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

AND

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

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.

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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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EXHIBIT 11
STATE OF NEW MEXICO
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REBUTTAL TECHNICAL TESTIMONY OF ELIZABETH BISBEY-KUEHN

I. Introduction

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

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

In his discussion of the data from the ozone monitors in Lea and Eddy Counties, WEG’s technical expert Dr. Ranjit Sahu characterizes the monitors as “in non-attainment” and “demonstrating non-attainment,” and claims that the area should be “considered to be in a state of actual non-attainment.” See Sahu Testimony at pp. 2, 22. These statements demonstrate a fundamental misunderstanding of the term “nonattainment”. The monitors in Lea and Eddy Counties are registering exceedances of the ozone NAAQS in the surrounding ambient air; they are not “demonstrating nonattainment.” Rather than describing an existing state of air quality, the
term “nonattainment” is a regulatory term of art under the federal Clean Air Act that denotes an area that has gone through a process of being formally designated as non-attainment by EPA, which designation has certain regulatory consequences for new and existing sources within the designated area. See 42 U.S.C. §§ 7501 through 7511f. Non-attainment is always a formal regulatory process; it is never a physically existing or “actual” state of ambient air quality. This is evidenced by the fact that neither the New Mexico Air Quality Control Act and its corresponding regulations, nor the Clean Air Act and its corresponding regulations define “nonattainment” as a stand-alone term. Instead, the definition is for a “nonattainment area”; this is a critical distinction, because the inclusion of the term “area” implies that there is a boundary, and it is the boundary that is determined through the formal regulatory designation process. While monitoring data is a critical piece of data for the nonattainment designation process, it does not constitute “nonattainment” in-and-of itself.

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

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

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

¹ See XTO Statement of Intent to Present Technical Evidence, Testimony of Randy Parmley at pages 11-12.
² 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”).
if such a designation will occur, what the severity will be, and what the geographical extent of the
non-attainment area will be.” Whether Lea and Eddy counties, or portions of them, are ultimately
designated as non-attainment by EPA, it does not follow that the Department can simply deny all
permits for all sources located in those counties that emit ozone precursors just because the
monitors show exceedances of the NAAQS. It is the formal nonattainment designation and the
subsequent classification of an area that determine what steps the State is required to take to bring
that area back into attainment status.

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

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

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

consolidated appeals. See Sahu Testimony at p. 14-15. The Department agrees that the MERPs can be used as an analytical tool to estimate ozone impacts from individual sources. In fact, the Department requires this approach for PSD sources (which emit over 250 tons per year of a regulated air pollutant). MERPs are applied to facility emissions of NOx and VOCs as multiplicative factors to estimate the facility ozone impacts. Because ozone formation chemistry is highly sensitive to local atmospheric conditions and concentrations of atmospheric species, these multiplicative factors were produced by EPA for several “hypothetical sources” modeled across the country. The multiplicative factors for the three “hypothetical sources” closest to the facilities at issue in these appeals require that over 250 tons per year of NOx or VOCs be emitted from a facility before the ozone impacts from the facility are considered to be above the Significant Impact Level (SIL) for ozone. The permits at issue in these appeals are all are minor sources; none of those facilities emit NOx or VOC above 250 tons per year each. Therefore, under the approach advocated by Dr. Sahu, these sources cannot be considered to significantly contribute to ozone concentrations. If the Department were to deny the permits, as advocated by WEG and Dr. Sahu, those denials would immediately be challenged as lacking any scientific or technical basis under the very EPA guidance and protocols that Dr. Sahu points to as the applicable analytical tools by which these permits should be evaluated.

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

Dr. Sahu discusses three modeling studies which he claims show that the emissions from the permitted sources whose permits are being appealed “are directly contributing to . . . violations of the NAAQS.” Sahu Testimony at p. 16. As discussed in the previous section, EPA’s modeling protocols and guidance require the opposite finding. Dr. Sahu further uses the cited studies to accuse the Department of failing to act diligently to address the ozone levels in these areas. Dr.
Sahu’s discussion leaves out critical context within which the studies he cites must be situated, and also misrepresents the data and conclusions from those studies.

