

**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***

HEARING OFFICER RECOMMENDED DECISION

BACKGROUND

These consolidated appeals arise out of permitting actions taken by the New Mexico Environment (“Department”) with respect to four minor source oil and gas facilities in Southeastern New Mexico. EIB 20-21(A) involves the Department’s approval of Air Quality Permit No. 7482-M1 (“3-Bear Permit”), issued to 3-Bear Delaware Operating – NM LLC (“3-Bear”) for its Libby Gas Plant (“the Libby Plant”) in Lea County, New Mexico. EIB 20-33(A) involves the Department’s approval of General Construction Permit for Oil and Gas Facilities (“GCP O&G”) Registration Nos. 8729, 8730, and 8733 (collectively, the “GCP Registrations”) issued to XTO Energy Co. (“XTO”) for its Corral Canyon 23 and Big Eddy Unit DI 38 facilities (Nos. 8729 and 8730, respectively), and Spur Energy Partners LLC (“Spur”) for its Dorami 2H, 4H and 9H Federal Oil Tank Battery (No. 8733), all of which are located in Eddy County.

On May 11, 2020, WildEarth Guardians (“WEG”) filed its Petition for Hearing in EIB 20-21(A), appealing the Department’s approval of the 3-Bear Permit. On June 12, 2020, WEG filed its Petition for Hearing in EIB 30-33(A), appealing the Department’s approval of the GCP

Registrations. Both appeals seek rescission of the permits in their entirety on the basis that the permitted sources will emit ozone precursor pollutants – namely, oxides of nitrogen (“NO_x), and volatile organic compounds (“VOCs”) – in counties where monitor readings are showing ozone levels exceeding the National Ambient Air Quality Standard (“NAAQS”). The appeals were consolidated for hearing, and the Parties stipulated that the specific emission limits, emission limit calculations, and permit conditions of the 3-Bear Permit and the GCP Registrations are not at issue in the appeals, and therefore no testimony on those subjects would be accepted.¹

WEG, the Department, and the Permittees submitted pre-filed written direct and rebuttal technical testimony. On September 23 and 24, 2020, the Board held a consolidated public hearing in EIB 20-21(A) and EIB 20-33(A). At the public hearing, appearances were entered on behalf of WEG, the Department, 3-Bear, XTO, Spur, and the Western Environmental Law Center. Members of the public were provided opportunities to be heard during the hearing, and three individuals provided public comment.

The following Hearing Officer’s findings of fact and conclusions of law are issued pursuant to 20.1.2.402 NMAC.

**JOINT FINDINGS OF FACT FOR
EIB NO. 20-21(A) AND EIB NO. 20-33(A)**

I. Regulation of Ozone Under Federal and State Law

A. Ground Level Ozone Chemistry and Formation

1. The ozone molecule is composed of three oxygen atoms. Ground level ozone is formed when nitrogen oxides (“NO_x”) and volatile organic compounds (“VOCs”) react in the presence of sunlight. As the amount of these compounds increase in the air during warm days and intense sunlight, the essential chemical reactions take place to form ozone. NMED Exh. 1, Direct

¹ See Procedural Order at p.3 (filed July 20, 2020)

Technical Testimony of Sufi Mustafa (“Mustafa Direct”) at 5:15-18.

2. Man-made, or anthropogenic sources of NO_x include products of fuel combustion. VOCs are emitted from various anthropogenic sources and processes such as motor vehicles; chemical manufacturing facilities; evaporative losses from crude oil holding tanks; and consumer and commercial products. Natural sources of nitrogen oxides include lightning NO_x, microbial processes that occur in soils, and wildland fires. Vegetation is the major natural source of VOCs; other natural sources include animals and microbes. *See id.* at 5:20 – 6:3.

3. Ozone is a reactive molecule that causes irritation and inflammation to the respiratory system and tissue damage to vegetation. While ozone is beneficial when it is present in the stratosphere to block harmful light radiation from reaching us, it is harmful when it is present in the lower troposphere, where we live and breathe. *See id.* at 5:4-7.

B. National Ambient Air Quality Standards

4. The federal Clean Air Act requires the U.S. Environmental Protection Agency (“EPA”) to set National Ambient Air Quality Standards for pollutants that EPA determines may endanger public health and welfare. *See* 40 U.S.C. § 7409; NMED Exh. 5, Technical Testimony of Elizabeth Bisbey-Kuehn (“Kuehn Direct”) at 3:18. These standards are in the form of maximum allowable concentrations of the pollutant in the ambient air during a specified time period, and are designed to protect the most sensitive individuals from harm from airborne pollutants. NMED Exh. 1 (Mustafa Direct) at 3:13-16.

5. Pursuant to the directives under the CAA, EPA has established NAAQS for six principal pollutants, known as “criteria pollutants”. These pollutants are carbon monoxide (“CO”); nitrogen dioxide (“NO₂”); sulfur dioxide (“SO₂”); particulate matter (“PM”) at 10 microns or less (referred to as coarse particulate matter) and 2.5 microns or less (referred to as fine particulate matter); ground level ozone; and lead. *See* 40 C.F.R. Part 50; NMED Exh. 5 (Kuehn Direct) at 4:1-

3; NMED Exh. 1 (Mustafa Direct) at 3:17-20.

6. Whether an area is in compliance with a NAAQS is measured by “design values” based on monitoring data. The design value for ozone is determined by calculating the three-year average of the annual fourth highest daily maximum 8-hour ozone concentration. *See* NMED Exh. 5 (Kuehn Direct) at 4:15-18.

7. The CAA requires EPA to review the NAAQS on a periodic basis, which may result in the standards being revised based on health and environmental criteria that apply to the concentration of a pollutant in outdoor air to limit harmful exposures and detrimental effects. *See id.* at 4:3-6.

8. In October of 2015, following a periodic review, EPA revised the ozone NAAQS downward from 75 parts per billion (ppb) to 70 ppb. *See id.* at 5:8-9.

C. Non-Attainment Designation Process

9. Following promulgation of a new or revised NAAQS, EPA undertakes a process of “designating” areas of a state as in “attainment” or “nonattainment” of the standard. The designation process entails collaborating with states and tribes and considering data and information from air quality monitors and modeling. If the concentration of a criteria pollutant in a geographic area is at or below the national standard, the area is designated as an “attainment area” for that pollutant. Conversely, an area where the concentration of a criteria pollutant is above the national standard will be designated as a “nonattainment area” with respect to that pollutant. *See* 42 U.S.C § 7407(d); NMED Exh. 5 (Kuehn Direct) at 4:7-14.

10. The Clean Air Act defines “nonattainment area” 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).

11. The definition of “nonattainment area” in the New Mexico Air Quality Control Act

(“AQCA”), NMSA 1978, §§ 74-2-1 through -17, is identical to the definition in the CAA. *See* NMSA 1978, § 74-2-2(N).

12. Section 7407(d) of the CAA lays out the process for designation of a nonattainment area, which includes each State submitting initial designations within one year of promulgation of the standard, and EPA reviewing the States’ initial designations and promulgating final designations of all areas within two years of promulgation of the standard.

13. In reviewing a state’s proposed designations, EPA can make modifications, including to the boundaries of the proposed designated areas, after which the state has an opportunity to challenge those modifications. *See* 42 U.S.C. 7407(d).

14. Once the boundaries of the nonattainment 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 contributing to that exceedance. *See* 42 U.S.C. § 7511(a)(4); NMED Exh. 5 (Kuehn Direct) at 5:1-2.

