UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 6
1445 ROSS AVENUE, SUITE 1200
DALLAS, TEXAS 75202 – 2733

March 22, 2018

Office of the Regional Administrator

Mr. Danny Nevarez
Deputy Director, Environmental Health Department
City of Albuquerque
Post Office Box 1293
Albuquerque, New Mexico 87103

Dear Mr. Nevarez:

This letter responds to the city of Albuquerque Exceptional Events Demonstrations, dated January 2, 2018. The demonstrations request to exclude Particulate Matter less than or equal to 10 micrometers in diameter (PM_{10}) data associated with exceptional event claims on March 22, 2016, March 29, 2016, and May 6, 2016. The city determined that the high wind dust event caused exceedances of the PM_{10} National Ambient Air Quality Standard level of 150 $\mu g/m^3$ at the South Valley ID 35-001-0029-81102-3 and Jefferson ID 35-001-0026-81102-1 monitors.

In 2016, the U.S. Environmental Protection Agency revised the Exceptional Events Rule (EER) found in sections 40 CFR 50.14 and 40 CFR 51.930. *See*, "Treatment of Data Influenced by Exceptional Events," 81 FR 68216 (Oct. 3, 2016). After careful consideration of the information provided, the EPA concurs, based on the weight of evidence, that the city of Albuquerque has met the applicable exceptional event demonstration requirements in 40 CFR 50.14(a)(2) and (b)(5). In addition, the city has met the schedule and procedural requirements in section 50.14(c). The EPA has reviewed the documentation provided to demonstrate the exceedances at the South Valley monitor on March 22, 2016, March 29, 2016, and May 6, 2016. We have determined that the criteria for an exceptional event under the EER has been met. The basis for our concurrence is set forth in the enclosed technical support documents. My staff will enter "concurrence flags" for these data into the EPA's Air Quality System data repository.

The 2016 rule revisions at 40 CFR 50.14(a)(1)(i) limit the applicability of the EER to NAAQS exceedances or violations which have relevance to specific regulatory determinations made by the EPA. The 24-Hour PM_{10} measurements at the Jefferson monitor on March 22, 2016, and May 6, 2016, monitor do not currently have regulatory significance due to the lack of PM_{10} exceedances at this monitor in 2014, 2015, and 2017. The EPA will retain these demonstrations should any of these data become significant for a future regulatory action.

The EPA concurrence is a preliminary step in the regulatory process for actions that may rely on the dataset containing the event-influenced data and does not constitute final agency action. If the EPA takes a regulatory action that is affected by exclusion of the subject data, the EPA will publish notice of its proposed action in the Federal Register. The EPA's concurrence letter and accompanying technical

support document will be included in the record as part of the technical basis for that proposal. When the EPA issues that regulatory action, it will be a final agency action subject to judicial review.

If you have any questions or wish to discuss this matter further, please have your staff contact Ms. Frances Verhalen, Air Monitoring/Grants Section Chief, at (214) 665-2172.

Sincerely,

Anne L. Idsal
Regional Administrator

Enclosures

Technical Review of March 22, 2016, PM_{10} Exceptional Events Demonstration for the South Valley and Jefferson monitoring sites by the City of Albuquerque, dated January 2, 2018

Introduction

The U.S. Environmental Protection Agency (EPA) promulgated the Exceptional Events Rule (EER) in 2007 (*See*, 72 FR 13560, March 22, 2007) hereafter referred to as "EER of 2007," pursuant to the 2005 amendment of the Clean Air Act Section 319. The EER of 2007 was in effect until September 30, 2016, when a revised EER was issued (See, 81 FR 68216, October 3, 2016) hereafter referred to as "EER of 2016." This Exceptional Event Demonstration hereafter referred to as "demonstration," was submitted in accordance with the EER of 2016 on January 2, 2018.

As a requirement of the EER of 2016, data claimed to be due to an exceptional event must be flagged in the EPA Air Quality System (AQS) database, an initial notification of the event shall be provided to the EPA, and notice and opportunity for public input must occur. Failure to meet these criteria will result in non-concurrence with the flagging of the measured National Ambient Air Quality Standard (NAAQS) exceedance(s). The City of Albuquerque flagged the subject exceedances in AQS with "High Winds" or "RJ" qualifier flags and provided EPA with an initial notification of the exceedances dated January 23, 2017. As part of the Initial Notification of Potential Exceptional Event process, the regulatory significance of the exceedances was reviewed and the City of Albuquerque was informed that only some of the exceedances currently have regulatory significance.

After considering the weight of evidence provided in the demonstration, the EPA will decide to concur or not to concur with each flag. In accordance with 40 CFR §50.14(c)(3), a demonstration to justify data exclusion must include:

- A narrative conceptual model;
- Evidence there was a clear causal relationship;
- Analyses comparing event influenced concentration(s) to other concentrations at the monitor(s);
- Evidence the event was not reasonably controllable or preventable;
- Evidence the event was caused by human activity unlikely to recur at a particular location or was a natural event;
- Records of a public comment period lasting at least 30-days;
- Copies of comments received; and
- Response to comments received.

We address these criteria below. Should the air agency be unable to demonstrate even one of these criteria as set forth in the EER of 2016, we must non-concur on the air agency's exceptional events package.

All times discussed below are in Mountain Standard Time (MST) also known as Local Standard Time (LST). Measurements from regulatory monitors entered into AQS by air agencies reflect an area's Standard Time rather than daylight savings time. Communities in New Mexico use Daylight Saving Time from March 11 to November 4.

(1) **A narrative conceptual model that describes the event(s) causing the exceedance or violation and a discussion of how emissions from the event(s) led to the exceedance or violation at the affected monitor(s)**

According to 40 CFR §50.14(c)(3)(iv)(A), the demonstration to justify data exclusion shall provide a narrative conceptual module that describes the event and how emissions from the event led to the exceedances at the affected monitors. In the 'Analysis Preamble' section of the demonstration, the City of Albuquerque provided a summary of the event and overview of the technical information in subsequent sections of the demonstration.

The exceedances occurred on March 22, 2016, hereafter referred to as the "exceedance day", at two monitoring sites located in the City of Albuquerque, Bernalillo County, New Mexico. The City of Albuquerque is the air agency which operates the monitors at these sites. The exceedances were measurements above the National Ambient Air Quality Standard (NAAQS) level of 150 micrograms per cubic meter ($\mu g/m^3$) for particulate matter with an aerodynamic diameter less than or equal to a nominal 10 micrometers (PM_{10}) using an averaging time of 24 hours. The relevant monitors and exceedances are:

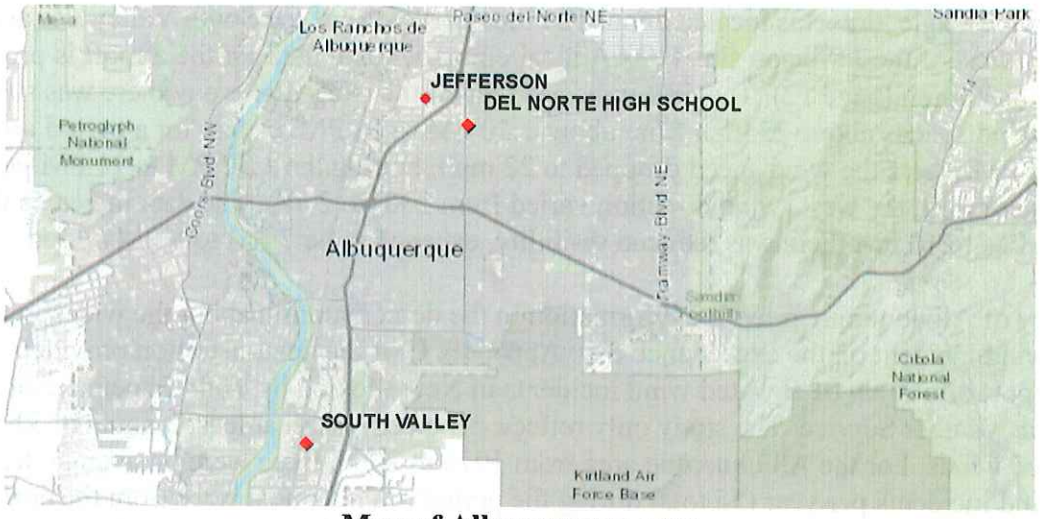
Site Name	Monitor	Exceedance, Measurement
South Valley, 2ZV	AQS ID 35-001-0029-81102-3	240.5 $\mu g/m^3$
Jefferson, 2ZS	AQS ID 35-001-0026-81102-1	191.8 $\mu g/m^3$

The City of Albuquerque claims the subject exceedances were caused by a High Wind Dust Event. A High Wind Dust Event is defined by 40 CFR §50.1(p) as an event that includes the high speed wind and the dust that the wind entrains and transports to a monitoring site.

(2) **A demonstration that the event affected air quality in such a way that there exists a clear causal relationship between the specific event and the monitored exceedance or violation**

According to 40 CFR §50.14(c)(3)(iv)(B), the demonstration to justify data exclusion shall provide evidence that there was a clear causal relationship between the measurement under consideration and the event claimed to have affected the air quality in the area. In accordance with 40 CFR §50.14(b)(5)(i), the City of Albuquerque must demonstrate that the claimed High Wind Dust Event caused the relevant concentrations to justify exclusion of data under this event type.

