AIR POLLUTION CONTROL DISTRICT

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March 17, 2014
Exceptional Event (EE) Documentation
Addendum

The Clean Air Act (CAA) recognizes that it may not be appropriate to use monitoring data influenced by "exceptional" events collected by the ambient air quality-monitoring network when making certain regulatory determinations. As such, in place regulation[1] allows for the exclusion of monitoring data that has exceeded or violated the National Ambient Air Quality Standard (NAAQS) for particulate matter less than 10 microns (PM_{10}). In 2007, the United States Environmental Protection Agency (USEPA) promulgated regulation that set forth requirements that needed to be met by air agencies requesting exclusion of event influenced exceedances or violations of the PM_{10} NAAQS. The 2007 requirements embodied seven specific elements; the development of a conceptual model, addressing the not reasonably controllable or preventable criteria, analyzing the historical fluctuations, providing the clear causal relationship, describing how the event affected air quality, defining by evidence whether the event was a natural event and finalizing with an analysis of a “but-for” determination.

The October 3, 2016 revisions to CFR sections 50.1 and 50.14 "Treatment of air quality monitoring data influenced by exceptional events" returns to three core statutory elements that align closely with the CAA section 319(b). These core elements (listed below) are supported within this document and have been broken down by sub-elements below to demonstrate compliance with the revisions to the rule “Treatment of air quality monitoring data influenced by exceptional events”.

1. 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.

2. The event was not reasonably controllable or preventable

3. The event was caused by human activity that is unlikely to recur at a particular location or was a natural event.

The March 17, 2014 EE Demonstration was originally constructed under the 2007 rule therefore it is very important to demonstrate that this EE demonstration meets any new requirements imposed by the October 2016 revision. In an effort to assure that the EE Demonstration for March 17, 2014 meets any new requirement imposed by the October 2016 revision, the Air District has identified the code sections that either where revised or are new below. In addition, the Air District has provided the section or sections where the current EE Demonstration contains language that specifically addresses the revised or new requirement. Where language is contained in several sections, the Air District has included a brief summary explaining the

[1] “Treatment of Data Influenced by Exceptional Events; Final Rule “, 72 FR 13560, March 22, 2007

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connection. Those sections that are in italic's represent revisions to the rule that cannot be applied because the original demonstration process followed the prior rule, these are marked New Process (NP). To help explain the impact of the March 17, 2014 event upon the monitors that existed during 2014 in Imperial County a brief monitor measurement background is included below.

Finally, the current guidance, "Interim Guidance on the Preparation of Demonstrations in Support of Requests to Exclude Ambient Air Quality Data Affected by High Winds under the Exceptional Events Rule" dated May 2013, has not been revised to reflect the revisions to the new EE Rule. Where there is a conflict between the existing May 2013 guidance and the revised regulation the regulation supersedes.

Monitor Measurement Background

In 2014 the Imperial County air monitoring network included five Federal Reference Method (FRM) Size-Selective Inlet (SSI) high volume samplers and two Beta Attenuation Monitor Model 1020 (BAM 1020) measuring PM_{10}. FRM samplers or filter based sampling, run on a preset schedule of 1:6 days. The State and Local Air Monitoring Sites (SLAMS) in El Centro, Westmorland and Calexico did not measure PM_{10} because March 17, 2014 was a non-scheduled run day.[2] In addition, there were two BAM 1020 continuous monitors measuring concentrations in Niland and Brawley. It is important to note that for the March 17, 2014 event the location of these monitors contributed to the different level of impact of particulate matter upon the monitors.

TABLE 1-1
CONCENTRATIONS OF PM_{10} ON MARCH 17, 2014

DATE	MONITORING SITE	AQS ID	POC(s)	HOURS	24-HOUR CONCENTRATION µg/m³	PM_{10} NAAQS µg/m³
3/17/2014	**Brawley**	**06-025-0007**	**3**	**24**	**190.9**	**150**
3/17/2014	Niland	06-025-4004	3	24	87.8	150

While the both the Brawley and Niland monitors measured elevated concentrations of particulate matter in the afternoon only the Brawley monitor measured an exceedance March 17, 2014. While both wind direction and the effect of airflow by topography contributed to the Niland monitor not exceeding, instrument mal-function similarly played a role. It is conceivable, that had the instrument not failed a critical criteria requirement at the 17:00 hour when winds were strongest, the Niland monitor would have measured an exceedance.

The March 17, 2014 EE Demonstration provides a National Oceanic and Atmospheric Administration (NOAA) HYSPLIT back-trajectory (**Figure 2-12; pg. 16**) and a time sequence analysis showing the movement of the low pressure system through the region (**Figure 5-1**) that

[2] Figure 2-5 of the March 17, 2014 EE Demonstration provides the location of the monitoring sites in Imperial County.

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supports the significant impact to the Brawley monitor. The March 17, 2014 EE Demonstration provides evidence that strong and gusty west winds affected all of southeastern California and Arizona. In particular, these strong, gusty west winds, as measured by both "upwind" and "downwind" sites disturbed dry PM_{10} within the mountain ranges which divide Imperial County from San Diego County and Riverside County (**Figure 5-1)**. Essentially, both the Niland and Brawley continuous monitors were impacted but only Brawley exceeded. Topography and wind direction played significant roles.