15. State and local governments are required to develop a plan, known as a state implementation plan (“SIP”), that details how nonattainment areas will improve the air quality to attain and maintain the standards. Once a nonattainment area meets the standards, states can petition EPA to designate the area as a maintenance area. *See* NMED Exh. 5 (Kuehn Direct) at 5:3-6.

D. New Mexico Designations Following Promulgation of the 2015 Ozone NAAQS

16. In October 2015, following a periodic review, EPA revised the ozone NAAQS downward from 0.075 parts per million (ppm) to 0.070 ppm. *See* NMED Exh. 5 (Kuehn Direct) at 5:8-9.

17. Until the promulgation of the 2015 ozone NAAQS, New Mexico had no designated ozone nonattainment areas in the State. *See id.* at 5:6-7.

18. Following promulgation of the revised ozone NAAQS, all states were required to submit their designation recommendations to EPA by October 1, 2016. Ozone data collected by NMED from 2014 through 2016 showed that a monitor located in the Sunland Park area in southern New Mexico was exceeding the revised ozone standard, as measured by the design values. *See id.* at 5:9-12.

19. NMED submitted a nonattainment area recommendation for the Sunland Park area and recommended attainment or attainment/unclassifiable designations for the remainder of areas in New Mexico. EPA concurred with the recommendations and finalized the area designations for New Mexico on August 3, 2018. *See id.* at 5:9-15.

20. Lea and Eddy Counties were designated as attainment areas for the 2015 ozone NAAQS, and they remain designated as such, following EPA's proposal to retain that designation as of January 16, 2018. *See* NMED Exh. 11, Rebuttal Technical Testimony of Elizabeth Bisbey-Kuehn ("Kuehn Rebuttal"), at 4:8-12.

21. EPA classified the Sunland Park nonattainment area as marginal, allowing NMED 3 years to develop a SIP revision that includes the planning elements required for a marginal nonattainment classification. The SIP revision outlines the strategies and emissions control measures that are expected to reduce the amount of ozone precursors emitted to the atmosphere and improve air quality in the area by August 3, 2021. States may rely on current or upcoming federal rules, new or revised state rules, and other programs, such as the New Mexico Volkswagen mitigation plan projects and the 2021 Regional Haze SIP revision. *See* NMED Exh. 5 (Kuehn Direct) at 5:16-22.

22. On July 13, 2020, EPA proposed to retain the existing 2015 ozone NAAQS. The

CAA does not require EPA to promulgate area designations when an existing NAAQS is retained following the periodic review process. *See id.* at 6:1-3.

23. While not required, the CAA provides that EPA can redesignate an area in the absence of a new or revised NAAQS. This can happen upon EPA's own initiative by notifying the Governor that available information indicates that the designation of an area within the state should be revised. The Governor of a state can also request that EPA redesignate an area of the state. However, EPA must evaluate and approve such a request. Ultimately, EPA retains the sole authority to redesignate an area from attainment to nonattainment, or vice versa. *See* 42 U.S.C. §7407(d)(3); Tr. Vol. 1, 203:9-19.

24. In deciding whether to redesignate an attainment area as a nonattainment area, EPA can consider measures being implemented by a state to address monitored exceedances. *See* Tr. Vol. 203:20 – 204:4.

25. New Mexico's current ozone designations under the CAA will remain in place unless and until the ozone NAAQS is revised again, EPA decides that a redesignation is appropriate, or the Governor requests a redesignation and EPA approves that request. *See* 42 U.S.C. § 7407(d)(3); NMED Exh. 5 (Kuehn Direct) at 6:4-6.

E. Ozone Regulation Under the New Mexico Air Quality Control Act

26. Section 74-2-5.3 of the AQCA specifically mandates that the Board take action to control VOC and NO_x emissions when the Board determines that emissions from sources within its jurisdiction cause or contribute to ozone concentrations in excess of ninety-five percent of the ozone NAAQS. *See* NMSA 1978, § 74-2-5.3.

27. Under this statutory provision, the Board is required to adopt a plan, including regulations, to control emissions of NO_x and VOCs, to provide for the attainment and maintenance of the ozone standard for those areas that exceed 95% of the ozone standard. *See id.* at 74-2-5.3(A).

28. In accordance with this section, the Board is required to consider the following in the adoption of regulations:

- (1) the public interest, including the social and economic value of the sources of emissions and subjects of air contaminants;
- (2) previous experience with equipment and methods available to control the air contaminants involved;
- (3) energy, environmental and economic impacts and other social costs;
- (4) efforts by sources of emissions to reduce emissions prior to the effective date of regulations adopted under this section; and
- (5) for existing sources of emissions, the remaining useful life of any existing source to which the regulation would apply.

Id. at 74-2-5.3(C).

29. Seven counties under the Board's jurisdiction are currently registering or contributing to ozone design values exceeding 95% of the NAAQS: San Juan, Rio Arriba, Sandoval, Valencia, Eddy, Lea, and Doña Ana. *See* NMED Exh. 5 (Kuehn Direct) at 7:11-13.

30. To address this statutory requirement, the Bureau has embarked upon the Ozone Attainment Initiative ("OAI") to develop a series of rules and voluntary measures to mitigate emissions of NO_x and VOCs in the aforementioned counties. *See id.* at 7:14-16.

31. A proposed rule to control NO_x and VOC emissions from various types of equipment related to the production of oil and gas in the South San Juan and Permian Basins has been developed, and the Bureau intends to bring this proposal to the Board for a hearing. *See id.* at 7:14-23.

F. Other Ozone Mitigation Efforts in New Mexico

32. The oil and gas industry is not the only significant contributor to monitored ozone concentrations in New Mexico; previously conducted regional modeling efforts, including the Southern New Mexico Ozone Study ("SNMOS") completed in 2016, have shown that emissions from onroad mobile sources are the largest New Mexico anthropogenic contribution to the design

values at most monitors in southern New Mexico. *See* NMED Exh. 5 (Kuehn Direct) at 8:1-5; NMED Exh. 7, 2016 SNMOS Technical Support Document, at p. 81.

33. Section 177 of the Clean Air Act allows other states to adopt California’s motor vehicle emission standards, and the Department intends to bring before the Board regulations setting standards for low emission vehicles (“LEV”), and zero emission vehicles (“ZEV”) for adoption in 2021 that will provide further mitigation of ozone precursors. *See* 42 U.S.C. §7507; NMED Exh. 5 (Kuehn Direct) at 8:6-10.

34. The Department has also submitted a letter of participation to EPA for the Ozone Advance Program. That program is a means to promote local actions in areas designated as in attainment to reduce ozone and/or fine particulate pollution for the continued maintenance of the NAAQS. The Bureau will coordinate efforts with local governments that wish to take proactive steps towards the protection of air quality. In addition to positioning areas to avoid a nonattainment designation, it can allow communities to choose control measures that are cost effective and that make the most sense for their area, potentially resulting in multi-pollutant benefits. *See* NMED Exh 5 (Kuehn Direct) at 8:11-18.

35. In addition to the OAI and Ozone Advance, the Bureau is also working with the City of Albuquerque on preparing revised Regional Haze State Implementation Plans for submittal to EPA in July of 2021. The goal of the Regional Haze provisions of the CAA is to improve visibility in national parks and wilderness areas (referred to as “Class I areas”), and states are required to make reasonable progress over time towards the long-term goal of attaining natural visibility conditions by 2064. The Regional Haze program requires states to submit Regional Haze State Implementation Plans approximately once every ten years. Additional controls for certain emission units adopted as part of the 2021 Regional Haze SIP revision will also serve to reduce the formation of ozone. *See id.* at 8:22 – 9:11.