The City of Albuquerque operates three PM_{10} monitors in Bernalillo County (South Valley, Jefferson, and Del Norte High School AQS ID 35-001-0023). The Jefferson site is located about 9 miles north and east of the South Valley site. The Del Norte site is about 1 mile east and south of the Jefferson site. Ambient air monitors outside of Bernalillo County are operated by New Mexico Environment Department.



Map of Albuquerque area

The demonstration includes copies of news media reports of a health alert (page 17) and weather reports (pages 2-7) issued on the exceedance day.

The City of Albuquerque indicates in the demonstration (page 1) that the National Weather Service (NWS) announced a High Wind Warning on the exceedance day, and reported area wind gusts in the range of 60-75 miles per hour (mph). The City of Albuquerque provided a copy of the NWS table of 'Monthly/Daily Climate Data' for the Albuquerque area during March 2016 (page 11). The latitude and longitude information on the table indicates a location on or near the Albuquerque International Airport. The table indicated a "dust storm or sand storm" occurred on the exceedance day with maximum hourly wind speed of 41 mph and gust of 53 mph.

The City of Albuquerque states the elevated area winds lasted about 11 hours from approximately 1 PM to 11:59 PM on the exceedance day. The maximum hourly wind speeds measured at the South Valley and Jefferson sites on the exceedance day were 22 and 26 mph, respectively.

The demonstration (pages 14-15) provides information from the National Oceanic and Atmospheric Administration (NOAA) National Centers for Environmental Information Storm Event Database about a 'strong wind' and 'high wind' incident which occurred in and near Albuquerque area on the exceedance day. The information indicated the area experienced persistent wind gusts near 55 mph.

The Albuquerque International Airport (also known as Albuquerque Sunport Airport) is about 2.5 miles northeast of the South Valley site. NOAA local climatological data for the airport is provided in the demonstration (pages 10 and 13). The data shows that on the exceedance day there was sustained hourly wind speeds above 25 mph from about 12:30 PM to 11:30 PM. During this period, the winds were from the west (wind direction varied from 240° to 270°, or west-southwest to west). The data also indicates that between about 1 PM and 6 PM there was reduced visibility and an observation of 'Dust, volcanic ash, blowing dust, blowing sand or…obstruction' (Weather Type DU).

The Double Eagle airport is located about 12 miles northwest of the South Valley site and about 10 miles west of the Jefferson site. NOAA local climatological data for the airport is provided in the demonstration (page 12). The data indicates that on the exceedance day there was sustained hourly wind speeds above 25 mph from about 1:30 PM to 11 PM, except for a period around 7 PM to 8 PM where the wind speed dropped to 22 mph. During the 1:30 PM to 11 PM period, the winds were from the west (wind direction varied from 230° to 270°). The data indicates that from about 2 PM to 10 PM there was reduced visibility, except for the 7 PM to 8 PM period.

The City of Albuquerque provided information in the demonstration about the widespread nature of the wind incident on the exceedance day. Appendix C of the demonstration provided a May 2010 report of a study of elevated wind incidents in New Mexico by Todd Shoemake of the National Weather Service. The study only reflected incidents with at least 3 hours of 31 mph sustained winds. For the Albuquerque area from 1976 to 2005, there were on average less than 2 such wind incidents per year (55 total during the period). While most were from the east, some came from the west. The incidents from the west were generally associated with "more dynamic weather events…most frequently in the winter and spring months as deep upper level troughs of low pressure sweep across the southwestern states…" or "caused by…pressure gradients and momentum aloft mixed to the surface…" and "strictly observed in the late afternoon to early evening hours."

The demonstration (pages 27-28) includes wind rose graphs which superimposed wind speed, wind direction, and PM_{10} measurements at the monitor sites. Graphs were also included of wind speed and PM_{10} measurements (pages 29-30).

The City of Albuquerque provided independent weather reports, evidence of visibility impairment from blowing dust, and hourly wind data which showed that on the exceedance day the area experienced a wind incident with entrained particulate matter. The demonstration showed that elevated hourly PM_{10} measurements at the monitors correlated with elevated wind speeds measured on the exceedance day both at the monitor sites and at nearby weather stations. Based on the EPA review of the clear causal relationship criterion using a weight of evidence approach, the City of Albuquerque sufficiently showed that a High Wind Dust Event clearly caused the PM_{10} exceedances at the monitors on the exceedance day.

(3) Analyses comparing the claimed event-influenced concentration(s) to concentrations at the same monitoring site at other times to support the clear causal relationship requirement

According to 40 CFR §50.14(c)(3)(iv)(C), the demonstration to justify data exclusion shall provide an analyses of the exceedance compared to measurements at the same monitor at other times. An air agency does not need to prove a specific percentile point in the distribution data, nor that the exceedance was higher than all historical concentrations at the monitor. The demonstration should compare the ambient pollutant concentrations in question to the historical distribution of concentrations of the same pollutant at the same monitoring site to help determine whether a deviation from normal concentrations occurred.

In the demonstration, the City of Albuquerque states an 'historical data evaluation estimates the potential for any given day to exceed the standard at [sic] either of the two sites as 0.5% or less.' The City of Albuquerque goes on to state that while considering data from full calendar years, there is only a 0.5% chance that a value greater than 85% of the PM_{10} NAAQS will occur, and an evaluation limited to storm events (NOAA Storm Events Database) only increases the chance to 17%. The demonstration also included a table for each monitor, which provides various annual percentile frequency distribution, up to 99% percentile, of PM_{10} 24-hour measurements during March for the years 2012 to 2016 (page 49). Data points in the table did not exceed the PM_{10} NAAQS level of 150 $\mu g/m^3$.

A table was provided in the demonstration of a subset days between 2011 and 2016 with data points of maximum short term hourly wind speeds measured at the monitor sites and longer term PM_{10} 24-hour average measurements at the monitor sites (pages 34-35). The City of Albuquerque indicates only "a very small percentage" of short duration elevated winds, i.e., one hour, result in exceedances or near exceedances of the PM_{10} 24-hour NAAQS. On the exceedance day, however, the City of Albuquerque states a "long term significant event", i.e., hours of elevated winds, occurred. Also, the City of Albuquerque states the "primary reason" for the exceedances was the widespread nature of the elevated winds which "impacted a large area of the state".

The City of Albuquerque indicates in the demonstration some level of drought or abnormally dry condition existed for most of Bernalillo county prior to the wind incident on the exceedance day. The demonstration included a graph of percentiles and 1 hour measurements at the monitors during March for the years 2012 to 2016 (page 51). The City of Albuquerque interprets the graph as showing a "clear separation" of 2016 highest hourly monitor measurements from prior years. EPA understands that the City of Albuquerque considers 2016 to be an unusual year for elevated hourly PM_{10} measurements at the South Valley and Jefferson monitors.

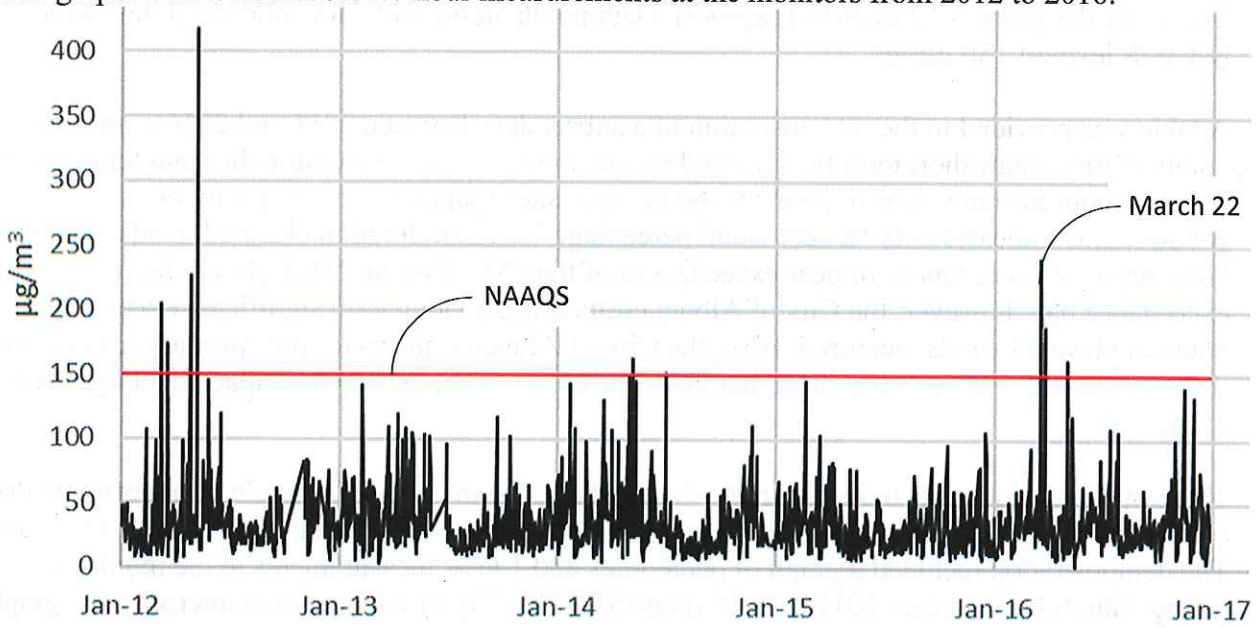
The tables below reflect the instances from 2012 to 2016 where the PM_{10} monitors had a 24-hour measurement above the NAAQS level of 150 $\mu g/m^3$.