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TITLE 40 CFR PART 50 § 50.14

(a) Requirements - (1) Scope (i)

This section applies to the treatment of data showing exceedances or violations of any national ambient air quality standard for purposes of the following types of regulatory determinations by the Administrator:

A. Designation (CCA Section 107(d)(1)) or redesignation (CCA Section 107(d)(3))

This section of the Exceptional Event (EE) Demonstration for March 17, 2014 explains the 3 year and 12 month submittal requirements. While the three 3 year and 12 month requirement was removed with the October 2016 revision the requirement to disclose the impact of a regulatory decision with the submittal of the EE demonstration still is required. The submittal of the March 17, 2014 is expected to have a regulatory implication upon the submittal of the PM_{10} State Implementation Plan (SIP) in 2017. (**Page 3 section I.2.d**)

B. Assignment/Re-Assignment Classification category to a nonattainment area - comparison to design values N/A
C. Determination that a nonattainment area attained the level of appropriate NAAQS by a specified deadline N/A
D. Determination that an area has data for the specific NAAQS which qualify the area for an attainment date extension – N/A
E. Determination under CAA section 110(k)(5) that SIP is inadequate under the requirements of CAA section 110 – N/A
F. Other actions case-by-case basis determined by the Administrator – N/A

(b) Determinations by the Administrator (5) High wind dust events. (i)

The Administrator shall exclude data from use in determinations of exceedances and violations, where a State demonstrates to the Administrator's satisfaction that emissions from a high wind dust event caused a specific air pollution concentration in excess of one or more national ambient air quality standards at a particular air quality monitoring location and otherwise satisfies the requirements of this section provided that such emissions are from high wind dust events. **(Pages 12-17 section II.3)**

Title 40 part 50.1 defines a "high wind dust event" as an event that includes the high-speed wind and the dust that the wind entrains and transports to a monitoring site. The March 17, 2014 EE demonstration compiles evidence that demonstrates that as early as the mid-morning of March 17, 2014 wind speeds associated with a low pressure system impacted the Brawley monitor resulting in an exceedance on March 17, 2014. Appendix A of the March 17, 2014 EE demonstration contains copies of the National Weather Service forecast predicting west winds with gusts has high as 35 mph. (**Appendix A**)

The EE demonstration for March 17, 2014 contains sections that in its entirety provide evidence that the "high wind dust event" affected air quality. Both the historical norm section, which discusses the historical concentration data, and the clear causal section bring together the argument that the "high wind dust event" impacted the Brawley monitor causing an exceedance. The analysis contained in the March 17, 2014 demonstration contains analyses and statistics showing how the observed event concentration compares to the distribution or time series of historical concentrations of PM_{10}. The March 17, 2014 demonstration contains graphs, time series, and visibility graphs, measurements from regulatory and non-regulatory monitoring stations, satellite imagery and appendices with special weather statements and advisories, graphs showing wind direction and the path of the emissions from the identified source area. (**Pages 12-17 section II.3; Pages 18-33 section III & V; Appendix's B and C**)

In addition, the March 17, 2014 demonstration provides evidence that the event was a "natural event" that was not reasonably controllable and preventable. Finally, the March 17, 2014 EE demonstration provides evidence

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that all known anthropogenic sources, upwind of the affected monitor, were controlled but where overwhelmed by the "natural event". (**Pages 22-26 section IV; Appendix D**)

(b) Determinations by the Administrator (5) High wind dust events. (ii)
The Administrator will consider high wind dust events to be natural events in cases where windblown dust is entirely from natural undisturbed lands in the area or where all anthropogenic sources are reasonably controlled as determined in accordance with paragraph (b)(8) of this section. **(Pages 22-26 section IV)**

Title 40 part 50.1 defines a "natural event" as an event and its resulting emissions, which may recur at the same location, in which human activity plays little or no direct causal role. The definition further explains that anthropogenic sources that are reasonably controlled are considered to not play a direct role in causing emissions. As explained below, the March 17, 2014 EE demonstration compiles evidence that demonstrates that all known anthropogenic sources in Imperial County applied reasonable measures but where overwhelmed by the "natural event". The Introduction and the Conceptual Model sections of the March 17, 2014 EE demonstration provides the background topographical and climatologically information surrounding the impacted area and provides trajectory information identifying the areas impacted by the "natural event". (**Pages 22-26 section IV**)

(b) Determinations by the Administrator (5) High wind dust events. (iii)
The Administrator will accept a high wind threshold of a sustained wind of 25 mph for areas in the States of Arizona, California, Colorado, Kansas, Nebraska, Nevada, New Mexico, North Dakota, Oklahoma, South Dakota, Texas, Utah, and Wyoming provided this value is not contradicted by evidence in the record at the time the State submits a demonstration. In lieu of this threshold, States can identify and use an Administrator-approved alternate area-specific high wind threshold that is more representative of local or regional conditions, if appropriate. **(Pages 12-17 section II.3)**

Title 40 part 50.1 defines a "high wind threshold" as the minimum wind speed capable of causing particulate matter emissions from natural undisturbed lands in the area affected by the "high wind dust event". Current guidance indicates that EPA will accept that high winds "could be the cause of a high 24-hour average PM_{10} or $PM_{2.5}$ concentration" if there is at least one full hour where the hourly average wind speed is above the area-specific high wind threshold.[3] EPA further recognizes that sources of wind speed data employ "short-period" averages generally accepting that the hourly average wind speed was above the threshold if the reported short-period wind speed was above the threshold. In addition, current guidance indicates that wind speed data need not necessarily have to be at the location of the exceedance but the data should represent the source area generating the emissions. Finally, guidance states that EPA generally recommends using National Weather Service data or the National Climate Data Center.