36. While the Department and the Board have authority to take action to reduce ozone precursor emissions from anthropogenic sources in New Mexico within their regulatory jurisdiction that contribute to ozone design values, contributions from other sources are beyond the Department's and the Board's control. For instance, the SNMOS evaluated contributions to design values at monitors in southern New Mexico in the base year (2011) and a future year (2025). The most frequent contributors to the design values of the six Doña Ana County monitors were on-road mobile sources (New Mexico, Texas, and Mexico), natural sources (Mexico), electric generating units ("EGUs") (Mexico), non-EGU point sources (Mexico), and oil and gas (Texas). *See id.* at 9:14:19; NMED Exhibit 6, SNMOS Technical Support Document, at p. 67.

37. Therefore, it is possible that, even with all the regulatory efforts of the Board and the Department, some areas of the State may not be able to reach or stay in attainment of the ozone NAAQS. In that case, the regulatory path will be a formal nonattainment designation by EPA. *See* NMED Exh. 5 (Kuehn Direct) at 9:19 – 10:2.

II. Public Comment

38. Mr. Tamas-Parris gave public comment supporting WEG's position that the permits at issue are illegal, and that the Department's draft ozone precursor regulations will not be able to reduce methane pollution and other VOC emissions. *See* Tr. Vol. 1, 230:11 – 236:25.

39. Yang gave public comment regarding the impact of oil and gas development on indigenous communities, and supporting WEG's request that the Board reject the permits at issue. *See* Tr. Vol. 1, 237:9 – 242:20.

40. Ms. Khalsa gave public comment regarding the health impacts of ground level ozone and supporting WEG's appeals calling for rescission of the permits at issue. *See* Tr. Vol. 1, 243:1 – 245:15.

**FINDINGS OF FACT FOR
EIB NO. 20-21(A)**

III. The 3-Bear Facility

41. 3-Bear Delaware Operating – NM, LLC (“3-Bear”), owns and operates the 3 Bear Libby Gas Plant (“Libby Plant”) located approximately 16 miles southwest of Monument, in Lea County, New Mexico. The Libby Plant uses a cryogenic gas separation train to process field gas received from three surrounding compressor stations. The Plant extracts natural gas liquids from the field gas, resulting in pipeline quality natural gas that is referred to as “residue gas.” *See* 3-Bear Hearing Exhibit 1, Direct Testimony of Jeffry D. Bennett and Lori K. Marquez filed Aug. 3, 2020 (“Bennett/Marquez Direct”) at 1:6-11.

42. Pursuant to the Board’s regulations for construction permits at 20.2.72 NMAC, the Bureau issued New Source Review (“NSR”) Permit No. 7482 for construction of the Libby Plant on January 8, 2018. *See* 3-Bear Exh. 4.

43. On September 11, 2019, 3-Bear submitted an application to amend NSR Permit No. 7482; a revised application to amend was submitted in December 2019. *See* EIB 20-21(A) Administrative Record (“AR”) 00142-00388; 00401-00638.

44. On April 8, 2020, the Bureau issued NSR Permit 7482-M1, which is the subject of the appeal in EIB No. 20-21(A). *See* EIB 20-21(A) AR 00734-00784.

45. WildEarth Guardians (“WEG”) filed its Petition for a Hearing, appealing the 3-Bear Permit, on May 11, 2020.

IV. NSR Permit Requirements

46. The AQCA and the Board’s regulations at Title 20, Chapter 2 NMAC, set forth the standards for regulated air pollutants, and the requirements with which facilities that emit such pollutants must comply.

47. The AQCA provides that the Board shall require “a person intending to construct or modify any source, except as otherwise provided by regulation, to obtain a construction permit from the Department . . . prior to such construction or modification.” NMSA 1978, § 74-2-7(A)(1). Pursuant to this statutory directive, the Board adopted the Construction Permit regulations at 20.2.72 NMAC. *See* 20.2.72.3 NMAC.

48. The 3-Bear Permit at issue in EIB 20-21(A) is governed by the Board’s permitting regulations at 20.2.72 NMAC, which apply to new sources or modifications of existing sources.

49. EPA has approved the Board’s construction permitting regulations at 20.2.72 NMAC, and that program is part of New Mexico’s federally-approved State Implementation Plan (“SIP”). *See* 78 Fed. Reg. 15296 (March 11, 2013); Tr. Vol. 1 at 166:25 – 167:9.

A. NSR Permits under 20.2.72 NMAC

50. Section 20.2.72.200.A NMAC requires that permits must be obtained from the Department by certain categories of persons or sources, including the following:

- (1) Any person constructing a stationary source which has a potential emission rate greater than 10 pounds per hour or 25 tons per year of any regulated air contaminant for which there is a National or New Mexico Ambient Air Quality Standard; and
- (2) Any person modifying a stationary source when all of the pollutant emitting activities at the entire facility, either prior to or following the modification, emit a regulated air contaminant for which there is a National or New Mexico Ambient Air Quality Standard with a potential emission rate greater than 10 pounds per hour or 25 tons per year and the regulated air contaminant is emitted as a result of the modification.

51. Section 20.2.72.208 NMAC enumerates the bases for which the Department shall deny an application for a construction permit or permit modification, which include instances where the “construction, modification, or permit revision will cause or contribute to air

contaminant levels in excess of any National Ambient Air Quality Standard . . . unless the ambient air impact is offset by meeting” the requirements for sources in nonattainment areas, as specified in 20.2.79 NMAC or 20.2.72.216 NMAC. *See* 20.2.72.208.D NMAC.

52. The term “cause or contribute” in the Board’s regulations is based on language in the federal Clean Air Act’s Prevention of Significant Deterioration (“PSD”) provisions that prohibits construction of PSD major sources unless the owner or operator can demonstrate that “emissions from construction of such facility will not cause, or contribute to, air pollution in excess of any . . . [NAAQS].” 42 U.S.C. § 7475(a)(3).

53. PSD major sources are sources that emit more than 250 tons per year of any regulated pollutant. *See* 42 U.S.C. § 7479(1); 3-Bear Exh. 2, Rebuttal Testimony of Jeffry Bennett and Lori K. Marquez (“Bennett/Marquez Rebuttal”), at 2:30-34.

54. EPA has historically used pollutant-specific concentration levels known as “significant impact levels” (“SILs”) to identify the degree of air quality impact that is considered to “cause or contribute” to a violation of a NAAQS. 3-Bear Exh. 2 (Bennett/Marquez Rebuttal) at 2:36-38.

55. According to EPA, “proposed sources have met the requirement to demonstrate that they do not cause or contribute to a violation by showing that the ambient air quality impacts resulting from the proposed source’s emissions would be below these concentration levels.” WEG Exh. 12, EPA Guidance on Significant Impact Levels for Ozone and Fine Particles in the Prevention of Significant Deterioration Permitting Program (April 17, 2018) (“EPA SIL Guidance”), at p. 5.

56. Likewise, NMED’s Air Dispersion Modeling Guidelines (“NMED Modeling Guidelines”) at Section 2.4.1 define “Significance Level” as “thresholds below which the source is not considered to contribute to any predicted exceedance of air quality standards.....” *See* 3-

Bear Exh. 7.

57. EPA has established a SIL for ozone of 1.0 parts per billion (ppb). *See* WEG Exh. 12 at p. 15.

58. NMED's Modeling Guidelines adopt EPA's ozone significance level of 1.0 ppb. *See* NMED Modeling Guidelines, Section 2.6.5 Table 5E (citing to EPA's SIL Guidance).

a. Demonstrating compliance with NAAQS for criteria pollutants other than ozone

59. Pollutants that are emitted directly by a source – such as NO_x, SO₂, PM₁₀, PM_{2.5}, and lead – are known as “primary pollutants”. *See* NMED Exh. 1 (Mustafa Direct) at 6:13-14.