South Valley PM_{10} Monitor, 35-001-0029-81102-3		
Date	24-Hour Measurements above NAAQS level	EE Demonstration Status
05/07/2012	418 $\mu g/m^3$	Concurred
03/22/2016	**240** $\mu g/m^3$	Under Review
04/26/2012	227 $\mu g/m^3$	Concurred
03/08/2012	205 $\mu g/m^3$	n/a*
03/29/2016	187 $\mu g/m^3$	Under Review
03/18/2012	174 $\mu g/m^3$	Concurred
05/07/2014	163 $\mu g/m^3$	Concurred
05/06/2016	161 $\mu g/m^3$	Under Review
07/01/2014	152 $\mu g/m^3$	n/a*

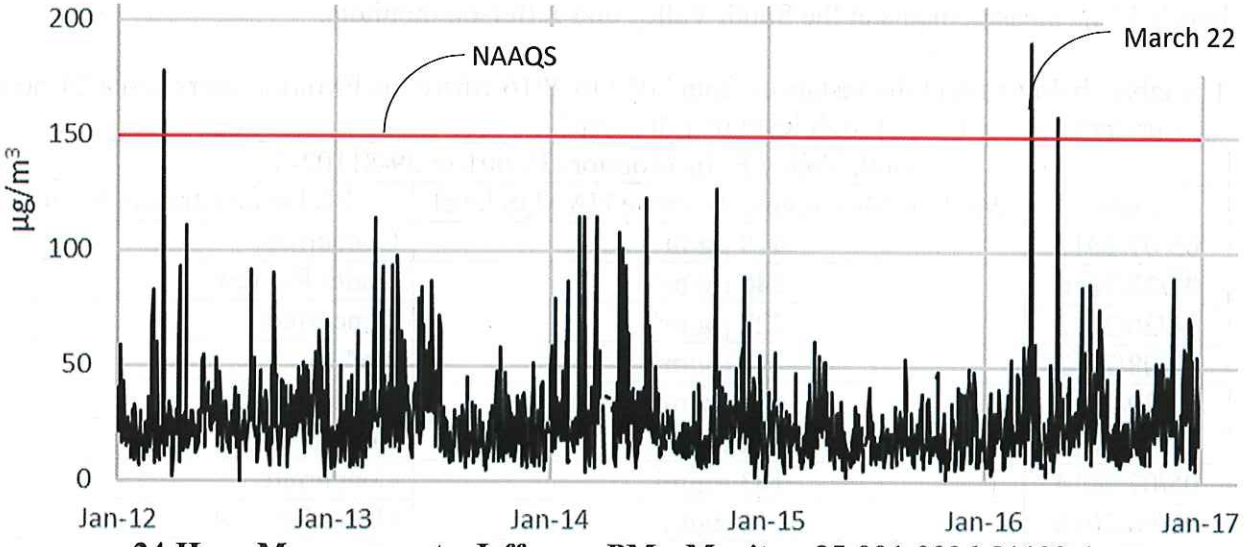
*No Exceptional Event Demonstration submitted by air agency

Jefferson PM_{10} Monitor, 35-001-0026-81102-1		
Date	24-Hour Measurements above NAAQS level	EE Demonstration Status
03/22/2016	**192 µg/m³**	Under Review
03/18/2012	178 µg/m³	Concurred
05/06/2016	159 µg/m³	Under Review

The graphs below reflect the 24-hour measurements at the monitors from 2012 to 2016.



24-Hour Measurements, South Valley PM_{10} Monitor, 35-001-0029-81102-3



24-Hour Measurements, Jefferson PM_{10} Monitor, 35-001-0026-81102-1

Based on the analyses and statistics, the comparison of the exceedances to the historical concentrations of PM_{10} at these monitors indicates a deviation from normal concentrations occurred and supports the clear causal relationship between the monitored exceedances and the wind incident on the exceedance day.

(4) A demonstration that the event was both not reasonably controllable and not reasonably preventable

According to 40 CFR §50.14(c)(3)(iv)(D), the demonstration to justify data exclusion shall provide evidence that the event was both not reasonably controllable and not reasonably preventable.

Reasonably Preventable - In accordance with 40 CFR §50.14(b)(5)(iv), the air agency will not be required to provide case-specific evidence the event was not reasonably preventable for a High Wind Dust Event. The City of Albuquerque showed that a High Wind Dust Event clearly caused the exceedances and therefore the city was not required to provide evidence for the reasonably preventable criterion.

Reasonably Controllable, Natural Undisturbed Land Sources - A High Wind Threshold is defined at 40 CFR §50.1 as the minimum wind speed capable of causing particulate matter emissions from natural undisturbed lands in the area affected by a High Wind Dust Event. In accordance with 40 CFR §50.14(b)(5)(iii) and absent an area-specific alternative threshold, EPA will accept a high wind threshold of a sustained wind of 25 mph as the minimum wind speed capable of causing PM emissions from natural undisturbed lands located in the Albuquerque area. As stated in the preamble to the EER of 2016 (81 FR 68257-68258), the High Wind Threshold clarified the "level of evidence needed to demonstrate not reasonably controllable" and "should be representative of conditions that are capable of overwhelming reasonable controls…on anthropogenic sources and/or causing emissions from natural undisturbed areas."

Currently, commercial and residential development extends to about 4 and 7 miles west of the South Valley and Jefferson sites, respectively. Beyond the developed land boundary and to the west, the lands are essentially natural and undisturbed arid lands. About 3 miles to the east of the South Valley site, are more natural arid lands. The City of Albuquerque showed that on the exceedance day, area winds were sustained above the High Wind Threshold, and therefore emissions from undeveloped lands in the area could not have been reasonably controllable.

Reasonably Controllable, Anthropogenic Sources - The demonstration indicates the dominant source of particulate matter near the South Valley site is anthropogenic, i.e., residential and small commercial properties. Other anthropogenic sources include recreational vehicle usage to the east and active agricultural lands to the north and south. The Jefferson site has light commercial properties to the north, south and east, and three permitted aggregate facilities to the west.

A copy of a City of Albuquerque public service announcement was included in the demonstration. The announcement (page 16) was issued on the exceedance data at 10:24 am and alerted contractors to be prepared to shut down operations in the afternoon due to wind. The city also provided a copy of the follow-up contractor shutdown notification issued at 2:30 PM (page 18). The demonstration included a copy of a health alert issued by the city at noon on the exceedance day. The city indicated in the demonstration that city personnel responded to six dust complaints from the event and oversaw compliance with dust permits issued to businesses and contractors in the area during the event.

The demonstration includes information about fugitive dust controls and enforcement of the controls for potentially contributing anthropogenic sources in the area. Based on the implementation of the controls and sustained area winds above the High Wind Threshold, the demonstration sufficiently showed that potentially contributing anthropogenic activities were reasonably controlled on the exceedance day.

Reasonably Controllable, Mitigation Plan - In accordance with 40 CFR 51.930, air agencies are required to develop and submit Mitigation Plans for areas with known, recurring events. EPA expects such Mitigation Plans will assist air agencies in satisfying the not reasonable controllable criterion. EPA used the EER of 2016 promulgation to provide written notice to air agencies with areas initially subject to the Mitigation Plan requirements. EPA did not notify the City of Albuquerque that Bernalillo County is subject to the requirement. Therefore, the concurrence prohibition of 40 CFR 50.14(b)(9) is not applicable to this demonstration.

(5) **A demonstration that the event was a human activity that is unlikely to recur at a particular location or was a natural event**

According to 40 CFR §50.14(c)(3)(iv)(E), the demonstration to justify data exclusion must provide evidence that the event was a human activity unlikely to recur or was a natural event. In accordance with 40 CFR §50.14(b)(5)(ii) and (b)(8)(iii) and (viii), a High Wind Dust Event is considered a natural event if the demonstration shows all anthropogenic sources are reasonably controlled, and identifies sources, control measures, and provides evidence of control measure implementation.

The demonstration showed that a High Wind Dust Event clearly caused the exceedances. The demonstration also identified potentially contributing anthropogenic activities and showed the city oversaw compliance of the reasonable controls implemented at the time of the exceedance. Therefore, the High Wind Dust Event that occurred on the exceedance day is considered a natural event.

(6) **Documentation that the State followed the public comment process and conducted at least a 30-day comment period**

According to 40 CFR §50.14(c)(3)(v)(A), the demonstration to justify data exclusion will provide evidence that the air agency followed the public comment process and conducted a 30-day comment period. The City of Albuquerque provided records of the comment period for the demonstration. The comment period was open for more than 30 days, i.e., November 21, 2017, through January 2, 2018.

(7) **Submit the public comments with the demonstration**

According to 40 CFR §50.14(c)(3)(v)(B), the demonstration to justify data exclusion will provide copies of the comments during the comment period. The City of Albuquerque did not receive comments.

(8) Address in the demonstration those comments disputing or contradicting factual evidence provided in the demonstration

According to 40 CFR §50.14(c)(3)(v)(C), the demonstration to justify data exclusion will address comments received during the comment period. The City of Albuquerque did not receive comments.