The March 17, 2014 EE demonstration provides evidence from Airport, regulatory and non-regulatory meteorological stations that as early as the mid-morning of March 17, 2014 elevated winds, in some cases in excess of 25mph, suspended particulate matter into the air. Because winds continued to be elevated throughout the day of March 17, 2014, elevated particulate matter impacted the Brawley Station, which resulted in the exceedance. Appendix B contains QCLCD reports for the Imperial County Airport and the Naval Air Facility Airport as well as other surrounding airports in Riverside County.

(b) Determinations by the Administrator (5) High wind dust events. (iv)
In addressing the requirements set forth in paragraph (c)(3)(iv)(D) of this section regarding the not reasonably preventable criterion, the State shall not be required to provide a case-specific justification for a high wind dust event. **(Pages 13-19 section II.3)**

[3] USEPA, "Interim Guidance on the Preparation of Demonstration in Support of Requests to Exclude Ambient Air Quality Data Affected by High Winds under the Exceptional Events Rule", May 2013

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The March 17, 2014 EE demonstration provides evidence that a "high wind event" occurred as early as mid-morning of March 17, 2014 and continued throughout the rest of the day impacting the Brawley monitor. The March 17, 2014 EE demonstration provides evidence that a "high wind event" occurred as a result of a low-pressure system that moved through southern California as early as mid-morning of March 17, 2014. Appendix A of the March 17, 2014 EE demonstration provides copies of Zone and Area Forecast which includes a high wind advisory as they were issued by the San Diego and Phoenix weather offices. As a result, the meteorological event, the low-pressure system and the resulting high winds were not preventable. (**Appendix A**)

(b) Determinations by the Administrator (5) High wind dust events. (v)
With respect to the not reasonably controllable criterion of paragraph (c)(3)(iv)(D) of this section, dust controls on an anthropogenic source shall be considered reasonable in any case in which the controls render the anthropogenic source as resistant to high winds as natural undisturbed lands in the area affected by the high wind dust event. The Administrator may determine lesser controls reasonable on a case-by-case basis.

Both permitted and non-permitted sources are required to comply with Regulation VIII requirements that address fugitive dust emissions. The identified permitted sources are Aggregate Products, Inc., US Gypsum Quarry, Val-Rock, Inc., Granite Construction, US Gypsum Plaster City, Laidlaw Environmental Services, and various agricultural operations.

Non-permitted sources include the wind farm known as Ocotillo Express, and a solar facility known as CSolar IV West. In addition, the desert region is under the jurisdiction of the Bureau of Land Management and the California Department of Parks. All these sources are required to comply with Regulation VIII at all times. Regulation VIII was approved as BACM by EPA with an effective date of May 22, 2013. Therefore, as the HYSPLIT Model found on page 16 of the demonstration demonstrates, the exceedance experienced by the Brawley FEM monitor was due to dust particles transported from desert regions and agricultural lands controlled by Regulation VIII. (**Attached Figs ADD-1 and ADD-2 Maps; Pages 22-26 section IV**)

(b) Determinations by the Administrator (5) High wind dust events. (vi)
For large-scale and high-energy high wind dust events, the Administrator will generally consider a demonstration documenting the nature and extent of the event to be sufficient with respect to the not reasonably controllable criterion of paragraph (c)(3)(iv)(D) of this section provided the State provides evidence showing that the event satisfies the following:
(A) The event is associated with a dust storm and is the focus of a Dust Storm Warning
(B) The event has sustained winds that are greater than or equal to 40 miles per hour
(C) The event has reduced visibility equal to or less than 0.5 miles.
(Section does not apply to the February 31, 2014 EE demonstration)

(b) Determinations by the Administrator (8) Determinations with respect to the not reasonably controllable or preventable criterion. (i)
The not reasonably controllable or preventable criterion has two prongs that the State must demonstrate: prevention and control.

An event is considered not reasonably preventable if reasonable measures to prevent the event were applied at the time of the event. Similarly, an event is considered not reasonably controllable if reasonable measures to control the impact of the event on air quality were applied at the time of the event. The final guidance issued October 2016 explains that when addressing the "not reasonably controllable or preventable" criterion air agencies should identify the natural and anthropogenic sources of emissions causing and contributing to the monitored exceedance. Identify the relevant SIP or other enforceable control measures in place for the identified sources as well as the implementation status of the controls and if applicable, provide evidence of effective implementation and enforcement of reasonable controls.

(b) Determinations by the Administrator (8) Determinations with respect to the not reasonably controllable or preventable criterion. (ii)

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The Administrator shall determine that an event is not reasonably preventable if the State shows that reasonable measures to prevent the event were applied at the time of the event.