60. To demonstrate compliance with the NAAQS for primary pollutants, applicants for an NSR permit under 20.2.72 NMAC use air dispersion modeling analyses to predict what the concentrations of most criteria pollutants will be after the source is constructed or modified. Dispersion modeling for primary pollutants simulates dispersion of that pollutant in the air after it is emitted from the source. *See id.* at 4:9 – 5:13; 6:16-16.

61. In general, an EPA-approved regulatory model known as AERMOD is used to model air impacts of primary pollutants. The model requires various inputs, including the post-construction emissions of various criteria air pollutants such as carbon monoxide, nitrogen oxides, sulfur dioxide, and particulate matter. The model's output are the predicted pollutant concentrations, which are compared against the NAAQS to demonstrate compliance. *See id.*

b. Demonstrating compliance with NAAQS for ozone

62. Ozone is different from the other criteria pollutants in that it is not directly emitted from sources, but instead is primarily formed in the ambient air through chemical interactions between other precursor pollutants. Pollutants that are formed through chemical interactions in the ambient air, such as ozone, are known as “secondary pollutants.” *See* NMED Exh. 1 (Mustafa

Direct) at 6:11-16.

63. In contrast to dispersion modeling for primary pollutants, modeling for a secondary pollutant such as ozone must be capable of simulating chemistry in addition to dispersion. This is commonly done using photochemical models that simulate atmospheric chemistry as well as atmospheric mixing. *See id.* at 6:17-19.

64. The addition of chemistry adds substantial complexity to the model. While the impacts of a facility's emissions on primary pollutant concentrations are typically evaluated for a facility alone based on modeling that covers an area of a few hundred square miles, the impact of a facility's emissions on secondary pollutant concentrations must be evaluated in relation to emissions from other sources, since the precursors reacting to create secondary pollutants are often emitted from multiple sources and sectors. *See id.* at 6:20 – 7:2.

65. In addition to regulated facilities, ozone precursors are emitted from numerous other anthropogenic and natural sources, as well as being transported from surrounding states and countries. Precursors can travel hundreds of miles in the atmosphere before reacting to form ozone. This makes it necessary to have not only a detailed understanding of the emissions from regulated facilities in an area, but also emissions from sources hundreds of miles away. *See id.* at 7:1-7

66. The potential complexity of photochemical modeling has led several organizations, including EPA and the Western Regional Air Partnership ("WRAP"), to develop modeling platforms that contain most of the information necessary for photochemical grid modeling exercises. Despite the development of these platforms, photochemical modeling exercises are still highly complex, and are mostly conducted by private specialists under contract with state and local air quality agencies. These specialized studies are far more costly than dispersion modeling; for instance, the photochemical modeling associated with the Department's Ozone Attainment Initiative is being performed by highly specialized contractors at a cost of over three-hundred

thousand dollars. *See id.* at 7:8-16; 3-Bear Exh. 7 (NMED Modeling Guidelines) at p. 24.

67. EPA has developed modeling guidance for assessing single-source impacts on ambient ozone concentrations from major PSD sources (sources that emit 250 tpy of any regulated air pollutant). *See* NMED Exh. 1 (Mustafa Direct) at 8:23.

68. EPA's PSD program does not require modeling for new or modified minor sources. *See* NMED Exh. 1 (Mustafa Direct) at 8:17-20; 10:9-11; NMED Exh. 11, (Kuehn Rebuttal) at 4:21 – 5:17;; Tr Vol. II, 379:1-14; 436:22 – 437:23.

69. The Board's regulations and NMED's Modeling Guidelines also do not require analysis of ozone impacts for minor sources. *See* 3-Bear Exh. 3 (NMED Modeling Guidelines), at p. 24; Tr. Vol. I, 179:4-16.

70. This approach is consistent with the extensive modeling developed by EPA for its PSD major source guidance, because application of EPA's modeling indicates that minor sources, by definition, do not cause impacts above the SIL for ozone. *See* Tr. Vol. 1, 161:8 – 162:14; Tr Vol. II, 379:1-14; 436:22 – 437:23.

71. The EPA modeling guidance for PSD major sources uses a two-tiered demonstration approach to address single-source impacts on ambient ozone. This type of demonstration is included in the NMED Modeling Guidelines and forms the basis for NMED's modeling requirements for major PSD sources. *See* NMED Exh. 1 (Mustafa Direct) at 8:21 – 9:2.

72. Tier I of the demonstration is a screening tool that uses Modeled Emission Rates for Precursors ("MERPs"). This tool is based on extensive modeling using hypothetical sources around the country to account for the sensitivity of ozone formation chemistry to local atmospheric conditions and concentrations of atmospheric species. *See id.* at 9:2-3.; Tr. Vol II, 379:23 – 380:17.

73. MERPS are applied to facility emissions of NO_x and VOCs as multiplicative factors to estimate a facility's ozone impacts. 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 will be above the SIL for ozone. *See* NMED Exh 11 (Kuehn Rebuttal) at 5:4-11.

74. Based on application of the MERPs, the air impacts of any minor source – i.e. a source that emits less than 250 tpy per year of ozone precursors – will be below the SIL and are therefore not considered to cause or contribute to ozone levels in violation of the NAAQS. *See id.* at 5:11-14; Tr. Vol. I, 163:11 – 164:6.

75. All the sources at issue in these consolidated appeals are minor sources for purposes of the PSD program. *See id.* at 5:11-12.

V. Objections Raised by WEG

76. WEG’s objection to approval of the 3-Bear Permit is based on the Board’s regulations at 20.2.72.208.D NMAC, which provides that the Department shall deny any application for a permit if “[t]he construction, modification, or permit revision will cause or contribute to air contaminant levels in excess of any National Ambient Air Quality Standard . . . unless the ambient air impact is offset ” *See* EIB 20-21(A) Petition at 4.

77. WEG asserted that because air monitors in Lea and Eddy counties have been registering exceedances of the ozone NAAQS, issuance of the 3-Bear Permit would “presumptively contribute to exceedances of the ozone NAAQS,” rendering the permit action “unlawful and in violation of 20.2.72.208.D NMAC”. *Id.*

78. WEG further stated that NMED “conducted no air quality modeling or other technical analysis of the impact of [the proposed emissions in the 3-Bear Permit application] on current ozone levels and failed to provide any support for its conclusory determination that these additional ozone precursors would not ‘contribute’ to exceedances of the NAAQS,” and therefore “NMED’s conclusion that the additional emissions will not ‘cause or contribute’ to exceedances

of the ozone NAAQS was arbitrary and capricious, and NMED's issuance of the [3-Bear Permit] was unlawful." *Id.* at 4-5.

79. As a remedy, WEG requested that the Board rescind the 3-Bear Permit, and prohibit NMED from issuing a permit for the 3-Bear Facility "until NMED develops and implements a formal plan, including regulations, to reduce ozone precursors in the area and further demonstrates that additional emissions of ozone precursors from any new permit issued for the [3-Bear Facility] will not 'cause or contribute' to violations of the ozone NAAQS." *Id.* at 5.

80. WEG's technical witness testified regarding monitoring data from the three monitors in Eddy and Lea counties between 2015 and 2019 that shows 2017-2019 design values above the ozone NAAQS. *See* 3-Bear Petition at p. 3-4.

81. The Department did not dispute that design values based on data from air quality monitors in Hobbs and Carlsbad, New Mexico, in 2017, 2018, and 2019 show levels exceeding the 2015 ozone NAAQS. *See* EIB 20-21(A), New Mexico Environment Department's Answer at p. 2, ¶ 3.c. (filed 06/15/2020); NMED Exh. 5 (Kuehn Direct) at 6:7-10.

