

**STATE OF NEW MEXICO  
ENVIRONMENTAL IMPROVEMENT BOARD**

**IN THE MATTER OF THE APPEALS  
OF THE AIR QUALITY PERMIT  
NO. 7482-M1 ISSUED TO 3 BEAR  
DELAWARE OPERATING – NM LLC**

**EIB No. 20-21(A)**

**AND**

**REGISTRATION NOS. 8729, 8730, AND 8733  
UNDER GENERAL CONSTRUCTION PERMIT  
FOR OIL AND GAS FACILITIES**

**EIB No. 20-33(A)**

**WildEarth Guardians,  
*Petitioner***

**THE NEW MEXICO ENVIRONMENT DEPARTMENT'S  
STATEMENT OF INTENT TO PRESENT REBUTTAL TECHNICAL TESTIMONY**

Pursuant to 20.1.2.206 NMAC, the Air Quality Bureau (“Bureau”) of the Environmental Protection Division (“Division”) of the New Mexico Environment Department (“Department”) submits this Statement of Intent to Present Rebuttal Technical Testimony at the public hearing beginning September 23, 2020 on the consolidated appeal petitions filed by WildEarth Guardians.

**1. Name of Person Filing the Statement**

The Air Quality Bureau of the Environmental Protection Division of the Department.

**2. Technical Witness Information**

The Bureau will call the following witnesses at the hearing to present rebuttal technical testimony:

Elizabeth Bisbey-Kuehn: Ms. Bisbey-Kuehn is Chief of the Department’s Air Quality Bureau. A copy of Ms. Bisbey-Kuehn’s written rebuttal testimony is attached as NMED Exhibit 11.

The Bureau hereby reserves the right to call any other person to present rebuttal testimony and to support the admission of any exhibit.

**3. Exhibit List**

The following is a complete list of direct and rebuttal exhibits that Department intends to offer into evidence at the hearing. The Department reserves the right to introduce and move for admission of any other exhibit in support of sur-rebuttal testimony at the hearing.

<u>EXHIBIT NUMBER</u>	<u>TITLE OF EXHIBIT</u>
NMED Exhibit 1	Testimony of Sufi Mustafa
NMED Exhibit 2	Resume of Sufi Mustafa
NMED Exhibit 3	NMED Air Quality Bureau’s Air Dispersion Modeling Guidelines (June 6, 2019)
NMED Exhibit 4	US EPA’s Draft Guidance for Ozone and Fine Particulate Matter Permit Modeling (February 10, 2020)
NMED Exhibit 5	Testimony of Elizabeth Bisbey-Kuehn
NMED Exhibit 6	Resume of Elizabeth Bisbey Kuehn
NMED Exhibit 7	Southern New Mexico Ozone Study Technical Support Document (October 19, 2016)
NMED Exhibit 8	Resume of Kerwin Singleton
NMED Exhibit 9	Resume of Ted Schooley
NMED Exhibit 10	Resume of Angela Raso
NMED Exhibit 11	Rebuttal Technical Testimony of Elizabeth Bisbey-Kuehn

Respectfully submitted,

NEW MEXICO ENVIRONMENT DEPARTMENT

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## CERTIFICATE OF SERVICE

I hereby certify that a copy of the foregoing Statement of Intent to Present Technical Testimony was served via electronic mail on the following parties of record on September 2, 2020:

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/s/ Lara Katz

Lara Katz

**NMED**  
**EXHIBIT 11**

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**REBUTTAL TECHNICAL TESTIMONY OF ELIZABETH BISBEY-KUEHN**

**1 I. Introduction**

2 My name is Elizabeth Bisbey-Kuehn. I am the Bureau Chief of the Air Quality Bureau  
3 (“AQB” or “Bureau”) of the New Mexico Environment Department (“NMED” or “Department”).  
4 I have reviewed the direct technical testimony filed by WildEarth Guardians (“WEG”) in these  
5 consolidated permit appeals, and I present this written rebuttal testimony on behalf of the  
6 Department for the consolidated public hearings on those appeals.