An event is not reasonably preventable if reasonable measures to prevent the event were applied at the time of the event. However, for "high wind events" when PM_{10} concentrations are due to dust raised by high winds from desert areas whose sources are controlled with Best Available Control Measures (BACM) then the event is a "natural event" where human activity played little or no direct causal role and thus not preventable. The March 17, 2014 EE demonstration provides evidence that a large low-pressure system moved into southern California early March 17, 2014 suspending particulate matter and keeping the dust in the air well throughout the day. Thus, this event was not preventable. (**Attached Figs ADD-1 and ADD-2 Maps; Pages 22-26 section IV**)

(b) Determinations by the Administrator (8) Determinations with respect to the not reasonably controllable or preventable criterion. (iii)
The Administrator shall determine that an event is not reasonably controllable if the State shows that reasonable measures to control the impact of the event on air quality were applied at the time of the event.

An event is not reasonably controllable if reasonable measures to control the impact of the event on air quality are applied at the time of the event. Both permitted and non-permitted sources are required to comply with Regulation VIII requirements that address fugitive dust emissions. The identified permitted sources are Aggregate Products, Inc., US Gypsum Quarry, Val-Rock, Inc., Granite Construction, US Gypsum Plaster City, and Laidlaw Environmental Services. Non-permitted sources include the wind farm known as Ocotillo Express, and a solar facility known as CSolar IV West. In addition, the desert region is under the jurisdiction of the Bureau of Land Management and the California Department of Parks. All these sources are required to comply with Regulation VIII at all times. Regulation VIII was approved as BACM by EPA with an effective date of May 22, 2013. (**Attached Figs ADD-1 and ADD-2 Maps; Pages 22-26 section IV**)

(b) Determinations by the Administrator (8) Determinations with respect to the not reasonably controllable or preventable criterion. (iv)
The Administrator shall assess the reasonableness of available controls for anthropogenic sources based on information available as of the date of the event.

According to the October 2016 revision, the EPA would consider enforceable control measures that were approved by the EPA as part of a State Implementation Plan. The demonstration must be submitted within 5 years of the date of approval and must address the event-related pollutant and all sources necessary for fulfill the requirements of the Clean Air Act (CAA) with respect to all anthropogenic sources that may have contributed to the event-related emissions. The Imperial County Air Pollution Control District adopted Regulation VIII October of 2012 with approval by EPA of the adopted rules as BACM. The effective date of the rule approval was May 22, 2013. Regulation VIII addresses the desert open areas managed by BLM, California Department of Parks, Construction, Open Areas, Track Out, Paved and Unpaved roads and Agricultural Operations. All stationary sources are required to keep dust emissions controlled.

The March 17, 2014 EE demonstration identifies the Sonoran desert to the west of the Brawley monitor as the primary source of dust emissions. This addendum includes a Map where identified stationary sources are identified. Non-stationary sources include renewable energy facilities, one wind farm and a solar farm. The remaining area is comprised of managed lands by the Bureau of Land Management, the California Department of Parks, and the United States Military. Regulation VIII as approved by EPA with an effective date of May 22, 2013 applies to all these sources and is in force on any given day. The March 17, 2014 EE demonstration contains a section with the results of the review of sources either permitted or not permitted. The section identifies any complains and resolutions. For the March 17, 2014 EE demonstration no complaints were filed.
(**Attached Figs ADD-1 and ADD-2 Maps; Pages 22-26 section IV**)

(b) Determinations by the Administrator (8) Determinations with respect to the not reasonably controllable or preventable criterion. (v)

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Except where a State, tribal or federal air agency is obligated to revise its state implementation plan, tribal implementation plan, or federal implementation plan, the Administrator shall consider enforceable control measures implemented in accordance with a state implementation plan, tribal implementation plan, or federal implementation plan, ***approved by the EPA within 5 years of the date of the event****, that address the event-related pollutant and all sources necessary to fulfill the requirements of the Clean Air Act for the state implementation plan, tribal implementation plan, or federal implementation plan to be reasonable controls with respect to all anthropogenic sources that have or may have contributed to the monitored exceedance or violation.*

According to the October 2016 revision, the EPA would consider enforceable control measures that were approved by the EPA as part of a State Implementation Plan. The demonstration must be submitted within 5 years of the date of approval and must address the event-related pollutant and all sources necessary for fulfill the requirements of the Clean Air Act (CAA) with respect to all anthropogenic sources that may have contributed to the event-related emissions. The Imperial County Air Pollution Control District adopted Regulation VIII October of 2012 with approval by EPA of the adopted rules as BACM. The effective date of the rule approval was May 22, 2013. Regulation VIII addresses the desert open areas managed by BLM, California Department of Parks, Construction, Open Areas, Track Out, Paved and Unpaved roads and Agricultural Operations. All stationary sources are required to keep dust emissions controlled in accordance to Regulation VIII. The Imperial County Air Pollution Control District is not obligated to revise or adopt a State Implementation Plan (SIP).