82. WEG's witness, Dr. Ranaji (Ron) Sahu, testified that because the monitors in the counties where the permitted facilities at issue in these consolidated appeals are located are registering design values above the ozone NAAQS in recent years, and because the permitted facilities emit ozone precursor pollutants, those facilities necessarily contribute to exceedances of the ozone NAAQS. *See* Tr. Vol. 1 at 68:7-13.

83. Witnesses for NMED and 3-Bear testified that long-standing guidance from both EPA and NMED provides that the phrase "cause or contribute" in the CAA and its corresponding federal and state regulations is interpreted to include a significance threshold that must be met before a source's impacts on ambient air quality will be considered to "cause or contribute" to a NAAQS violation. *See* Tr. Vol. 1 at 166:25 – 167:9; Tr. Vol. II at 372:1 – 376:13.

84. Witnesses for 3-Bear provided testimony demonstrating that Colorado, Oklahoma, and Texas interpret the term “cause or contribute” as requiring a significance threshold, in the same manner as NMED and EPA. *See* 3-Bear Exh. 2 (Bennett/Marquez Rebuttal) at 4:25 – 7:10; Tr. Vol. II, 340:10 – 342:18.

85. Dr. Sahu was not able to point to any other jurisdiction in the U.S. that applies the “cause or contribute” standard without using a significance threshold. *See* Tr. Vol. 1 at 103:1 – 104:2.

86. Dr. Sahu further testified that EPA’s guidance for PSD major sources required that NMED make a specific determination as to whether the 3-Bear Facility would contribute to ozone concentrations above the NAAQS, and that NMED should have required a Tier 2 case-by-case analysis of the facility’s impacts on ozone concentrations under the PSD guidance in order to make such a determination. *See* WEG Exh. 11, Rebuttal Expert Report by Dr. Ranajit (Ron) Sahu, Consultant, In Support of Petition in EIB No. 20-33(A) and 20-21(A) (“Sahu Rebuttal”) at p. 6.

87. Witnesses for the Department and 3-Bear testified that the PSD Guidance applies only to major sources, and the 3-Bear Facility is a minor source for purposes of the PSD regulations. Tr. Vol. I, 160:21 – 161:7; 163:19 – 164:6.

88. NMED’s and 3-Bear’s witnesses testified that, in the context of an individual minor source permit application such as the one for the Libby Plant, the Board’s Regulations and NMED’s Modeling Guidelines do not require the applicant to demonstrate or NMED to determine that the source will not cause or contribute to ozone levels. They pointed out that no such specific determination is required is because, under the Tier 1 analysis in EPA’s PSD Guidance, impacts from minor sources will always be below the SIL for ozone, and therefore minor sources, by definition, are not considered to contribute to ozone concentrations above the NAAQS. *See* Tr. Vol. 1, 161:8 – 162:14; Tr. Vol. 1 at 166:25 – 167:9; *See* Tr. Vol. 1, 207:6 – 208:8; Tr. Vol. II at

372:1 – 376:13; Tr Vol. II, 379:1-14; 436:22 – 437:23.

89. 20.2.79 NMAC governs permitting in nonattainment areas. Subsection 20.2.79.7.AA of those rules defines “Nonattainment Area” as follows:

for any air pollutant an area which is shown by monitored data or which is calculated by air quality modeling (or other methods determined by the [EPA] administrator to be reliable) to exceed any national ambient air quality standard for such pollutant. Such term includes any area identified under Subparagraphs (A) through (C) of Section 107(d)(1) of the federal Clean Air Act.

90. WEG argues that this definition includes, but is not limited to, areas formally designated as nonattainment by EPA under the CAA, and because the monitors in Lea and Eddy Counties are registering exceedances of the ozone NAAQS, the Department must consider those counties to be “nonattainment areas” for ozone, even though EPA has not designated them as such. *See* WEG opening statement, Tr. Vol. 1, 29:8-23.

91. Ms. Kuehn testified that the AQCA expressly addresses how the Board must act with respect to counties in New Mexico, such as Lea and Eddy, that are currently designated as EPA as attainment areas for the ozone NAAQS, but which are registering design values close to or in excess of the standard. Specifically, she pointed to the provisions of NMSA 1978, § 74-2-5.3, which require the Board to take action to control ozone precursor emissions from sources within its jurisdiction in counties that have monitors registering design values over 95% of the NAAQS. *See* NMED Exh. 5 (Kuehn Direct) at 7:10 – 9:11.

92. Ms. Kuehn testified that action is currently being taken as required by Section 74-2-5.3 of the AQCA to address the seven counties under the Board’s jurisdiction that are currently registering design values over 95% of the NAAQS. Specifically, the Department has undertaken its Ozone Attainment Initiative to develop a series of regulations to bring before the Board, as well as other measures to mitigate ozone precursor emissions from contributing sources. *See id.* at 7:10 – 9:11.

93. Ms. Kuehn explained that a fundamental aspect of the OAI is determining exactly what sources are contributing to ozone concentrations in the State. To this end, the Department has contracted with the Western States Air Resources Council and Ramboll to conduct photochemical grid modeling for ozone to determine which sectors within the Board’s regulatory jurisdiction are contributing to ozone concentration and to support proposed regulations that will target ozone precursor emissions from those sectors. The modeling will identify anthropogenic, non-anthropogenic, and interstate and international contributions to monitored ozone concentrations in the counties of concern. The results of this modeling are expected in late 2020. *See id.*; Tr. Vol. 1 at 200:13-20.

94. Witnesses for NMED, 3-Bear, and XTO testified to the complexities, both procedural and substantive, of a nonattainment designation, and the lack of any authorization, guiding principles in the AQCA or Board’s regulations, or resources for the Department to conduct such a process. They highlighted the uncertainty and confusion that would arise if the definition of “nonattainment area” were interpreted to include counties with monitors that were registering design values above the NAAQS, as well as the unworkability as a practical matter of such an interpretation in terms of administering the Board’s construction permitting program regulations. *See, e.g.* NMED Exh. 11 (Kuehn Rebuttal) at 3:13 – 4:7; Parmley Rebuttal at 5:17 – 8:15; 3-Bear Exh. 2 (Bennett/Marquez Rebuttal) at 12:22 – 14:11; Tr. Vol. 2 at 316:20 – 317:16.

CONCLUSIONS OF LAW FOR EIB 20-21(A)

VI. Standard of Decision

95. In a permit appeal hearings before the Board, “the petitioner has the burden of going forward with the evidence and of proving by a preponderance of the evidence the facts relied upon to justify the relief sought in the petition.” 20.1.2.302 NMAC.

96. Following the establishment of a prima facie case by the petitioner, “any person

opposed to the relief sought in the petition has the burden of going forward with any adverse evidence and showing why the relief should not be granted.” *Id.*

97. On appeal, board decisions will be set aside where they are “(1) arbitrary, capricious, or an abuse of discretion; (2) not supported by substantial evidence in the record; or (3) otherwise not in accordance with law.” NMSA 1978 74-2-9(C)

VII. The 3-Bear Permit

98. The Board’s regulations at 20.2.72.208.D NMAC require the Department to deny a permit application under part 20.2.72 if “[t]he construction, modification, or permit revision will cause or contribute to air contaminant levels in excess of any [NAAQS] . . . unless the ambient air impact is offset by meeting the requirements of 20.2.79 NMAC or 20.2.72.216 NMAC.”

99. Where the Board’s regulations have been approved by EPA as part of the New Mexico State Implementation Plan, and where the language in the Board’s regulations mirrors language from the CAA, it is appropriate for NMED to interpret such language in the same manner as it is interpreted by EPA.