**7 II. The areas where the permitted sources are located are not in non-attainment status.**

8 In his discussion of the data from the ozone monitors in Lea and Eddy Counties, WEG’s  
9 technical expert Dr. Ranjit Sahu characterizes the monitors as “in non-attainment” and  
10 “demonstrating non-attainment,” and claims that the area should be “considered to be in a state of  
11 actual non-attainment.” *See* Sahu Testimony at pp. 2, 22. These statements demonstrate a  
12 fundamental misunderstanding of the term “nonattainment”. The monitors in Lea and Eddy  
13 Counties are registering *exceedances* of the ozone NAAQS in the surrounding ambient air; they  
14 are not “demonstrating nonattainment.” Rather than describing an existing state of air quality, the

1 term “nonattainment” is a regulatory term of art under the federal Clean Air Act that denotes an  
2 area that has gone through a process of being formally designated as non-attainment by EPA,  
3 which designation has certain regulatory consequences for new and existing sources within the  
4 designated area. *See* 42 U.S.C. §§ 7501 through 7511f. Non-attainment is always a formal  
5 regulatory process; it is never a physically existing or “actual” state of ambient air quality. This is  
6 evidenced by the fact that neither the New Mexico Air Quality Control Act and its corresponding  
7 regulations, nor the Clean Air Act and its corresponding regulations define “nonattainment” as a  
8 stand-alone term. Instead, the definition is for a “nonattainment *area*”; this is a critical distinction,  
9 because the inclusion of the term “area” implies that there is a boundary, and it is the boundary  
10 that is determined through the formal regulatory designation process. While monitoring data is a  
11 critical piece of data for the nonattainment designation process, it does not constitute  
12 “nonattainment” in-and-of itself.

13 That nonattainment denotes a formal designation is evidenced by the Clean Air Act  
14 definition of “Nonattainment area”, which is as follows: “[F]or any air pollutant, an area which is  
15 designated ‘nonattainment’ with respect to that pollutant within the meaning of section 7407(d) of  
16 this title.” 42 U.S.C. § 7501(2). Section 7407(d) lays out the process for designation of a non-  
17 attainment area, which includes each State submitting initial designations within 1 year of  
18 promulgation of the standard, and EPA reviewing the States’ initial designations and promulgating  
19 final designations of all areas within 2 years of promulgation of the standard. In reviewing the  
20 designations, EPA can make modifications, including to the boundaries of a State’s proposed  
21 designated areas, after which the State has an opportunity to challenge those modifications. Once  
22 the boundaries of the non-attainment area have been defined and designated, the area is then  
23 classified as marginal, moderate, serious, severe, or extreme. *See* 42 U.S.C. § 7511. Classifications

1 are determined based on the severity of the exceedance of the NAAQS, along with the degree to  
2 which the State in which the area is located has the ability to control the sources of ozone that are  
3 contributing to that exceedance. *See* 42 U.S.C. § 7511(a)(4).

4 In support of his contention that the Lea and Eddy county monitors show that those counties  
5 are in “actual non-attainment,” Dr. Sahu points to the definition of “nonattainment area” in the  
6 Board’s regulations at 20.2.72.7.F NMAC, which defines the term as “an area which is shown by  
7 monitored data or which is calculated by air quality monitoring (or other methods determined by  
8 the administrator to be reliable to exceed any [NAAQS].” Again, this definition references an  
9 “area” for which boundaries must be identified, and allows the Department to use other methods  
10 aside from monitored data, including modeling. Additionally, while the definition in the Board’s  
11 regulations has not been updated since the definition in the federal Clean Air Act changed,<sup>1</sup> the  
12 Board’s regulations are based on the federal Clean Air Act and the corresponding federal  
13 regulations, and must be read to be consistent with those authorities. If the Board were to find  
14 otherwise, not only would it run contrary to the stringency provisions in the New Mexico Air  
15 Quality Control Act,<sup>2</sup> it would mean that the Department would have to conduct its own non-  
16 attainment designation process under state law. Neither the state Air Quality Control Act nor the  
17 Board’s regulations provide for such a process, and the Department does not have the resources to  
18 conduct such a process.