Technical Review of March 29, 2016, PM_{10} Exceptional Events Demonstration for the South Valley monitoring site by the City of Albuquerque, dated January 2, 2018

Introduction

The U.S. Environmental Protection Agency (EPA) promulgated the Exceptional Events Rule (EER) in 2007 (*See*, 72 FR 13560, March 22, 2007) hereafter referred to as "EER of 2007", pursuant to the 2005 amendment of the Clean Air Act Section 319. The EER of 2007 was in effect until September 30, 2016, when a revised EER was issued (*See*, 81 FR 68216, October 3, 2016) hereafter referred to as "EER of 2016". This Exceptional Event Demonstration hereafter referred to as "demonstration", was submitted in accordance with the EER of 2016 on January 2, 2018.

As a requirement of the EER of 2016, data claimed to be due to an exceptional event must be flagged in the EPA Air Quality System (AQS) database, an initial notification of the event shall be provided to the EPA, and notice and opportunity for public input must occur. Failure to meet these criteria will result in non-concurrence with the flagging of the measured National Ambient Air Quality Standard (NAAQS) exceedance(s). The City of Albuquerque flagged the subject exceedance in AQS with "High Winds" or "RJ" qualifier flags and provided EPA with an initial notification of the exceedance dated January 23, 2017. As part of the Initial Notification of Potential Exception Event process, the regulatory significance of the exceedance was reviewed and the City of Albuquerque was informed that only some of the exceedance currently have regulatory significance.

After considering the weight of evidence provided in the demonstration, the EPA will decide to concur or not to concur with each flag. In accordance with 40 CFR §50.14(c)(3), a demonstration to justify data exclusion must include:

- A narrative conceptual model;
- Evidence there was a clear causal relationship;
- Analyses comparing event influenced concentration(s) to other concentrations at the monitor(s);
- Evidence the event was not reasonably controllable or preventable;
- Evidence the event was caused by human activity unlikely to recur at a particular location or was a natural event;
- Records of a public comment period lasting at least 30-days;
- Copies of comments received; and
- Response to comments received.

We address these criteria below. Should the air agency be unable to demonstrate even one of these criteria as set forth in the EER of 2016, we must non-concur on the air agency's exceptional events package.

All times discussed below are in Mountain Standard Time (MST) also known as Local Standard Time (LST). Measurements from regulatory monitors entered into AQS by air agencies reflect an area's standard time rather than daylight savings time. Communities in New Mexico use daylight saving time from March 11 to November 4.

(1) **A narrative conceptual model that describes the event(s) causing the exceedance or violation and a discussion of how emissions from the event(s) led to the exceedance or violation at the affected monitor(s)**

According to 40 CFR §50.14(c)(3)(iv)(A), the demonstration to justify data exclusion shall provide a narrative conceptual module that describes the event and how emissions from the event led to the exceedance at the affected monitors. In the "Analysis Preamble" section of the demonstration, the City of Albuquerque provided a summary of the event and overview of the technical information in subsequent sections of the demonstration.

The exceedance occurred on March 29, 2016, hereafter referred to as the "exceedance day", at a monitoring site located in the City of Albuquerque, Bernalillo County, New Mexico. The City of Albuquerque is the air agency which operates the PM_{10} monitor at the site. The exceedance were measurements above the National Ambient Air Quality Standard (NAAQS) level of 150 micrograms per cubic meter ($\mu g/m^3$) for particulate matter with an aerodynamic diameter less than or equal to a nominal 10 micrometers (PM_{10}) using an averaging time of 24 hours. The relevant site, monitor and exceedance are:

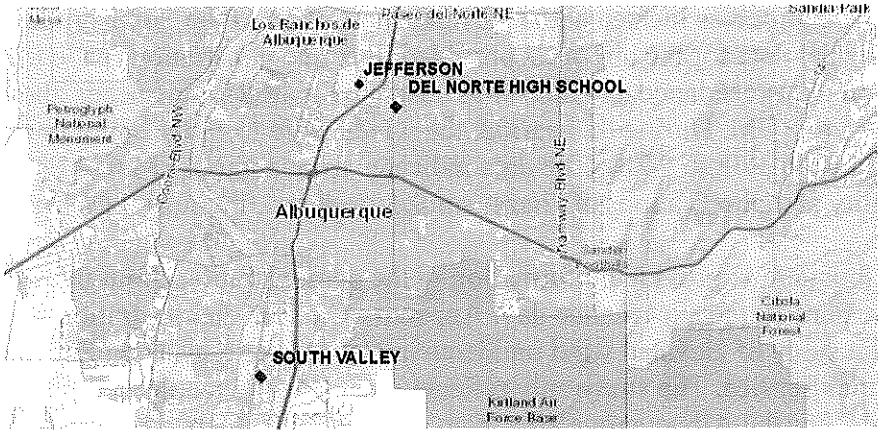
Site Name	Monitor	Exceedance, Measurement
South Valley, 2ZV	AQS ID 35-001-0029-81102-3	187 $\mu g/m^3$

The City of Albuquerque claims the subject exceedance was caused by a High Wind Dust Event. A High Wind Dust Event is defined by 40 CFR §50.1(p) as an event that includes the high speed wind and the dust that the wind entrains and transports to a monitoring site.

(2) **A demonstration that the event affected air quality in such a way that there exists a clear causal relationship between the specific event and the monitored exceedance or violation**

According to 40 CFR §50.14(c)(3)(iv)(B), the demonstration to justify data exclusion shall provide evidence that there was a clear causal relationship between the measurement under consideration and the event claimed to have affected the air quality in the area. In accordance with 40 CFR §50.14(b)(5)(i), the City of Albuquerque must demonstrate that the claimed High Wind Dust Event caused the relevant concentration to justify exclusion of data under this event type.

The City of Albuquerque operates three PM_{10} monitors in Bernalillo County (South Valley, Jefferson, and Del Norte High School AQS ID 35-001-0023). The Jefferson site is located about 9 miles north and east of the South Valley site. The Del Norte site is about 1 mile east and south of the Jefferson site. Ambient air monitors outside of Bernalillo County are operated by New Mexico Environment Department.



Map of Albuquerque area

The demonstration includes copies of news media reports of a health alert (page 14) and weather reports (pages 2-4) issued on the exceedance day.

The City of Albuquerque indicates in the demonstration (page 1) that the National Weather Service (NWS) announced a High Wind Warning on the exceedance day, and reported area wind gusts in the range of 55-65 miles per hour (mph). The City of Albuquerque provided a copy of the NWS table of "Monthly/Daily Climate Data" for the Albuquerque area during March 2016 (page 7). The latitude and longitude information on the table indicates a location on or near the Albuquerque International Airport. The table indicated a "dust storm or sand storm" occurred on the exceedance day with maximum hourly wind speed of 39 mph and gust of 49 mph.

The City of Albuquerque states the elevated area winds lasted about 10 hours from approximately 9 AM to 6:59 PM on the exceedance day (page 1). The maximum hourly wind speed measured at the South Valley site on the exceedance day was 30 mph.

The demonstration (pages 10-11) provides information from the National Oceanic and Atmospheric Administration (NOAA) National Centers for Environmental Information Storm Event Database about a "high wind" incident which occurred on the exceedance day for the areas known as the "Southwest Mountains" (located more than 100 miles southwest of Albuquerque) and "Sandia/Manzano Mountains" (located directly east of the City of Albuquerque). The information indicated the areas experienced sustained high winds and blowing dust which impaired visibility.

The Albuquerque International Airport (also known as Albuquerque Sunport Airport) is about 2.5 miles northeast of the South Valley site. NOAA local climatological data for the airport is provided in the demonstration (page 9, pages 5-6). The data shows that on the exceedance day there was sustained hourly wind speeds above 25 mph from about 8:30 AM to 5:30 PM, except for a few hours with wind speeds of 23 and 24 mph. During this period, the winds were from the south to southwest (wind direction varied from 180° to 220°). The data also indicates that between about 1:30 PM and 2:30 PM there was reduced visibility. There were observations of "Dust, volcanic ash, blowing dust, blowing sand or…obstruction" (Weather Type DU) from about 1:30 PM to 6 PM.

The Double Eagle airport is located about 12 miles northwest of the South Valley site. NOAA local climatological data for the airport is provided in the demonstration (page 8). The data indicates that on the exceedance day there was sustained hourly wind speeds above 25 mph from about 10:30 AM to 6 PM. During this period, the winds were from the south to southwest (wind direction varied from 170° to 240°). The data indicates from about 2 PM to 4 PM there was reduced visibility and observations of "haze, smoke, or dust… in the air" (Weather Type HZ).

The City of Albuquerque provided information in the demonstration about the widespread nature of the wind incident on the exceedance day. Appendix C of the demonstration provided a May 2010 report of a study of elevated wind incidents in New Mexico by Todd Shoemake of the National Weather Service. The study only reflected incidents with at least 3 hours of 31 mph sustained winds. For the Albuquerque area from 1976 to 2005, there were on average less than 2 such wind incidents per year (55 total during the period). While most were from the east, some came from the west. The incidents from the west were generally associated with "more dynamic weather events…most frequently in the winter and spring months as deep upper level troughs of low pressure sweep across the southwestern states…" or "caused by…pressure gradients and momentum aloft mixed to the surface…" and "strictly observed in the late afternoon to early evening hours."

The demonstration (page 20) includes wind rose graphs which superimposed wind speed, wind direction, and PM_{10} measurements at the monitor site. Graphs were also included of wind speed and PM_{10} measurements (page 21).