100. Pursuant to long-standing EPA and NMED guidance, for a source to be considered to “cause or contribute” to ozone concentrations in excess of a NAAQS, its impacts on ozone concentrations must be above the “significant impact level” as established by EPA.

101. Sources that emit below 250 tpy of ozone precursor are “minor sources” for purposes of the Board’s PSD permitting regulations.

102. Pursuant to EPA guidance, NMED guidance, and the Board’s permitting regulations at 20.2.72 and 20.2.74 NMAC, a permit applicant for a minor source is not required to make an individual demonstration of its impacts on ambient ozone concentrations.

103. Application of EPA modeling guidance establishes that sources in Lea and Eddy County whose emissions of ozone precursor pollutants are below 250 tpy will be below the

significant impact level for ozone.

104. Because their impacts are below the SIL for ozone, minor sources by definition do not “cause or contribute to” ozone concentrations in excess of the NAAQS.

105. The Department does not have authority or discretion to deny a permit or require offsets for an individual new or modified minor source in a designated attainment area on the basis that the facility will “cause or contribute” to ozone levels above the NAAQS.

106. WEG failed to establish by a preponderance of the evidence that the Department’s determination that the modifications to the Libby Plant proposed in the 3-Bear Permit application would not cause or contribute to concentrations in excess of a NAAQS was arbitrary, capricious, or otherwise contrary to law.

107. WEG’s technical witness did not offer any testimony establishing that the Department should have disregarded EPA’s and NMED’s long-standing historical interpretation of the phrase “cause or contribute” to find that a minor source that emits any amount of ozone precursors in a county designated as attainment but with monitors registering exceedances of the ozone NAAQS will necessarily contribute to ozone concentrations above the NAAQS.

108. WEG has not identified any other jurisdiction in the United States that interprets the phrase “cause or contribute” in the manner advocated by WEG.

109. At least three other similarly-situated jurisdictions take the same approach to permitting minor sources under the CAA as the Department did with respect to 3-Bear’s Libby Plant.

110. The recommendation of the Hearing Officer is that in total WEG has not met the requirement in 20.1.2.302 of proving by a preponderance of the evidence that the Department issued Air Quality Permit No. 7482-M1 in violation of the AQCA or Board regulations. Accordingly, it is the recommendation of the Hearing Officer that the relief sought in WEG’s

petition as to the 3-Bear Permit be denied.

**FINDINGS OF FACT
FOR EIB NO. 20-33(A)**

VIII. Registrations 8729, 8730, and 8733 under GCP For Oil and Gas Facilities

111. XTO Energy Inc. (“XTO”) owns and operates the Big Eddy Unit DI 38 Tank Battery and the Corral Canyon 23 Tank Battery, both of which are located in Eddy County, New Mexico.

112. On February 24, 2020, XTO submitted an application to register its proposed Corral Canyon 23 Tank Battery under the GCP Oil & Gas. *See* EIB 20-33(A) AR 0008-0215.

113. On March 27, 2020, the Department approved registration of the XTO Corral Canyon 23 Tank Battery under Air Quality General Permit GCP-O&G No. 8729. *See* EIB 20-33(A) AR 0220-0232.

114. On February 18, 2020, XTO submitted an application to register its proposed Big Eddy Unit under the GCP Oil & Gas. *See* EIB 20-33(A) AR 0240-0445.

115. On March 27, 2020, the Department approved registration of the XTO Big Eddy Unit Tank Battery under Air Quality General Permit GCP-O&G No. 8730. *See* EIB 20-33(A) AR 0450-0461.

116. Spur Energy Partners LLC (“Spur”) owns and operates the Dorami 2H, 4H and 9H Federal Tank Battery, located in Eddy County, New Mexico.

117. On February 10, 2020, Spur submitted an application to register its proposed Dorami 2H, 4H and 9H Federal Tank Battery under the GCP O&G. *See* EIB 20-33(A) AR 0500-0597.

118. On March 23, 2020, the Department approved registration of the Spur Dorami 2H, 4H and 9H Federal Tank Battery under Air Quality General Permit GCP O&G No. 8733. *See* EIB

20-33(A) AR 0660-0671.

IX. The GCP for Oil & Gas Facilities

119. The AQCA provides that the Board shall require “a person intending to construct or modify any source, except as otherwise provided by regulation, to obtain a construction permit from the Department . . . prior to such construction or modification.” NMSA 1978, § 74-2-7(A)(1). Pursuant to this statutory directive, the Board adopted the Construction Permit regulations at 20.2.72 NMAC. *See* 20.2.72.3 NMAC.

120. The Registrations under the GCP at issue in EIB 20-33(A) are governed by the Board’s permitting regulations at 20.2.72 NMAC, which apply to new sources or modifications of existing sources.

121. EPA has approved the Board’s construction permitting regulations at 20.2.72 NMAC, and that program is part of New Mexico’s federally-approved State Implementation Plan (“SIP”). *See* 78 Fed. Reg. 15296 (March 11, 2013); Tr. Vol. 1 at 166:25 – 167:9.

122. Section 20.2.72.220 NMAC allows the Department to issue one or more general construction permits (“GCP”) that cover numerous similar sources. *See* 20.2.72.220.A(1) NMAC. Prior to issuing a GCP, the Department must give notice of the draft GCP under Subsections A and B of 20.2.72.206 NMAC, and hold a public hearing with opportunity for public participation under Subsection C of 20.2.72.206 NMAC. *See id.* Sources registered under a GCP “shall be generally homogeneous in terms of operations, processes and emissions, subject to the same or substantially similar requirements, and not subject to case-by-case standards or requirements.” *Id.*

123. The GCP O&G was issued under 20.2.72.220 NMAC, and was developed to replace two previously issued GCPs for oil and gas facilities: the GCP-1 (Level One Oil and Gas Installations) and the GCP-4 (Combustion Sources and Related Equipment). The GCP O&G addressed a broader range of equipment than was covered by the previous GCPs. *See* Spur Exh. 3,

Direct Testimony and Exhibits of Adam Erenstein, Trinity Consultants (“Erenstein Direct”), at p. 2:21-22, 3:15-17.

124. Prior to issuing the GCP O&G, the Department undertook a lengthy stakeholder and public outreach and comment process. The Department released the initial draft of the GCP O&G for public comment in May of 2017, and released a revised draft in December of 2017 which incorporated changes based on revised modeling analyses and comments received. In January of 2018, the Department published a completeness determination for the draft permit, which initiated a formal 30-day comment period, and held open houses on the proposed permit. A hearing on the permit was held before a Department hearing officer in February of 2018. The final GCP O&G was issued on April 27, 2018. *See* Spur Exh. 3 (Erenstein Direct) at 3:22 – 4:1.

125. Throughout the development and hearing process on the GCP O&G, the Department elicited input regarding the proposed permit conditions, and the assumptions and modeling that formed the basis for those conditions. *See id.* at 4:2-7.

126. In issuing the GCP O&G, the Department determined that if facilities are operated in accordance with the provisions of the GCP O&G, they will not cause or contribute to any concentrations above air quality standards and PSD increments. *See* GCP O&G, B100A.

127. Only minor sources are eligible to register for the GCP O&G. *See* GCP O&G, A106A, Table 106.

128. The AQCA defines “source” as “a structure, building, equipment, facility, installation or operation that emits or may emit an air contaminant.” NMSA 1978, § 74-2-2(D).

129. The Board’s permitting regulations at 20.2.72.220.EE NMAC define “source” as “any building, structure, equipment, facility, installation (including temporary installations), operation or portable stationary source which emits or may emit any air contaminant.”