19 Dr. Sahu understands that designating an area as non-attainment is a formal process, as  
20 evidenced by his statement of his “professional opinion that it is simply a matter of when and not

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<sup>1</sup> See XTO Statement of Intent to Present Technical Evidence, Testimony of Randy Parmley at pages 11-12.  
<sup>2</sup> *See* NMSA 1978, § 74-2-5.C (stating that “rules adopted by the [Board] may: (1) include rules . . . to achieve national ambient air quality standards in nonattainment areas; provided that such regulations: (a) shall be no more stringent than but at least as stringent as required by the federal [Clean Air Act and regulations] pertaining to nonattainment areas”).



1 if such a designation will occur, what the severity will be, and what the geographical extent of the  
2 non-attainment area will be.” Whether Lea and Eddy counties, or portions of them, are ultimately  
3 designated as non-attainment by EPA, it does not follow that the Department can simply deny all  
4 permits for all sources located in those counties that emit ozone precursors just because the  
5 monitors show exceedances of the NAAQS. It is the formal nonattainment designation and the  
6 subsequent classification of an area that determine what steps the State is required to take to bring  
7 that area back into attainment status.

8 Thus, while the Department does not dispute that the monitors in Hobbs and Carlsbad have  
9 been registering exceedances of the NAAQS in recent years, as calculated by the design values,  
10 there is no “non-attainment area” at this time. Instead, Lea and Eddy County are currently  
11 designated as “attainment”, and EPA has proposed to retain that designation as of January 16,  
12 2018. According to EPA’s Ozone Advance guidance<sup>3</sup> when an area that is designated as attainment  
13 has monitors that are showing violations of an existing ozone NAAQS (as opposed to a new or  
14 revised standard), EPA can consider measures being implemented by a state to address those  
15 monitored exceedances when deciding whether that area should be redesignated as nonattainment.  
16 Such measures are exactly what NMED is currently undertaking through the Ozone Attainment  
17 Initiative, and participation in EPA’s Ozone Advance Program.

18 **II. The sources whose permits WEG is challenging in these appeals are not considered to**  
19 **significantly contribute to ozone levels under the modeling protocols and guidance cited**  
20 **by Dr. Sahu.**

21 In his testimony, Dr. Sahu advocates the use of EPA guidance on determining Modeled  
22 Emission Rates for Precursors (MERPs) to evaluate the contributions of individual sources to  
23 ambient ozone levels, including the oil and gas sources whose permits are the subject of these

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<sup>3</sup> Available at [https://www.epa.gov/sites/production/files/2016-04/documents/guidance\\_update.final\\_.april\\_2016.pdf](https://www.epa.gov/sites/production/files/2016-04/documents/guidance_update.final_.april_2016.pdf)

1 consolidated appeals. *See* Sahu Testimony at p. 14-15. The Department agrees that the MERPs can  
2 be used as an analytical tool to estimate ozone impacts from individual sources. In fact, the  
3 Department requires this approach for PSD sources (which emit over 250 tons per year of a  
4 regulated air pollutant). MERPS are applied to facility emissions of NO<sub>x</sub> and VOCs as  
5 multiplicative factors to estimate the facility ozone impacts. Because ozone formation chemistry  
6 is highly sensitive to local atmospheric conditions and concentrations of atmospheric species, these  
7 multiplicative factors were produced by EPA for several “hypothetical sources” modeled across  
8 the country. The multiplicative factors for the three “hypothetical sources” closest to the facilities  
9 at issue in these appeals require that over 250 tons per year of NO<sub>x</sub> or VOCs be emitted from a  
10 facility before the ozone impacts from the facility are considered to be above the Significant Impact  
11 Level (SIL) for ozone. The permits at issue in these appeals are all are minor sources; none of  
12 those facilities emit NO<sub>x</sub> or VOC above 250 tons per year each. Therefore, under the approach  
13 advocated by Dr. Sahu, these sources cannot be considered to significantly contribute to ozone  
14 concentrations. If the Department were to deny the permits, as advocated by WEG and Dr. Sahu,  
15 those denials would immediately be challenged as lacking any scientific or technical basis under  
16 the very EPA guidance and protocols that Dr. Sahu points to as the applicable analytical tools by  
17 which these permits should be evaluated.