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

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⁴ See NMED Exhibit 7, at p. 20.
⁵ Available at http://vibe.cira.colostate.edu/WAQS_SA_SNMOS/.
This image shows the contributions from the New Mexico, Texas, Mexico region at the Carlsbad monitor during one of the highest ozone days in 2011. The chart indicates that most of the ozone contribution was from outside the Texas, Mexico, New Mexico domain; out of the total ozone level, the total contribution from that region is 13.2% and the rest is transported from outside the region or is natural background. The New Mexico contribution of the total modeled ozone is 4.3%, out of which the New Mexico oil and gas sector contributes just 2.9%, as shown in the image below:
These studies suggest that the entire oil and gas sector in New Mexico is likely responsible for only a relatively small portion of the ozone concentrations in any area of the state, which means the contribution of the individual minor sources whose permits are being challenged in these appeals would not even register as contributing in any scientifically significant way to those levels. This is borne out by application of EPA modeling guidance and protocols to those sources, which is discussed above, as well as in the Department’s direct testimony of Sufi Mustafa.

Dr. Sahu also cites to a 2013 modeling effort conducted on behalf of the U.S. Bureau of Land Management’s Carlsbad Field Office which predicted future ozone levels, including at the Carlsbad, Carlsbad Caverns, and Hobbs monitors. Dr. Sahu claims that this study predicted design values above the NAAQS at all three monitors. However, Dr. Sahu leaves out the fact that at the time of that study, the ozone NAAQS was 75 ppb, not 70 ppb; EPA revised the standard downward in October of 2015. Prior to that revision, the modeling predicted only one monitor being slightly
above the standard in 2017. The same point is true for the 2011 EPA analysis Dr. Sahu cites on page 18 of his testimony.

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

Second, the Department was also involved in a lawsuit in the D.C. Circuit Court of Appeals brought by a coalition of western States challenging the 2015 Ozone NAAQS. The Department’s argument in that litigation was that the new standard was problematic for western states like New Mexico whose ozone concentrations are caused to a substantial degree by sources outside of the states’ control – including natural background, interstate and international transport, and non-anthropogenic causes. Sunland Park is an area that has no major industry and contributes just 3% of the ozone precursors in the Paseo del Norte airshed; it is the quintessential example of why the 2015 standard is problematic for states like New Mexico, which face burdensome federal regulations and the possibility of punitive sanctions, including loss of highway funds, for a problem that they essentially have no ability to fix. While that litigation was ultimately unsuccessful, it reflected legitimate concerns over the position the new standard put states like New Mexico in when there is no ability to control the main sources of ozone, and EPA does not provide regulatory tools for such situations.
Finally, it is important to note that the executive branch was under different leadership from 2011 through the beginning of 2019. As an executive agency, the priorities of the Department necessarily reflect the priorities of the Governor. Since 2019, when the leadership of the executive branch changed hands with a new set of priorities, the Department has pushed forward aggressively on its Ozone Attainment Initiative, despite severe resource constraints and the challenges entailed by the 2015 ozone NAAQS, as illustrated in the timeline below. This timeline also shows the Department’s work on nonattainment designations and state implementation plans following promulgation of the 2015 ozone NAAQS.

\[ \text{Timeline Image} \]

V. Conclusion

It is important for the Board to understand that ozone regulation in New Mexico and throughout the United States is dictated by the federal Clean Air Act. The Department regulates ozone consistent with other western states; the Department is not aware of any other state that
approaches ozone regulation in the manner that WEG argues the Department should (i.e., denying permits for all sources that will emit any amount of ozone precursors in counties where monitors are registering exceedances of the NAAQS). The Department can only act within the parameters of its authority under federal and state statutes and regulations. Based on my experience and my understanding of those authorities, the approach advocated by WEG is contrary to the regulatory directives and practices of New Mexico and other similarly-situated states. The Board should therefore uphold the Department’s decision to approve the permits at issue in these appeals.