While the March 17, 2014 EE demonstration identifies that the submission of the EE demonstration would be used for regulatory purposes, the submittal of a PM_{10} SIP in 2017, there is currently no legal requirement or obligation, such as a SIP call, for the Imperial County Air Pollution Control District to submit a PM_{10} SIP.
(**Attached Figs ADD-1 and ADD-2 Maps; Pages 22-26 section IV**)

(b) Determinations by the Administrator (8) Determinations with respect to the not reasonably controllable or preventable criterion. (vi)
Where a State, tribal or federal air agency is obligated to revise its state implementation plan, tribal implementation plan, or federal implementation plan, the deference to enforceable control measures identified in paragraph (b)(8)(v) of this section shall remain only until the due date of the required state implementation plan, tribal implementation plan, or federal implementation plan revisions. However, where an air agency is obligated to revise the enforceable control measures identified in paragraph (b)(8)(v) of this section in its implementation plan as a result of an action pursuant to Clean Air Act section 110(k)(5), the deference, if any, to those enforceable control measures shall be determined on a case-by-case basis.
(Section does not apply to the February 31, 2014 EE demonstration)

(b) Determinations by the Administrator (8) Determinations with respect to the not reasonably controllable or preventable criterion. (vii)
The Administrator shall not require a State to provide case-specific justification to support the not reasonably controllable or preventable criterion for emissions-generating activity that occurs outside of the State's jurisdictional boundaries within which the concentration at issue was monitored. In the case of a tribe treated as a state under 40 CFR 49.2 with respect to exceptional events requirements, the tribe's jurisdictional boundaries for purposes of requiring or directly implementing emission controls apply. In the case of a federal land manager or other federal agency submitting a demonstration under the requirements of this section, the jurisdictional boundaries that apply are those of the State or the tribe depending on which has jurisdiction over the area where the event has occurred.
(Section does not apply to the February 31, 2014 EE demonstration)

(b) Determinations by the Administrator (8) Determinations with respect to the not reasonably controllable or preventable criterion. (viii)
In addition to the provisions that apply to specific event types identified in paragraphs (b)(3)(ii) and (b)(5)(i) through (iii) of this section in addressing the requirements set forth in paragraph (c)(3)(iv)(D) of this section

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regarding the not reasonably controllable or preventable criterion, the State must include the following components:

(A) *Identification of the natural and anthropogenic sources of emissions causing and contributing to the monitored exceedance or violation, including the contribution from local sources*

The March 17, 2014 EE demonstration identifies the Sonoran desert to the west of the Brawley monitor as the primary source of dust emissions. This addendum includes a Map where identified stationary sources are identified. Non-stationary sources include renewable energy facilities, one wind farm and a solar farm. The remaining area is comprised of managed lands by the Bureau of Land Management, the California Department of Parks, and the United States Military. (**Attached Figs ADD-1 and ADD-2 Maps**)

(B) *Identification of the relevant state implementation plan, tribal implementation plan, or federal implementation plan or other enforceable control measures in place for the source identified in paragraph (b)(8)(vii)(A) of this section and the implementation status of these controls.*

The Imperial County Air Pollution Control District adopted Regulation VIII October of 2012 with approval by EPA of the adopted rules as BACM. The effective date of the rule approval was May 22, 2013. Regulation VIII addresses the desert open areas managed by BLM, California Department of Parks, Construction, Open Areas, Track Out, Paved and Unpaved roads and Agricultural Operations. All stationary sources are required to keep dust emissions controlled. The Imperial County Air Pollution Control District is not obligated to revise or adopt a State Implementation Plan (SIP). (**Pages 23-27 section IV**)

(C) *Evidence of effective implementation and enforcement of the measures identified in paragraph (b)(8)(vii)(B)*

The March 17, 2014 EE demonstration contains a section with the results of the review of sources either permitted or not permitted. The section identifies any complains and resolutions. For the March 17, 2014 EE demonstration no complaints were filed. (**Pages 25 section IV.1.c**)

(D) *The provisions in this paragraph shall not apply if the provisions in paragraph (b)(4), (b)(5)(vi), or (b)(6) of this section apply.*

The March 17, 2014 EE demonstration is a "high wind" demonstration and not a Wildfire, Large-scale and high-energy high wind dust event, or a Stratospheric Intrusion.

(c) Schedules and procedures. (2) Initial notification of potential exceptional event. (i)
A State shall notify the Administrator of its intent to request exclusion of one or more measured exceedances of an applicable national ambient air quality standard as being due to an exceptional event by creating an initial event description and flagging the associated data that have been submitted to the AQS database and by engaging in the Initial Notification of Potential Exceptional Event process as follows:

(A) *The State and the appropriate EPA Regional office shall engage in regular communications to identify those data that have been potentially influenced by an exceptional event, to determine whether the identified data may affect a regulatory determination and to discuss whether the State should develop and submit an exceptional events demonstration according to the requirements in this section.*

The March 17, 2014 EE demonstration discussed the initial notification process by the Imperial County Air Pollution Control District. The initial notification was submitted to the California Air Resources Board May 28, 2015 under the provisions of the 2007 rule this was in advance of the revision, which occurred October 2016. However, the Imperial County Air Pollution Control District had consultations with the California Air Resources before moving forward. Under the prior 2007 rule the Imperial County Air Pollution Control District did submit an initial EE demonstration for comment and review to both USEPA and CARB

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(B) *For data that may affect an anticipated regulatory determination or where circumstances otherwise compel the Administrator to prioritize the resulting demonstration, the Administrator shall respond to a States' Initial Notification of Potential Exceptional Event with a due date for demonstration submittal that considers the nature of the event and the anticipated timing of the associated regulatory decision;*