18 **III. Dr. Sahu misrepresents the studies cited in his testimony and leaves out critical context**  
19 **regarding the Department’s efforts to address ozone issues in the State.**

20 Dr. Sahu discusses three modeling studies which he claims show that the emissions from  
21 the permitted sources whose permits are being appealed “are directly contributing to . . . violations  
22 of the NAAQS.” Sahu Testimony at p. 16. As discussed in the previous section, EPA’s modeling  
23 protocols and guidance require the opposite finding. Dr. Sahu further uses the cited studies to  
24 accuse the Department of failing to act diligently to address the ozone levels in these areas. Dr.

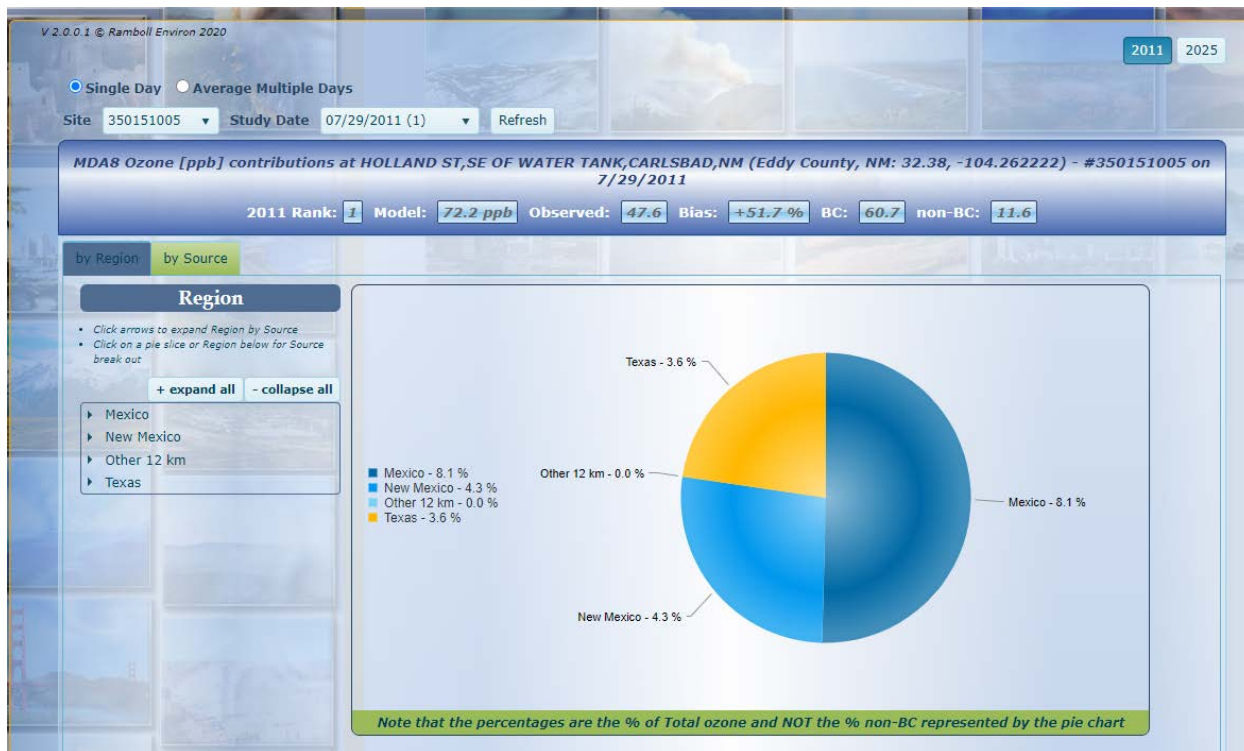
1 Sahu’s discussion leaves out critical context within which the studies he cites must be situated,  
2 and also misrepresents the data and conclusions from those studies.