The City of Albuquerque provided independent weather reports, evidence of visibility impairment from blowing dust, and hourly wind data which showed that on the exceedance day the area experienced a wind incident with entrained particulate matter. The demonstration showed that elevated hourly PM_{10} measurements at the South Valley monitor correlated with elevated wind speeds measured on the exceedance day both at the monitor site and at nearby weather stations. Based on the EPA review of the clear causal relationship criterion using a weight of evidence approach, the City of Albuquerque sufficiently showed that a High Wind Dust Event clearly caused the PM_{10} exceedance at the South Valley site on the exceedance day.

(3) Analyses comparing the claimed event-influenced concentration(s) to concentrations at the same monitoring site at other times to support the clear causal relationship requirement

According to 40 CFR §50.14(c)(3)(iv)(C), the demonstration to justify data exclusion shall provide an analyses of the exceedance compared to measurements at the monitor at other times.

In the demonstration, the City of Albuquerque states an "historical data evaluation estimates the potential for any given day to exceed the standard at [sic] either of the two sites as 0.5% or less." The demonstration also included a table for the monitor (page 38), which provides various annual percentile frequency distribution, up to 99% percentile, of PM_{10} 24-hour measurements during March for the years 2012 to 2016. Data points in the table did not exceed the PM_{10} NAAQS level of 150 $\mu g/m^3$.

A table was provided in the demonstration (pages 25-26) of a subset of days between 2011 and 2016 with data points of maximum short term hourly wind speeds measured at the monitor sites and longer term PM_{10} 24-hour average measurements at the monitor sites. The City of Albuquerque indicates "a very small percentage" of short duration elevated winds, i.e., one hour, result in exceedances or near exceedances of the PM_{10} 24-hour NAAQS. On the exceedance day, however, the City of Albuquerque states a "long term significant event", i.e., hours of elevated winds, occurred. Also, the City of Albuquerque states the "primary reason" for the exceedance was the widespread nature of the elevated winds which "impacted a large area of the state".

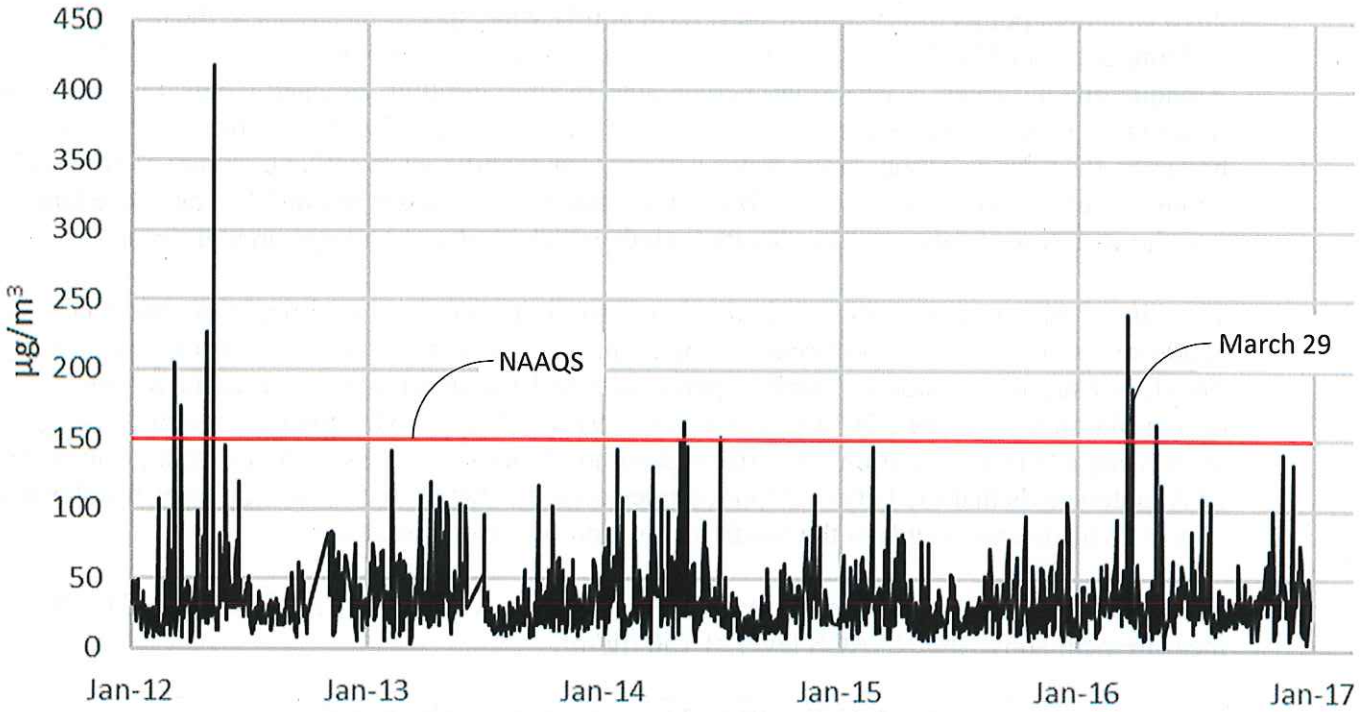
The City of Albuquerque indicates in the demonstration some level of drought or abnormally dry condition existed for most of Bernalillo county prior to the wind incident on the exceedance day. The demonstration included a graph of percentiles and 1 hour measurements at the monitor during March for the years 2012 to 2016 (page 39). The City of Albuquerque interprets the graph as showing a "clear separation" of 2016 highest hourly monitor measurements from prior years. EPA understands that the City of Albuquerque considers 2016 to be an unusual year for elevated hourly PM_{10} measurements at the South Valley and Jefferson monitors.

The table below reflects the instances from 2012 to 2016 where PM_{10} monitors had a 24-hour measurement above the NAAQS level of 150 $\mu g/m^3$.

South Valley PM_{10} Monitor, 35-001-0029-81102-3		
Date	24-Hour Measurements above NAAQS level	EE Demonstration Status
05/07/2012	418 $\mu g/m^3$	Concurred
03/22/2016	240 $\mu g/m^3$	Under Review
04/26/2012	227 $\mu g/m^3$	Concurred
03/08/2012	205 $\mu g/m^3$	n/a*
03/29/2016	**187 $\mu g/m^3$**	Under Review
03/18/2012	174 $\mu g/m^3$	Concurred
05/07/2014	163 $\mu g/m^3$	Concurred
05/06/2016	161 $\mu g/m^3$	Under Review
07/01/2014	152 $\mu g/m^3$	n/a*

*No demonstration submitted by air agency

The graph below reflects the 24-hour measurements at the monitor from 2012 to 2016.



24-Hour Measurements, South Valley PM_{10} Monitor, 35-001-0029-81102-3

Based on the analyses and statistics, the comparison of the exceedance to the historical concentrations of PM_{10} at this monitor indicates a deviation from normal concentrations occurred and supports the clear causal relationship between the monitored exceedance and the wind incident on the exceedance day.

(4) **A demonstration that the event was both not reasonably controllable and not reasonably preventable**

According to 40 CFR §50.14(c)(3)(iv)(D), the demonstration to justify data exclusion shall provide evidence that the event was both not reasonably controllable and not reasonably preventable.

Reasonably Preventable - In accordance with 40 CFR §50.14(b)(5)(iv), the air agency will not be required to provide case-specific evidence the event was not reasonably preventable for a High Wind Dust Event. The City of Albuquerque showed that a High Wind Dust Event clearly caused the exceedance and therefore the city was not required to provide evidence for the reasonably preventable criterion.

Reasonably Controllable, Natural Undisturbed Land Sources - A High Wind Threshold is defined at 40 CFR §50.1 as the minimum wind speed capable of causing particulate matter emissions from natural undisturbed lands in the area affected by a High Wind Dust Event. In accordance with 40 CFR §50.14(b)(5)(iii) and absent an area-specific alternative threshold, EPA

will accept a high wind threshold of a sustained wind of 25 mph as the minimum wind speed capable of causing PM emissions from natural undisturbed lands located in the Albuquerque area. As stated in the preamble to the EER of 2016 (81 FR 68257-68258), the High Wind Threshold clarified the "level of evidence needed to demonstrate not reasonably controllable" and "should be representative of conditions that are capable of overwhelming reasonable controls…on anthropogenic sources and/or causing emissions from natural undisturbed areas".

Currently, commercial and residential development extends to about 4 miles west of the South Valley site. Beyond the developed land boundary and to the west, the lands are essentially natural and undisturbed arid lands. About 3 miles to the east of the South Valley site, are more natural arid lands. The City of Albuquerque showed that on the exceedance day, area winds were sustained above the High Wind Threshold, and therefore emissions from undeveloped lands in the area could not have been reasonably controllable.

Reasonably Controllable, Anthropogenic Sources - The demonstration indicates the dominant source of particulate matter near the South Valley site is anthropogenic, i.e., residential and small commercial properties. Other anthropogenic sources include recreational vehicle usage to the east and active agricultural lands to the north and south.