The March 17, 2014 EE demonstration discussed the initial notification process by the Imperial County Air Pollution Control District. The initial notification was submitted to the California Air Resources Board May 28, 2015 under the provisions of the 2007 rule this was in advance of the revision, which occurred October 2016. However, the Imperial County Air Pollution Control District had consultations with the California Air Resources before moving forward. Under the prior 2007 rule the Imperial County Air Pollution Control District did submit an initial EE demonstration for comment and review to both USEPA and CARB

(C) *The Administrator may waive the Initial Notification of Potential Exceptional Event process on a case-by-case basis.*

The March 17, 2014 EE demonstration discussed the initial notification process by the Imperial County Air Pollution Control District. The initial notification was submitted to the California Air Resources Board May 28, 2015 under the provisions of the 2007 rule this was in advance of the revision, which occurred October 2016. However, the Imperial County Air Pollution Control District had consultations with the California Air Resources before moving forward. Under the prior 2007 rule the Imperial County Air Pollution Control District did submit an initial EE demonstration for comment and review to both USEPA and CARB

(c) Schedules and procedures. (3) Submission of demonstrations (iv)
The demonstration to justify data exclusion must include:

(A) *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);*

The March 17, 2014 EE demonstration contains a section, which discusses the Conceptual model, which describes the event that caused the exceedance. The Introduction and the Conceptual Model sections of the March 17, 2014 EE demonstration provides the background topographical and climatologically information surrounding the impacted area and provides trajectory information identifying the areas impacted by the "natural event". In addition, the section contains graphs and figures that provide time sequence analysis and concentration related impacts. (**Pages 1-17 sections I thru II.3**)

(B) *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*

(C) *Analysis comparing the claimed event-influenced concentration(s) to concentration(s) at the same monitoring site at other times to support the requirement at paragraph (c)(3)(iv)(B) of this section. The Administrator shall not require a State to prove a specific percentile point in the distribution of data;*

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

The March 17, 2014 EE demonstration provides evidence that a "high wind event" occurred elevating PM_{10} concentrations from desert areas whose identified sources were controlled with Best Available Control Measures (BACM). Such "high wind events" are not preventable as they are meteorological systems. In the March 17, 2014 EE demonstration a low-pressure system moved through southern California as early as the mid-morning of March 17, 2014 and continued through the rest of the day. The weather system brought strong west winds across the mountains and deserts and was then a "natural event". In addition because the identified sources where reasonably controlled with BACM then it is reasonable to conclude that human activity played little or no direct causal role and thus the event was not preventable or controllable.

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

The March 17, 2014 EE demonstration provides evidence that a "high wind event" occurred elevating PM_{10} concentrations from desert areas whose identified sources were controlled with Best Available Control Measures (BACM). Such "high wind events" are not preventable as they are meteorological systems. In the March 17, 2014 EE demonstration a large low-pressure system moved through southern California as early as the mid-morning of March 17, 2014 and continued throughout the rest of the day. The weather system brought strong west winds across the mountains and deserts and was then a "natural event". In addition because the identified sources where reasonably controlled with BACM then it is reasonable to conclude that human activity played little or no direct causal role and thus the event was not preventable or controllable.

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FIGURE ADD-1
IDENTIFIED SOURCES