3 Dr. Sahu cites to the Southern New Mexico Ozone Study, which was addressed in the  
4 Department’s direct technical testimony. In his discussion, Dr. Sahu fails to distinguish between  
5 local and non-local sources, and between anthropogenic and non-anthropogenic sources. In this  
6 way, he is able to distort what the studies he cites to actually say. According to Dr. Sahu, the  
7 SNMOS “correctly concluded that oil and gas emissions are the ‘largest contributing source’ to  
8 the Eddy County monitor.” This quote is misleading; what the SNMOS showed was that oil and  
9 gas emissions were the “largest *New Mexico anthropogenic* contribution at the Carlsbad monitor.”  
10 (Emphasis added). Further, while the study did show contributions at the Carlsbad monitor from  
11 oil and gas operations in the entire Permian basin as a whole, the majority of those were from  
12 Texas.<sup>4</sup> As far as overall contributions, the Intermountain West Data Warehouse has tools for  
13 analyzing and visualizing the data from the SNMOS.<sup>5</sup> The following image is a screenshot from  
14 the ozone source apportionment tool:

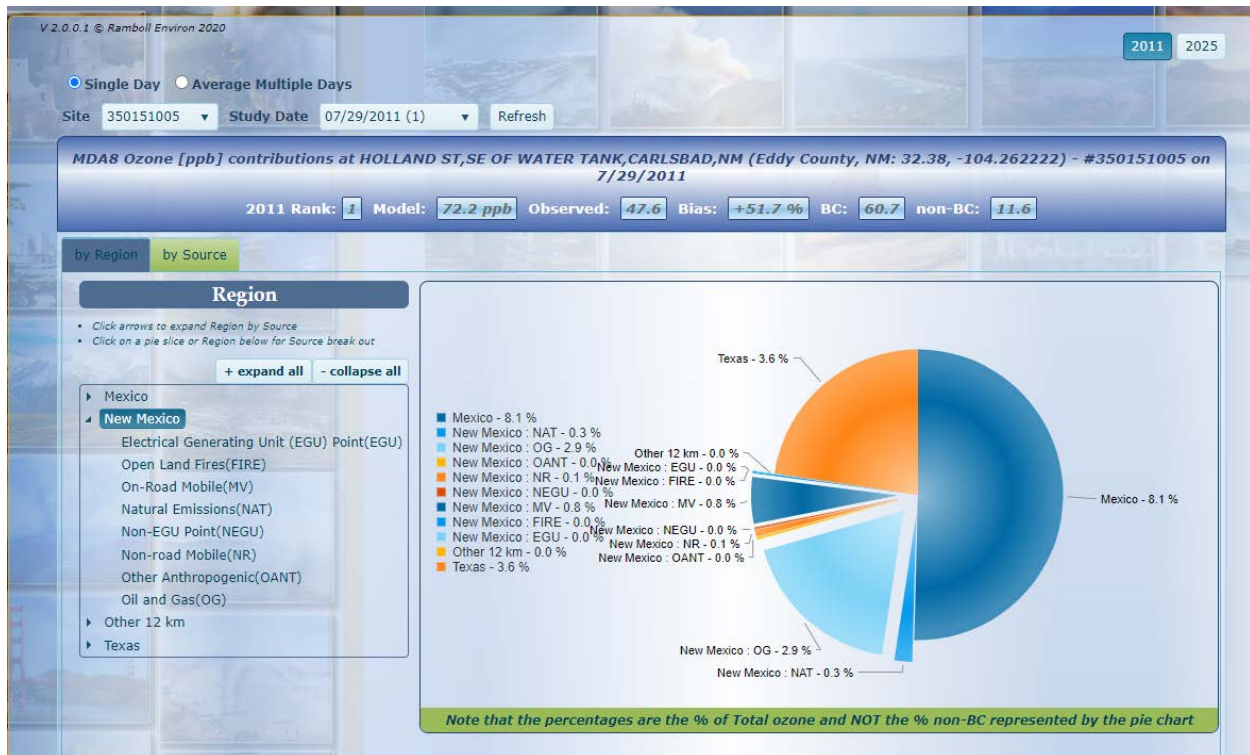
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<sup>4</sup> See NMED Exhibit 7, at p. 20.