A copy of a City of Albuquerque public service announcement was included in the demonstration. The announcement (page 12) was issued on the exceedance data at 10:21 am and alerted contractors to be prepared to shut down operations in the afternoon due to wind. The city also provided a copy of the follow-up contractor shutdown notification issued at 12:15 PM (page 13). The demonstration included a copy of a health alert issued by the city at 1:10 PM on the exceedance day (page 14). The city indicated in the demonstration that city personnel which respond to dust complaints did not receive any complaints on the exceedance day. The City of Albuquerque mobilized staff to oversee compliance with dust permits issued to businesses and contractors in the area during the event.

The demonstration includes information about fugitive dust controls and enforcement of the controls for potentially contributing anthropogenic sources in the area. Based on the implementation of the controls and sustained area winds above the High Wind Threshold, the demonstration sufficiently showed that potentially contributing anthropogenic activities were reasonably controlled on the exceedance day.

Reasonably Controllable, Mitigation Plan - In accordance with 40 CFR 51.930, air agencies are required to develop and submit Mitigation Plans for areas with known, recurring events. EPA expects such Mitigation Plans will assist air agencies in satisfying the not reasonable controllable criterion. EPA used the EER of 2016 promulgation to provide written notice to air agencies with areas initially subject to the Mitigation Plan requirements. EPA did not notify the City of Albuquerque that Bernalillo County is subject to the requirement. Therefore, the concurrence prohibition of 40 CFR 50.14(b)(9) is not applicable to this demonstration.

(5) A demonstration that the event was a human activity that is unlikely to recur at a particular location or was a natural event

According to 40 CFR §50.14(c)(3)(iv)(E), the demonstration to justify data exclusion must provide evidence that the event was a human activity unlikely to recur or was a natural event. In accordance with 40 CFR §50.14(b)(5)(ii) and (b)(8)(iii) and (viii), a High Wind Dust Event is considered a natural event if the demonstration shows all anthropogenic sources are reasonably controlled, and identifies sources, control measures, and provides evidence of control measure implementation.

The demonstration showed that a High Wind Dust Event clearly caused the exceedance. The demonstration also identified potentially contributing anthropogenic activities and showed the city oversaw compliance of the reasonable controls implemented at the time of the exceedance. Therefore, the High Wind Dust Event that occurred on the exceedance day is considered a natural event.

(6) Documentation that the State followed the public comment process and conducted at least a 30-day comment period

According to 40 CFR §50.14(c)(3)(v)(A), the demonstration to justify data exclusion will provide evidence that the air agency followed the public comment process and conducted a 30-day comment period. The City of Albuquerque provided records of the comment period for the demonstration. The comment period was open for more than 30 days, i.e., November 21, 2017, through January 2, 2018.

(7) Submit the public comments with the demonstration

According to 40 CFR §50.14(c)(3)(v)(B), the demonstration to justify data exclusion will provide copies of the comments during the comment period. The City of Albuquerque did not receive comments.

(8) Address in the demonstration those comments disputing or contradicting factual evidence provided in the demonstration

According to 40 CFR §50.14(c)(3)(v)(C), the demonstration to justify data exclusion will address comments received during the comment period. The City of Albuquerque did not receive comments.

Technical Review of May 6, 2016, PM_{10} Exceptional Events Demonstration for the South Valley and Jefferson monitoring sites by the City of Albuquerque, dated January 2, 2018

Introduction

The U.S. Environmental Protection Agency (EPA) promulgated the Exceptional Events Rule (EER) in 2007 (*See*, 72 FR 13560, March 22, 2007), hereafter referred to as "EER of 2007", pursuant to the 2005 amendment of the Clean Air Act Section 319. The EER of 2007 was in effect until September 30, 2016, when a revised EER was issued (*See*, 81 FR 68216, October 3, 2016) hereafter referred to as "EER of 2016". This Exceptional Event Demonstration hereafter referred to as "demonstration", was submitted in accordance with the EER of 2016 on January 2, 2018.

As a requirement of the EER of 2016, data claimed to be due to an exceptional event must be flagged in the EPA Air Quality System (AQS) database, an initial notification of the event shall be provided to the EPA, and notice and opportunity for public input must occur. Failure to meet these criteria will result in non-concurrence with the flagging of the measured National Ambient Air Quality Standard (NAAQS) exceedance(s). The City of Albuquerque flagged the subject exceedances in AQS with "High Winds" or "RJ" qualifier flags and provided EPA with an initial notification of the exceedances dated January 23, 2017. As part of the Initial Notification of Potential Exceptional Event process, the regulatory significance of the exceedances was reviewed and the City of Albuquerque was informed that only some of the exceedances currently have regulatory significance.

After considering the weight of evidence provided in the demonstration, the EPA will decide to concur or not to concur with each flag. In accordance with 40 CFR §50.14(c)(3), a demonstration to justify data exclusion must include:

- A narrative conceptual model;
- Evidence there was a clear causal relationship;
- Analyses comparing event influenced concentration(s) to other concentrations at the monitor(s);
- Evidence the event was not reasonably controllable or preventable;
- Evidence the event was caused by human activity unlikely to recur at a particular location or was a natural event;
- Records of a public comment period lasting at least 30-days;
- Copies of comments received; and
- Response to comments received.

We address these criteria below. Should the air agency be unable to demonstrate even one of these criteria as set forth in the EER of 2016, we must non-concur on the air agency's exceptional events package.

All times discussed below are in Mountain Standard Time (MST) also known as Local Standard Time (LST). Measurements from regulatory monitors entered into AQS by air agencies reflect an area's Standard Time rather than daylight savings time. Communities in New Mexico use Daylight Saving Time from March 11 to November 4.

(1) **A narrative conceptual model that describes the event(s) causing the exceedance or violation and a discussion of how emissions from the event(s) led to the exceedance or violation at the affected monitor(s)**

According to 40 CFR §50.14(c)(3)(iv)(A), the demonstration to justify data exclusion shall provide a narrative conceptual module that describes the event and how emissions from the event led to the exceedances at the affected monitors. In the "Analysis Preamble" section of the demonstration, the City of Albuquerque provided a summary of the event and overview of the technical information in subsequent sections of the demonstration.

The exceedances occurred on May 6, 2016, hereafter referred to as the "exceedance day," at two monitoring sites located in the City of Albuquerque, Bernalillo County, New Mexico. The City of Albuquerque is the air agency which operates the monitors at these sites. The exceedances were measurements above the National Ambient Air Quality Standard (NAAQS) level of 150 micrograms per cubic meter ($\mu g/m^3$) for particulate matter with an aerodynamic diameter less than or equal to a nominal 10 micrometers (PM_{10}) using an averaging time of 24 hours. The relevant sites, monitors and exceedances are:

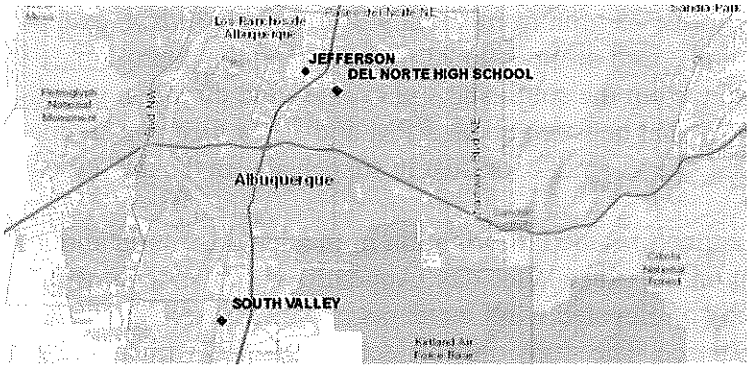
Site Name	Monitor	Exceedance, Measurement
South Valley, 2ZV	AQS ID 35-001-0029-81102-3	161 $\mu g/m^3$
Jefferson, 2ZS	AQS ID 35-001-0026-81102-1	159 $\mu g/m^3$

The City of Albuquerque claims the subject exceedances were caused by a High Wind Dust Event. A High Wind Dust Event is defined by 40 CFR §50.1(p) as an event that includes the high speed wind and the dust that the wind entrains and transports to a monitoring site.

(2) **A demonstration that the event affected air quality in such a way that there exists a clear causal relationship between the specific event and the monitored exceedance or violation**

According to 40 CFR §50.14(c)(3)(iv)(B), the demonstration to justify data exclusion shall provide evidence that there was a clear causal relationship between the measurement under consideration and the event claimed to have affected the air quality in the area. In accordance with 40 CFR §50.14(b)(5)(i), the City of Albuquerque must demonstrate that the claimed High Wind Dust Event caused the relevant concentrations to justify exclusion of data under this event type.

The City of Albuquerque operates three PM_{10} monitors in Bernalillo County (South Valley, Jefferson, and Del Norte High School AQS ID 35-001-0023). The Jefferson site is located about 9 miles north and east of the South Valley site. The Del Norte site is about 1 mile east and south of the Jefferson site. Ambient air monitors outside of Bernalillo County are operated by New Mexico Environment Department.



Map of Albuquerque area

The demonstration includes copies of news media reports of a health alert (page 13) and weather reports (pages 2-4) issued on the exceedance day.

The City of Albuquerque indicates in the demonstration (page 1) that the National Weather Service (NWS) announced a High Wind Warning on the exceedance day. News media reported sustained winds of 40 miles per hour (mph) with wind gusts over 50 mph. The City of Albuquerque provided a copy of the NWS table of "Monthly/Daily Climate Data" for the Albuquerque area during March 2016 (page 7). The latitude and longitude information on the table indicates a location on or near the Albuquerque International Airport. The table indicated a "dust storm or sand storm" occurred on the exceedance day with maximum hourly wind speed of 41 mph and gust of 53 mph.