X. Objections Raised by WEG

130. Dr. Sahu testified that the “collective impact of the three challenged facilities registered under the GCP O&G assuming the maximum allowable emissions of 95 tons per year each for NO_x and VOCs is 1.82 ppb,” implying that, when considered collectively, the impact of GCP registrations is above the ozone SIL. WEG Exh. 11 (Sahu Rebuttal), at p. 6.

131. Dr. Sahu was unable to identify any provisions in the AQCA or the Board’s permitting regulations that would allow the Department to collectively consider multiple separate GCP registration applications for different facilities in different locations and under different ownership with respect to potential emissions for purposes of determining emissions levels, source classifications, or impacts on ozone concentrations. *See* Tr. Vol. 1 at 80:2 – 81:2.

132. WEG’s objection in the GCP Petition is based on Sections A103 and A100H(6) of the GCP O&G. Section A103 states that “the permittee shall comply with all applicable sections of the requirements listed in Table 103 [of the GCP O&G].” Table 103 lists “40 CFR 50 National Ambient Air Quality Standards” as a requirement, and the 2015 ozone NAAQS is set forth at 40 C.F.R. § 50.19(a). WEG asserts that because the monitors in Eddy and Lea Counties have been registering exceedances of the ozone NAAQS, there is “no way for the permittees to comply with the ozone NAAQS, as required for registration under the [GCP O&G].” EIB 20-33(A) Petition at 3.

133. Section B100 of the GCP Oil & Gas states that “The Department has determined that all facilities registered under and operating in accordance with this permit will meet all applicable requirements under [the CAA, the AQCA, and the Board’s regulations at Title 20, Chapter 2], and will not cause or contribute to air contaminant levels in excess of any national or New Mexico ambient air quality standard.” Spur Exh. 5 (GCP Oil & Gas) at p. 31.

134. WEG also points to Section A100H(6) of the GCP O&G, which states that the

Department shall deny a registration under the permit if “[t]he Facility is located in a nonattainment area [defined by 20.2.72.216 and 20.2.79 NMAC]” *Id.* at p. 4-5.

135. 20.2.79 NMAC governs permitting in nonattainment areas. Subsection 20.2.79.7.AA of those rules defines “Nonattainment Area” as follows:

for any air pollutant an area which is shown by monitored data or which is calculated by air quality modeling (or other methods determined by the [EPA] administrator to be reliable) to exceed any national ambient air quality standard for such pollutant. Such term includes any area identified under Subparagraphs (A) through (C) of Section 107(d)(1) of the federal Clean Air Act.

136. WEG argues that this definition includes, but is not limited to, areas formally designated as nonattainment by EPA under the CAA, and because the monitors in Lea and Eddy Counties are registering exceedances of the ozone NAAQS, the Department must consider those counties to be “nonattainment areas” for ozone, even though EPA has not designated them as such. *See* WEG opening statement, Tr. Vol. 1, 29:8-23.

137. Accordingly, WEG claims that “NMED’s decision to approve the [GCP Registrations] – and thereby authorize additional emissions of ozone precursor pollutants in an area already exceeding the ozone NAAQS – was unlawful, arbitrary, and capricious.” GCP Petition at 3.

138. As a remedy, WEG requests that the Board rescind the GCP Registrations, and prohibit NMED from approving any new registrations under the GCP O&G in Eddy and Lea Counties “until NMED develops and implements a formal plan, including regulations, to reduce ozone precursors in the area and further demonstrates that additional emissions of ozone precursors from any new permit registrations will be able to fully comply with the ozone NAAQS.” *Id.* at 6.

139. Dr. Sahu testified that because the monitors in Lea and Eddy Counties are registering design values in excess of the 2015 ozone NAAQS, those counties are “actual nonattainment areas” to which permitting requirements for nonattainment areas must apply,

positing that there can be a nonattainment area even in the absence of a nonattainment designation by EPA. *See* WEG Exh. 1, Expert Report by Dr. Ranajit (Ron) Sahu, Consultant, In Support of Petition in EIB No. 20-33(A) and 20-21(A) (“Sahu Direct”) at p. 2.

140. Witnesses for the Department and XTO contradicted Dr. Sahu’s testimony, explaining that there cannot be a “nonattainment area” in the absence of a formal designation by EPA. *See* NMED Exh. 11 (Kuehn Rebuttal) at 1:7 – 4:7; Direct Testimony of Randy Parmley, P.E., On Behalf of XTO Energy Inc., In Support of General Construction Permit, Oil and Gas Registration Nos. 8729 and 8730 (“Parmley Direct”), generally; Rebuttal Testimony of Randy Parmley, P.E., On Behalf of XTO Energy Inc., In Support of General Construction Permit, Oil and Gas Registration Nos. 8729 and 8730, generally.

141. Ms. Kuehn explained that, while monitoring data are a critical piece of a nonattainment designation, a county does not automatically become a “nonattainment area” when a monitor in that county registers design values above the NAAQS. *See* NMED Exh. 11 (Kuehn Rebuttal) at 2:10-12.

142. Ms. Kuehn testified that nothing in the CAA, the AQCA, or their corresponding regulations gives the Board or the Department the authority to designate an area of the state as a nonattainment area; it is solely within EPA’s authority to make such designations. Nor do the AQCA or the Board’s regulations set forth a process by which the Board or the Department could designate a given area as nonattainment. *See id.* at 3:4-18.

143. Ms. Kuehn testified that she was the primary draftsman for the GCP Oil & Gas, and that the intent of the language in Section A100H(6) was intended to preclude registration under of facilities in designated nonattainment areas. Tr. Vol. 1, 251:1-18.

144. Ms. Kuehn testified that the AQCA expressly addresses how the Board must act with respect to counties in New Mexico, such as Lea and Eddy, that are currently designated as

EPA as attainment areas for the ozone NAAQS, but which are registering design values close to or in excess of the standard. Specifically, she pointed to the provisions of NMSA 1978, § 74-2-5.3, which require the Board to take action to control ozone precursor emissions from sources within its jurisdiction in counties that have monitors registering design values over 95% of the NAAQS. *See* NMED Exh. 5 (Kuehn Direct) at 7:10 – 9:11.

145. Ms. Kuehn testified that action is currently being taken as required by Section 74-2-5.3 of the AQCA to address the seven counties under the Board’s jurisdiction that are currently registering design values over 95% of the NAAQS. Specifically, the Department has undertaken its Ozone Attainment Initiative to develop a series of regulations to bring before the Board, as well as other measures to mitigate ozone precursor emissions from contributing sources. *See id.* at 7:10 – 9:11.

146. Ms. Kuehn explained that a fundamental aspect of the OAI is determining exactly what sources are contributing to ozone concentrations in the State. To this end, the Department has contracted with the Western States Air Resources Council and Ramboll to conduct photochemical grid modeling for ozone to determine which sectors within the Board’s regulatory jurisdiction are contributing to ozone concentration and to support proposed regulations that will target ozone precursor emissions from those sectors. The modeling will identify anthropogenic, non-anthropogenic, and interstate and international contributions to monitored ozone concentrations in the counties of concern. The results of this modeling are expected in late 2020. *See id.*; Tr. Vol. 1 at 200:13-20.

147. Witnesses for NMED, 3-Bear, and XTO testified to the complexities, both procedural and substantive, of a nonattainment designation, and the lack of any authorization, guiding principles in the AQCA or Board’s regulations, or resources for the Department to conduct such a process. They highlighted the uncertainty and confusion that would arise if the definition of

“nonattainment area” were interpreted to include counties with monitors that were registering design values above the NAAQS, as well as the unworkability as a practical matter of such an interpretation in terms of administering the Board’s construction permitting program regulations. *See, e.g.* NMED Exh. 11 (Kuehn Rebuttal) at 3:13 – 4:7; Parmley Rebuttal at 5:17 – 8:15; 3-Bear Exh. 2 (Bennett/Marquez Rebuttal) at 12:22 – 14:11; Tr. Vol. 2 at 316:20 – 317:16.