<sup>5</sup> Available at [http://vibe.cira.colostate.edu/WAQS\\_SA\\_SNMOS/](http://vibe.cira.colostate.edu/WAQS_SA_SNMOS/).



1 This image shows the contributions from the New Mexico, Texas, Mexico region at the  
 2 Carlsbad monitor during one of the highest ozone days in 2011. The chart indicates that most of  
 3 the ozone contribution was from outside the Texas, Mexico, New Mexico domain; out of the total  
 4 ozone level, the total contribution from that region is 13.2% and the rest is transported from outside  
 5 the region or is natural background. The New Mexico contribution of the total modeled ozone is  
 6 4.3%, out of which the New Mexico oil and gas sector contributes just 2.9%, as shown in the image  
 7 below:



1            These studies suggest that the entire oil and gas sector in New Mexico is likely responsible  
 2 for only a relatively small portion of the ozone concentrations in any area of the state, which means  
 3 the contribution of the individual minor sources whose permits are being challenged in these  
 4 appeals would not even register as contributing in any scientifically significant way to those levels.  
 5 This is borne out by application of EPA modeling guidance and protocols to those sources, which  
 6 is discussed above, as well as in the Department’s direct testimony of Sufi Mustafa.

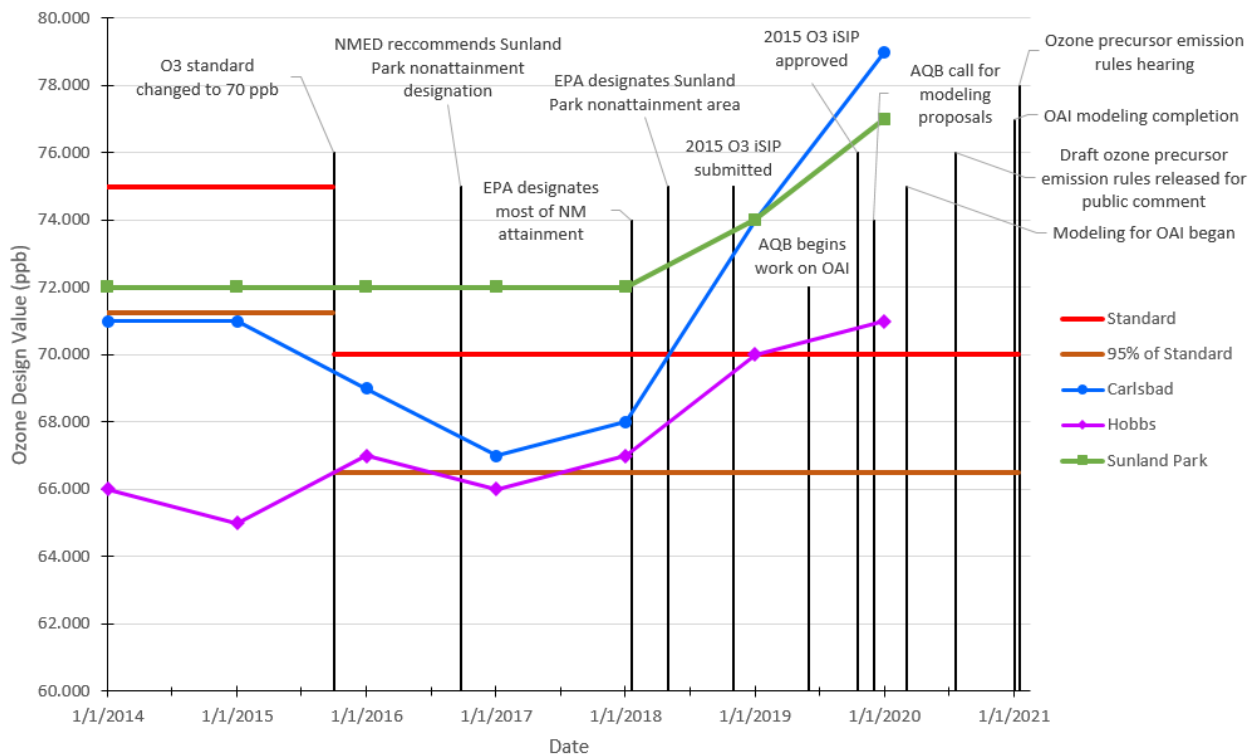
7            Dr. Sahu also cites to a 2013 modeling effort conducted on behalf of the U.S. Bureau of  
 8 Land Management’s Carlsbad Field Office which predicted future ozone levels, including at the  
 9 Carlsbad, Carlsbad Caverns, and Hobbs monitors. Dr. Sahu claims that this study predicted design  
 10 values above the NAAQS at all three monitors. However, Dr. Sahu leaves out the fact that at the  
 11 time of that study, the ozone NAAQS was 75 ppb, not 70 ppb; EPA revised the standard downward  
 12 in October of 2015. Prior to that revision, the modeling predicted only one monitor being slightly

