		
2007	1	90	15	14	93	22.2	43	31	0		
	2	91	15	15	100	23.5	62	34	0		
	3	92	16	15	94	18.8	32	31	0		
	4	92	15	15	100	27.8	41	39	0		
	Annual		61	59	97	23.1	62	43	0		
										2005-2007 Design Value = * 81	

* EPA guidelines prohibit the use of data substitutions when completeness for a quarter is less than 50%. Calculation of the three-year average is not permitted with incomplete data.
 For Q1 2005 data completeness is less than 50%; EPA guidelines prohibit data substitutions when completeness is less than 50%.
 For Q2 2005 extra run on 6/13/05, so possible samples 16 instead of the scheduled 15.
 For Q4 2006 extra run on 1/15/06, so possible samples 17 instead of the scheduled 16.

**Payson 24-hour PM₁₀ Standard Design Values
Three-Year Period Summary Statistics
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Year	Quarter	No. of Days in Quarter	No. of Possible Samples	No. of Actual Samples	% Data Completeness	Average PM ₁₀ (ug/m ³)	Max 24-hr. Sample	2nd Highest Sample	No. of Actual Exceedances	3-year Annual Average	Max 24-hr. Sample in 3-Year Period
2006-2008 DESIGN VALUES											
2006	1	90	15	15	100	32.3	66	62	0		
	2	91	15	15	100	21.4	32	29	0		
	3	92	15	14	93	14.6	41	22	0		
	4	92	17	16	94	26.3	43	40	0		
	Annual		62	60	97	23.7	66	62	0		
2007	1	90	15	14	93	22.2	43	31	0		
	2	91	15	15	100	23.5	62	34	0		
	3	92	16	15	94	18.8	32	31	0		
	4	92	15	15	100	27.8	41	39	0		
	Annual		61	59	97	23.1	62	43	0		
2008	1	91	16	14	88	22.3	32	30	0		
	2	91	15	15	100	25.3	43	38	0		
	3	92	15	15	100	14.2	20	17	0		
	4	92	15	15	100	25.5	39	39	0		
	Annual		61	59	97	21.8	43	39	0		
										2006-2008 Design Value =	
										23	
										66	
For Q4 2006 extra run on 11/15/06, so possible samples 17 instead of the scheduled 16.											