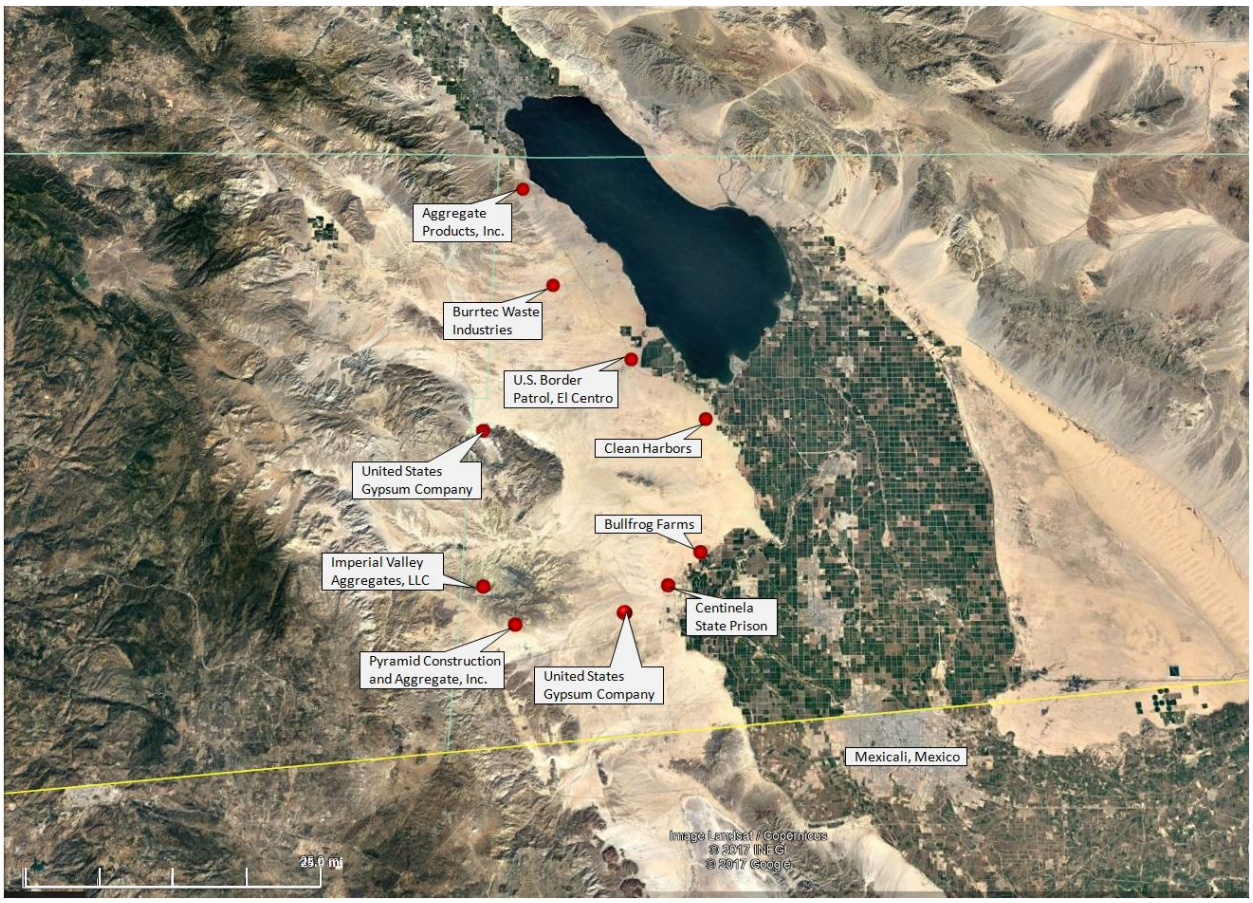

Fig ADD-1: The above map identifies those permitted sources located west, northwest and southwest of the Brawley monitor. The green line to the north denotes the political division between Imperial and Riverside counties. The yellow line below denotes the international border between the United States and Mexico. The green checker-boarded areas are a mixed use of agricultural and community parcels. In addition, either the Bureau of Land Management or the California Department of Parks manages the desert areas

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FIGURE ADD-2
IDENTIFIED POWER SOURCES

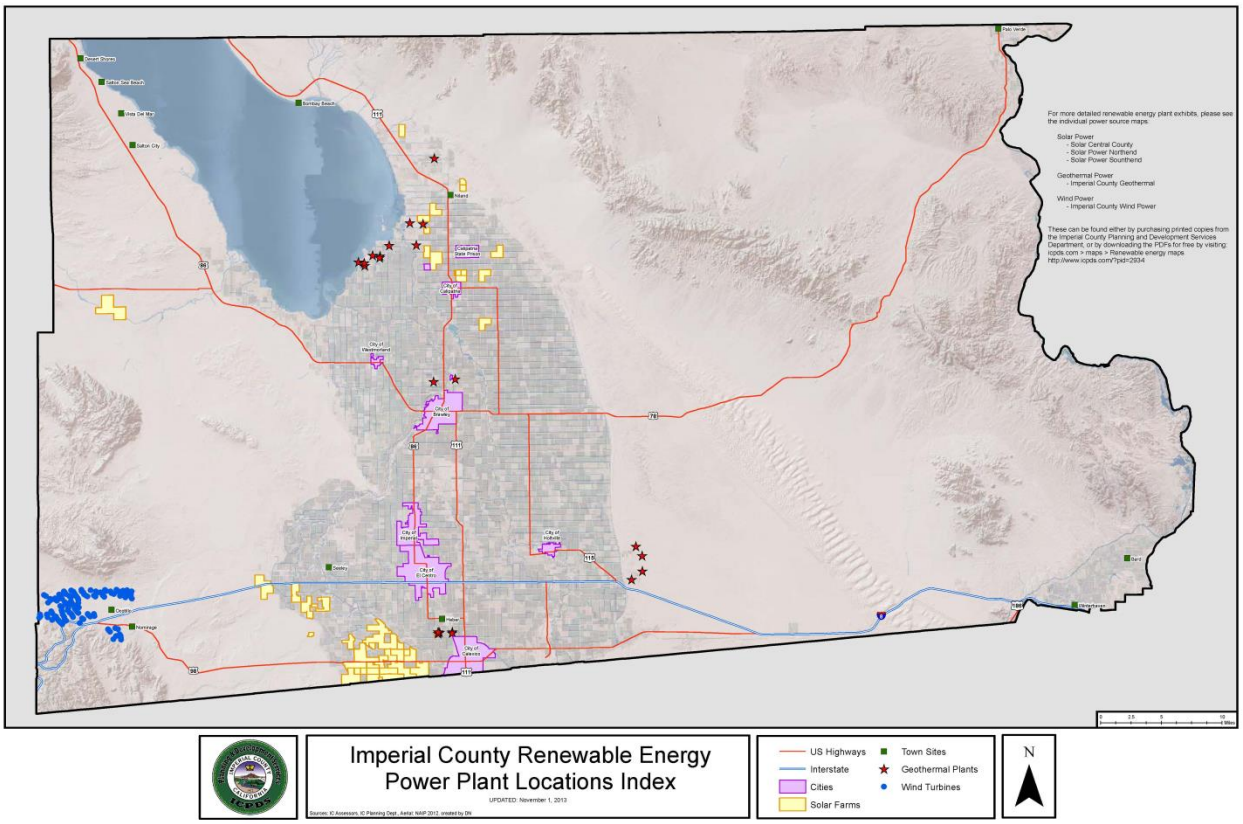

Fig ADD-2: The above map identifies those power sources located west, northwest and southwest of the Brawley monitor. Blue indicate the Wind Turbines, Yellow are the solar farms and stars are geothermal plants