1 above the standard in 2017. The same point is true for the 2011 EPA analysis Dr. Sahu cites on  
2 page 18 of his testimony.

3 Three points are important to consider with respect to the 2015 ozone NAAQS. First, the  
4 revision of the standard downwards triggered a process of re-evaluation and re-designation in New  
5 Mexico, including revisions to the state implementation plan (SIP) and designation of the State's  
6 first ozone non-attainment area in Sunland Park. Starting in 2016, the Department had to devote  
7 substantial resources to that process, which is mandated under the Clean Air Act. The Department  
8 has limited resources, and the redesignation and SIP processes had to take priority before other  
9 initiatives could be fully undertaken.

10 Second, the Department was also involved in a lawsuit in the D.C. Circuit Court of Appeals  
11 brought by a coalition of western States challenging the 2015 Ozone NAAQS. The Department's  
12 argument in that litigation was that the new standard was problematic for western states like New  
13 Mexico whose ozone concentrations are caused to a substantial degree by sources outside of the  
14 states' control – including natural background, interstate and international transport, and non-  
15 anthropogenic causes. Sunland Park is an area that has no major industry and contributes just 3%  
16 of the ozone precursors in the Paseo del Norte airshed; it is the quintessential example of why the  
17 2015 standard is problematic for states like New Mexico, which face burdensome federal  
18 regulations and the possibility of punitive sanctions, including loss of highway funds, for a  
19 problem that they essentially have no ability to fix. While that litigation was ultimately  
20 unsuccessful, it reflected legitimate concerns over the position the new standard put states like  
21 New Mexico in when there is no ability to control the main sources of ozone, and EPA does not  
22 provide regulatory tools for such situations.

1 Finally, it is important to note that the executive branch was under different leadership  
 2 from 2011 through the beginning of 2019. As an executive agency, the priorities of the Department  
 3 necessarily reflect the priorities of the Governor. Since 2019, when the leadership of the executive  
 4 branch changed hands with a new set of priorities, the Department has pushed forward aggressively  
 5 on its Ozone Attainment Initiative, despite severe resource constraints and the challenges entailed  
 6 by the 2015 ozone NAAQS, as illustrated in the timeline below. This timeline also shows the  
 7 Department's work on nonattainment designations and state implementation plans following  
 8 promulgation of the 2015 ozone NAAQS.



9 **V. Conclusion**

10 It is important for the Board to understand that ozone regulation in New Mexico and  
 11 throughout the United States is dictated by the federal Clean Air Act. The Department regulates  
 12 ozone consistent with other western states; the Department is not aware of any other state that

1 approaches ozone regulation in the manner that WEG argues the Department should (i.e., denying  
2 permits for all sources that will emit any amount of ozone precursors in counties where monitors  
3 are registering exceedances of the NAAQS). The Department can only act within the parameters  
4 of its authority under federal and state statutes and regulations. Based on my experience and my  
5 understanding of those authorities, the approach advocated by WEG is contrary to the regulatory  
6 directives and practices of New Mexico and other similarly-situated states. The Board should  
7 therefore uphold the Department's decision to approve the permits at issue in these appeals.