The City of Albuquerque states the elevated area winds lasted about 12 hours from approximately 9 AM to 9 PM on the exceedance day (page 22). The maximum hourly wind speeds measured at both the South Valley and Jefferson sites on the exceedance day were 23 mph.

The demonstration (page 10) provides information from the National Oceanic and Atmospheric Administration (NOAA) National Centers for Environmental Information Storm Event Database about a "high wind" incident which occurred in the Albuquerque area on the exceedance day. The information indicated the area experienced sustained winds near 40 mph and gusts as high as 55 mph.

The Albuquerque International Airport (also known as Albuquerque Sunport Airport) is about 2.5 miles northeast of the South Valley site. NOAA local climatological data for the airport is provided in the demonstration (pages 5-6 and 9). The data shows that on the exceedance day there was sustained hourly wind speeds above 25 mph from about 9:30 AM to 6:30 PM. During this period, the winds were from the south (wind direction varied from 170° to 190°). The data also indicates that at various times during the day there were various instances of a reduction in visibility. At about 2 PM and between 4 PM and 5 PM there were observations noted of "Dust, volcanic ash, blowing dust, blowing sand or…obstruction" (Weather Type DU).

The Double Eagle airport is located about 12 miles northwest of the South Valley site and about 10 miles west of the Jefferson site. NOAA local climatological data for the airport is provided in the demonstration (page 8). The data indicates that on the exceedance day there was sustained

hourly wind speeds above 25 mph from about 9:30 AM to 6:30 PM, except for a period around 11 AM where the wind speed dropped to 23 mph. During the approximate 9:30 AM to 6:30 PM period, the winds were from the south and southeast (wind direction varied from 150° to 180°). The data also indicates that between about 5 PM and 8 PM there was reduced visibility and observations included "haze, smoke, or dust in suspension in the air" (Weather Type HZ).

The City of Albuquerque provided information in the demonstration about the widespread nature of the wind incident on the exceedance day. Appendix C of the demonstration provided a May 2010 report of a study of elevated wind incidents in New Mexico by Todd Shoemake of the National Weather Service. The study only reflected incidents with at least 3 hours of 31 mph sustained winds. For the Albuquerque area from 1976 to 2005, there were on average less than 2 such wind incidents per year (55 total during the period). While most were from the east, some came from the west. The incidents from the west were generally associated with "more dynamic weather events…most frequently in the winter and spring months as deep upper level troughs of low pressure sweep across the southwestern states…" or "caused by…pressure gradients and momentum aloft mixed to the surface…" and "strictly observed in the late afternoon to early evening hours."

The demonstration (pages 23-24) includes wind rose graphs which superimposed wind speed, wind direction, and PM_{10} measurements at the monitor sites. Graphs were also included of wind speed and PM_{10} measurements (pages 25-26).

The City of Albuquerque provided independent weather reports, evidence of visibility impairment from blowing dust, and hourly wind data which showed that on the exceedance day the area experienced a wind incident with entrained particulate matter. The demonstration showed that elevated hourly PM_{10} measurements at the South Valley and Jefferson monitors correlated with elevated wind speeds measured on the exceedance day both at the monitor sites and at nearby weather stations. Based on the EPA review of the clear causal relationship criterion using a weight of evidence approach, the City of Albuquerque sufficiently showed that a High Wind Dust Event clearly caused the PM_{10} exceedances at the monitor sites on the exceedance day.

(3) Analyses comparing the claimed event-influenced concentration(s) to concentrations at the same monitoring site at other times to support the clear causal relationship requirement

According to 40 CFR §50.14(c)(3)(iv)(C), the demonstration to justify data exclusion shall provide an analyses of the exceedance compared to measurements at the same monitor at other times. An air agency does not need to prove a specific percentile point in the distribution data, nor that the exceedance was higher than all historical concentrations at the monitor. The demonstration should compare the ambient pollutant concentrations in question to the historical distribution of concentrations of the same pollutant at the same monitoring site to help determine whether a deviation from normal concentrations occurred.

In the demonstration, the City of Albuquerque states an "historical data evaluation estimates the potential for any given day to exceed the standard at [sic] either of the two sites as 0.5% or less." The demonstration also included a table for each monitor (page 45), which provides various annual percentile frequency distribution, up to 99% percentile, of PM_{10} 24-hour measurements during March for the years 2012 to 2016. Data points in the table did not exceed the PM_{10} NAAQS level of 150 $\mu g/m^3$.

A table was provided in the demonstration of a subset of days between 2011 and 2016 with data points of maximum short term hourly wind speeds measured at the monitor sites and longer term PM_{10} 24-hour measurements at the monitor sites. The City of Albuquerque indicates only "a very small percentage" of short duration elevated winds, i.e., one hour, result in exceedances or near exceedances of the PM_{10} 24-hour NAAQS. On the exceedance day, however, the City of Albuquerque states a "long term significant event", i.e., hours of elevated winds, occurred. Also, the City of Albuquerque states the "primary reason" for the exceedances was the widespread nature of the elevated winds which "impacted a large area of the state".

The City of Albuquerque indicates in the demonstration some level of drought or abnormally dry condition existed for most of Bernalillo county prior to the wind incident on the exceedance day. The demonstration included a graph of percentiles and 1 hour measurements at the monitors during May for the years 2012 to 2016. The City of Albuquerque interprets the graph as showing the 2016 highest hourly monitor measurements deviate from prior years. EPA understands that the City of Albuquerque considers 2016 to be an unusual year for elevated hourly PM_{10} measurements at the South Valley and Jefferson monitors.

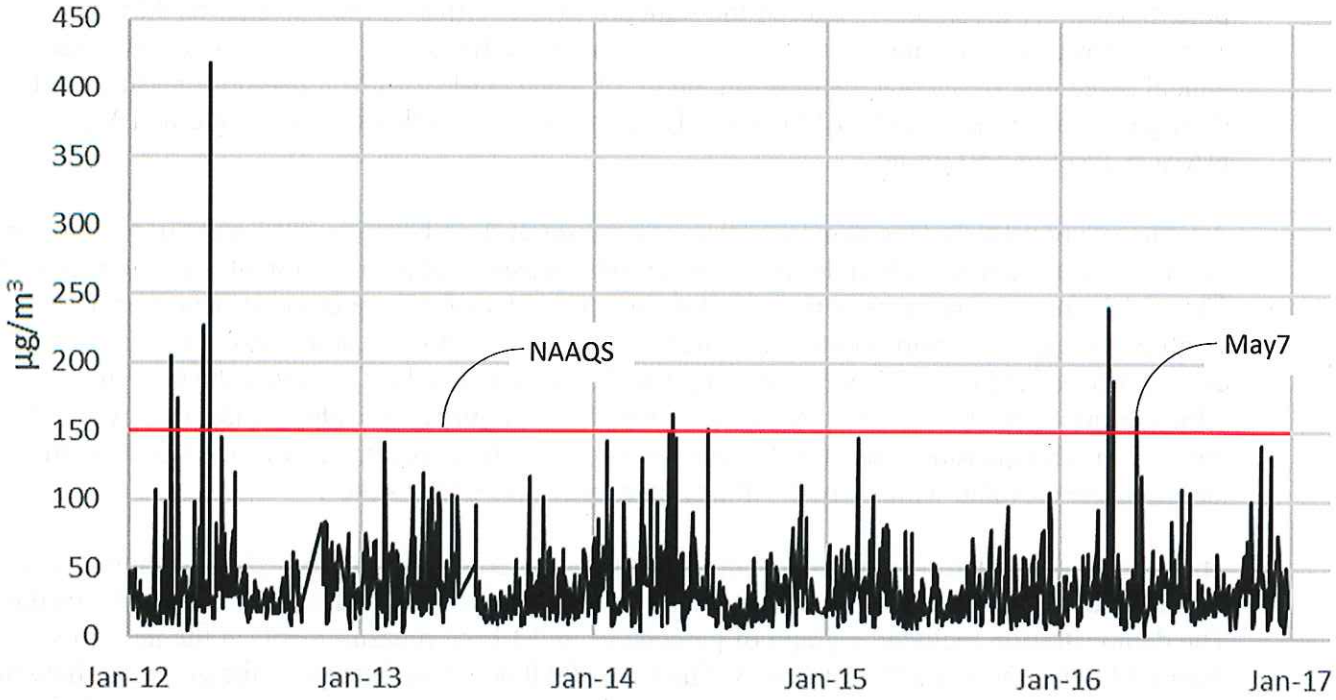
The tables below reflect the instances from 2012 to 2016 where the PM_{10} monitors had a 24-hour measurement above the NAAQS level of 150 $\mu g/m^3$.