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TABLE ADD-1
BRAWLEY WIND SPEED TABLE

EL CENTRO NAF (KNJK)				IMPERIAL CO AIRPORT (KIPL)				DESERT RESORTS RGNL AIRPORT				BRAWLEY FEM	
HOUR	W/S	W/G	W/D	HOUR	W/S	W/G	W/D	HOUR	W/S	W/G	W/D	HOUR	PM_{10} (µg/m³)
56	0		0	53	0		0	52	5		320	0	61
156	3		270	153	0		0	152	3		290	100	63
256	0		0	253	3		160	252	6		360	200	57
356	0		0	353	3		130	352	5		250	300	67
456	7		120	453	0		0	452	3		280	400	61
556	0		0	553	6		130	552	0		0	500	66
656	5		100	653	6		150	652	0		0	600	74
756	7		170	753	7		150	752	3		VR	700	81
856	3		150	853	6		230	852	5		VR	800	85
956	7		320	953	3		350	952	3		VR	900	76
1056	5		VR	1053	0		0	1052	6		150	1000	63
1156	3		VR	1153	3		320	1152	7		140	1100	61
1256	11		160	1253	11		180	1252	7		VR	1200	48
1356	20	30	240	1353	10		220	1352	7		100	1300	
1456	21		280	1453	21	30	270	1452	5		VR	1400	122
1556	26	33	250	1553	21	31	270	1552	5		240	1500	133
1656	21		250	1653	16	26	260	1652	6		300	1600	656
1756	24	29	250	1753	14		260	1752	15	24	330	1700	627
1856	25		250	1853	17	28	270	1852	21		330	1800	443
1956	24		250	1953	16		270	1952	23	32	340	1900	616
2056	14		250	2053	9		270	2052	18	26	330	2000	342
2156	13		260	2153	7		260	2152	17	29	330	2100	218
2256	3		VR	2253	9		280	2252	18	32	310	2200	119
2356	6		290	2353	6		280	2352	17	24	310	2300	243

Table ADD-1: Wind speed, wind gust, and wind direction tables for El Centro NAF, Imperial County Airport, and Desert Resorts Regional Airport comparative to the concentration of the Brawley FEM Monitor on March 17, 2014. Values indicated in red are wind speed values coincident with the Brawley FEM Monitor measured PM_{10} concentrations above 100 µg/m³

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TABLE ADD-2
NILAND WIND SPEED TABLE

EL CENTRO NAF (KNJK)				IMPERIAL CO AIRPORT (KIPL)				DESERT RESORTS RGNL AIRPORT				NILAND FEM	
HOUR	W/S	W/G	W/D	HOUR	W/S	W/G	W/D	HOUR	W/S	W/G	W/D	HOUR	PM_{10} (µg/m³)
56	0		0	53	0		0	52	5		320	0	34
156	3		270	153	0		0	152	3		290	100	42
256	0		0	253	3		160	252	6		360	200	38
356	0		0	353	3		130	352	5		250	300	25
456	7		120	453	0		0	452	3		280	400	21
556	0		0	553	6		130	552	0		0	500	29
656	5		100	653	6		150	652	0		0	600	52
756	7		170	753	7		150	752	3		VR	700	64
856	3		150	853	6		230	852	5		VR	800	58
956	7		320	953	3		350	952	3		VR	900	45
1056	5		VR	1053	0		0	1052	6		150	1000	33
1156	3		VR	1153	3		320	1152	7		140	1100	35
1256	11		160	1253	11		180	1252	7		VR	1200	48
1356	20	30	240	1353	10		220	1352	7		100	1300	57
1456	21		280	1453	21	30	270	1452	5		VR	1400	60
1556	26	33	250	1553	21	31	270	1552	5		240	1500	86
1656	21		250	1653	16	26	260	1652	6		300	1600	241
1756	24	29	250	1753	14		260	1752	15	24	330	1700	
1856	25		250	1853	17	28	270	1852	21		330	1800	329
1956	24		250	1953	16		270	1952	23	32	340	1900	205
2056	14		250	2053	9		270	2052	18	26	330	2000	153
2156	13		260	2153	7		260	2152	17	29	330	2100	110
2256	3		VR	2253	9		280	2252	18	32	310	2200	96
2356	6		290	2353	6		280	2352	17	24	310	2300	159

Table ADD-2: Wind speed, wind gust, and wind direction tables for El Centro NAF, Imperial County Airport, and Desert Resorts Regional Airport comparative to the concentration of the Niland FEM Monitor on March 17, 2014. Values indicated in red are wind speed values coincident with the Niland FEM Monitor measured PM_{10} concentrations above 100 µg/m³