South Valley PM_{10} Monitor, 35-001-0029-81102-3		
Date	24-Hour Measurements above NAAQS level	EE Demonstration Status
05/07/2012	418 $\mu g/m^3$	Concurred
03/22/2016	240 $\mu g/m^3$	Under Review
04/26/2012	227 $\mu g/m^3$	Concurred
03/08/2012	205 $\mu g/m^3$	n/a*
03/29/2016	187 $\mu g/m^3$	Under Review
03/18/2012	174 $\mu g/m^3$	Concurred
05/07/2014	163 $\mu g/m^3$	Concurred
05/06/2016	**161 $\mu g/m^3$**	Under Review
07/01/2014	152 $\mu g/m^3$	n/a*

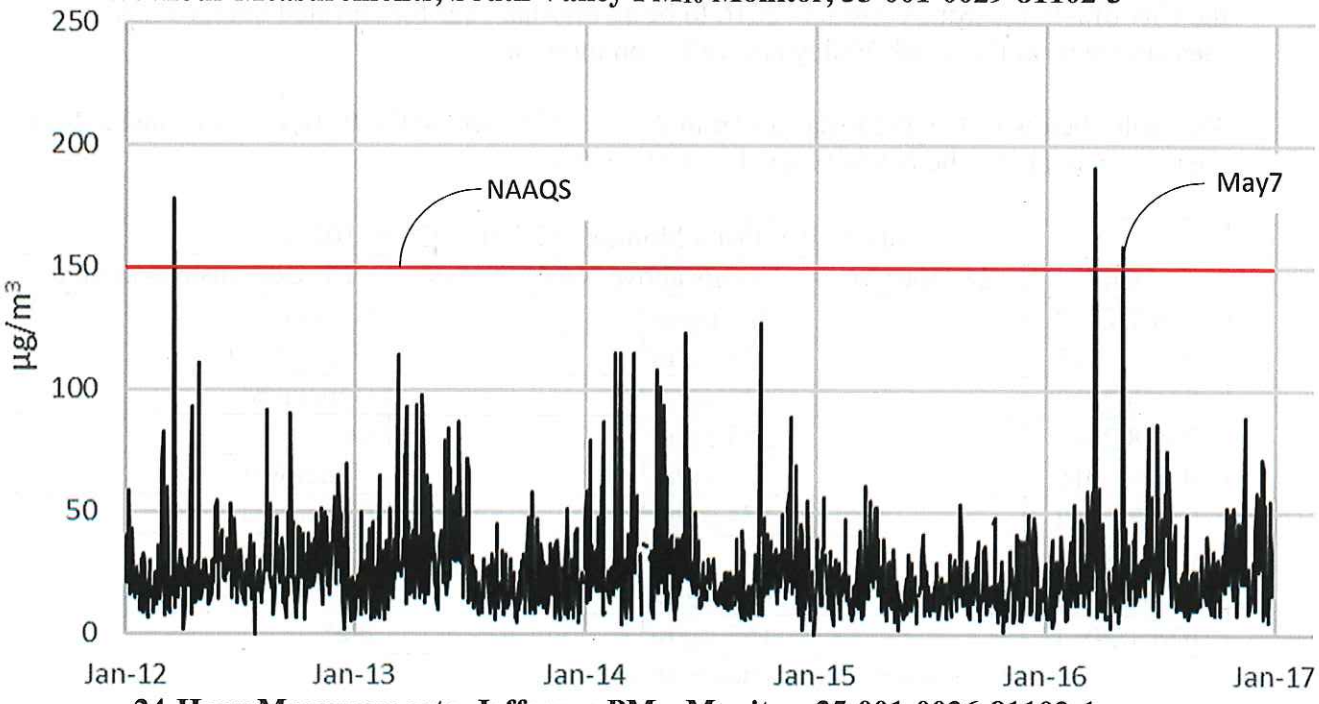
*No demonstration submitted by air agency

Jefferson PM_{10} Monitor, 35-001-0026-81102-1		
Date	24-Hour Measurements above NAAQS level	EE Demonstration Status
03/22/2016	192 $\mu g/m^3$	Under Review
03/18/2012	178 $\mu g/m^3$	Concurred
05/06/2016	**159 $\mu g/m^3$**	Under Review

The graphs below reflect the 24-hour measurements at the monitors from 2012 to 2016.



24-Hour Measurements, South Valley PM_{10} Monitor, 35-001-0029-81102-3



24-Hour Measurements, Jefferson PM_{10} Monitor, 35-001-0026-81102-1

Based on the analyses and statistics, the comparison of the exceedances to the historical concentrations of PM_{10} at these monitors indicates a deviation from normal concentrations occurred and supports the clear causal relationship between the monitored exceedances and the wind incident on the exceedance day.

(4) A demonstration that the event was both not reasonably controllable and not reasonably preventable

According to 40 CFR §50.14(c)(3)(iv)(D), the demonstration to justify data exclusion shall provide evidence that the event was both not reasonably controllable and not reasonably preventable.

Reasonably Preventable - In accordance with 40 CFR §50.14(b)(5)(iv), the air agency will not be required to provide case-specific evidence the event was not reasonably preventable for a High Wind Dust Event. The City of Albuquerque showed that a High Wind Dust Event clearly caused the exceedances and therefore the city was not required to provide evidence for the reasonably preventable criterion.

Reasonably Controllable, Natural Undisturbed Land Sources - A High Wind Threshold is defined at 40 CFR §50.1 as the minimum wind speed capable of causing particulate matter emissions from natural undisturbed lands in the area affected by a High Wind Dust Event. In accordance with 40 CFR §50.14(b)(5)(iii) and absent an area-specific alternative threshold, EPA will accept a high wind threshold of a sustained wind of 25 mph as the minimum wind speed capable of causing PM emissions from natural undisturbed lands located in the Albuquerque area. As stated in the preamble to the EER of 2016 (81 FR 68257-68258), the High Wind Threshold clarified the "level of evidence needed to demonstrate not reasonably controllable" and "should be representative of conditions that are capable of overwhelming reasonable controls…on anthropogenic sources and/or causing emissions from natural undisturbed areas".

Currently, commercial and residential development extends to about 4 and 7 miles west of the South Valley and Jefferson sites, respectively. Beyond the developed land boundary and to the west, the lands are essentially natural and undisturbed arid lands. About 3 miles to the east of the South Valley site, are more natural arid lands. The City of Albuquerque showed that on the exceedance day, area winds were sustained above the High Wind Threshold, and therefore emissions from undeveloped lands in the area could not have been reasonably controllable.

Reasonably Controllable, Anthropogenic Sources - The demonstration indicates the dominant source of particulate matter near the South Valley site is anthropogenic, i.e., residential and small commercial properties. Other anthropogenic sources include recreational vehicle usage to the east and active agricultural lands to the north and south. The Jefferson site has light commercial properties to the north, south and east, and three permitted aggregate facilities to the west.

A copy of a City of Albuquerque public service announcement was included in the demonstration. The announcement (page 11) was issued on the exceedance data at 9:12 am and alerted contractors to be prepared to shut down operations in the afternoon due to wind. The city also provided a copy of the follow-up contractor shutdown notification issued at 12:30 PM (page 14). The demonstration included a copy of a health alert issued by the city at noon on the exceedance day. The city indicated in the demonstration that city personnel responded to one dust complaint from the event and oversaw compliance with dust permits issued to businesses and contractors in the area during the event.

The demonstration includes information about fugitive dust controls and enforcement of the controls for potentially contributing anthropogenic sources in the area. Based on the implementation of the controls and sustained area winds above the High Wind Threshold, the demonstration sufficiently showed that potentially contributing anthropogenic activities were reasonably controlled on the exceedance day.

Reasonably Controllable, Mitigation Plan - In accordance with 40 CFR 51.930, air agencies are required to develop and submit Mitigation Plans for areas with known, recurring events. EPA expects such Mitigation Plans will assist air agencies in satisfying the not reasonable controllable criterion. EPA used the EER of 2016 promulgation to provide written notice to air agencies with areas initially subject to the Mitigation Plan requirements. EPA did not notify the City of Albuquerque that Bernalillo County is subject to the requirement. Therefore, the concurrence prohibition of 40 CFR 50.14(b)(9) is not applicable to this demonstration.

(5) A demonstration that the event was a human activity that is unlikely to recur at a particular location or was a natural event

According to 40 CFR §50.14(c)(3)(iv)(E), the demonstration to justify data exclusion must provide evidence that the event was a human activity unlikely to recur or was a natural event. In accordance with 40 CFR §50.14(b)(5)(ii) and (b)(8)(iii) and (viii), a High Wind Dust Event is considered a natural event if the demonstration shows all anthropogenic sources are reasonably controlled, and identifies sources, control measures, and provides evidence of control measure implementation.

The demonstration showed that a High Wind Dust Event clearly caused the exceedances. The demonstration also identified potentially contributing anthropogenic activities and showed the city oversaw compliance of the reasonable controls implemented at the time of the exceedance. Therefore, the High Wind Dust Event that occurred on the exceedance day is considered a natural event.

(6) Documentation that the State followed the public comment process and conducted at least a 30-day comment period

According to 40 CFR §50.14(c)(3)(v)(A), the demonstration to justify data exclusion will provide evidence that the air agency followed the public comment process and conducted a 30-day comment period. The City of Albuquerque provided records of the comment period for the demonstration. The comment period was open for more than 30 days, i.e., November 21, 2017, through January 2, 2018.

(7) Submit the public comments with the demonstration

According to 40 CFR §50.14(c)(3)(v)(B), the demonstration to justify data exclusion will provide copies of the comments during the comment period. The City of Albuquerque did not receive comments.

(8) Address in the demonstration those comments disputing or contradicting factual evidence provided in the demonstration

According to 40 CFR §50.14(c)(3)(v)(C), the demonstration to justify data exclusion will address comments received during the comment period. The City of Albuquerque did not receive comments.