CONCLUSIONS OF LAW FOR EIB 20-33(A)

XI. Standard of Decision

148. In a permit appeal hearing before the Board, “the petitioner has the burden of going forward with the evidence and of proving by a preponderance of the evidence the facts relied upon to justify the relief sought in the petition.” 20.1.2.302 NMAC.

149. Following the establishment of a prima facie case by the petitioner, “any person opposed to the relief sought in the petition has the burden of going forward with any adverse evidence and showing why the relief should not be granted.” *Id.*

150. The Board’s regulations at 20.2.72.208.D NMAC require the Department to deny a permit application under part 20.2.72 if “[t]he construction, modification, or permit revision will cause or contribute to air contaminant levels in excess of any [NAAQS] . . . unless the ambient air impact is offset by meeting the requirements of 20.2.79 NMAC or 20.2.72.216 NMAC.”

151. Where the Board’s regulations have been approved by EPA as part of the New Mexico State Implementation Plan, and where the language in the Board’s regulations mirrors language from the CAA, it is appropriate for NMED to interpret such language in the same manner as it is interpreted by EPA.

152. On appeal, board decisions will be set aside where they are “(1) arbitrary, capricious, or an abuse of discretion; (2) not supported by substantial evidence in the record; or (3)

otherwise not in accordance with law.” NMSA 1978 74-2-9(C)

XII. The GCP Registrations

153. Only minor sources can register for the GCP Oil & Gas.

154. Under the definitions set forth in the CAA and the AQCA, a “Nonattainment Area” means an area designated by EPA as such pursuant to Section 7407(d) of the CAA.

155. It is within EPA’s sole authority to identify the boundaries of an area and designate the attainment status of that area with respect to any NAAQS.

156. The Department cannot consider a county in the State to be a “nonattainment area” solely because data from a monitor in that county show design values above the NAAQS at a given moment in time.

157. The Board’s regulations do not provide a process by which the Department or the Board could designate a nonattainment area.

158. To the extent that the definition of “nonattainment area” in the Board’s regulations at 20.2.72.7.T NMAC can be regarded as inconsistent with the language of the definition of that term in Section 74-2-2(N) of the AQCA, it is the statutory definition that takes precedence.

159. The Department’s longstanding interpretation of the definition of “nonattainment area” in the Board’s regulations at 20.2.72.7.T NMAC as meaning only an area that has been formally designated as such by EPA is reasonable, and is required by the definition of “nonattainment area” in the AQCA.

160. Lea and Eddy Counties, being currently designated by EPA as attainment for the 2015 ozone NAAQS, do not meet the definition of “nonattainment areas” under the CAA or the AQCA.

161. Where a company seeks to register a source under the GCP O&G and the source is located in an area designated by EPA as in attainment of the ozone NAAQS, the Department does not have authority to deny the registration on the basis that the proposed source is located in a nonattainment area for the ozone NAAQS.

162. WEG failed to establish by a preponderance of the evidence that the Department's approval of the GCP Registrations was arbitrary, capricious, or otherwise contrary to law.

163. WEG's technical witness did not offer any testimony establishing that the Department should have disregarded the definition of "nonattainment area" in the CAA and the AQCA and the long-standing interpretation of the Board's regulations at 20.2.72.7(T) NMAC to reject an application for registration under the GCP O&G for a source located in a county designated by EPA as attainment but with monitors registering exceedances of the ozone NAAQS on the basis that the source is located in a nonattainment area and is not in compliance with the NAAQS.

164. WEG has not identified any other jurisdiction in the United States that interprets the term "nonattainment area" in the manner advocated by WEG.

165. The testimony of witnesses for the Department and XTO established that WEG's interpretation of "nonattainment area" would be unworkable, and would result in serious disruption to the Department's permitting program and significant uncertainty for regulated entities seeking permits for new or modified facility, and would call into question the status of permits for existing sources.

166. There are no provisions in the AQCA or the Board's regulations under which the Department could consider multiple separate permit applications for different facilities in different locations and under different ownership in the aggregate with respect to potential emissions for

purposes of determining emissions levels, “major” or “minor” source classifications, or impacts on ozone concentrations.

167. Section 74-2-5.3 of the AQCA expressly provides for how the Board is required to address counties in the State that have monitors registering ozone levels close to or above the ozone NAAQS.

168. The OAI and the other programs the Department’s witnesses discussed in their testimony are the proper mechanisms by which the Department and Board can address the exceedances of the NAAQS in Lea and Eddy Counties as required under the AQCA.

169. The recommendation of the Hearing Officer is that in total WEG has not met the requirement in 20.1.2.302 of proving by a preponderance of the evidence that the Department issued Registrations 8729, 8730, and 8733 under the GCP for Oil and Gas Facilities in violation of the AQCA or Board regulations. Accordingly, it is the recommendation of the Hearing Officer that the relief sought in WEG’s petition as to the GCP Registrations be denied.

PROPOSED FINAL ORDER

170. In accordance with 20.1.2.402 NMAC, a proposed final order is attached hereto as **Exhibit 1.**

Respectfully submitted,

/s/ John Volkerding
John Volkerding, Hearing Officer
New Mexico Environmental
Improvement Board

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

PROPOSED FINAL ORDER

BACKGROUND

These consolidated appeals arise out of permitting actions taken by the New Mexico Environment (“Department”) with respect to four minor source oil and gas facilities in Southeastern New Mexico. EIB 20-21(A) involves the Department’s approval of Air Quality Permit No. 7482-M1 (“3-Bear Permit”), issued to 3-Bear Delaware Operating – NM LLC (“3-Bear”) for its Libby Gas Plant (“the Libby Plant”) in Lea County, New Mexico. EIB 20-33(A) involves the Department’s approval of General Construction Permit for Oil and Gas Facilities (“GCP O&G”) Registration Nos. 8729, 8730, and 8733 (collectively, the “GCP Registrations”) issued to XTO Energy Co. (“XTO”) for its Corral Canyon 23 and Big Eddy Unit DI 38 facilities (Nos. 8729 and 8730, respectively), and Spur Energy Partners LLC (“Spur”) for its Dorami 2H, 4H and 9H Federal Oil Tank Battery (No. 8733), all of which are located in Eddy County.

On May 11, 2020, WildEarth Guardians (“WEG”) filed its Petition for Hearing in EIB 20-21(A), appealing the Department’s approval of the 3-Bear Permit. On June 12, 2020, WEG filed its Petition for Hearing in EIB 30-33(A), appealing the Department’s approval of the GCP Registrations. Both appeals seek rescission of the permits in their entirety on the basis that the

permitted sources will emit ozone precursor pollutants – namely, oxides of nitrogen (“NOx”), and volatile organic compounds (“VOCs”) – in counties where monitor readings are showing ozone levels exceeding the National Ambient Air Quality Standard (“NAAQS”). The appeals were consolidated for hearing, and the Parties stipulated that the specific emission limits, emission limit calculations, and permit conditions of the 3-Bear Permit and the GCP Registrations are not at issue in the appeals, and therefore no testimony on those subjects would be accepted.¹

WEG, the Department, and the Permittees submitted pre-filed written direct and rebuttal technical testimony. On September 23 and 24, 2020, the Board held a consolidated public hearing in EIB 20-21(A) and EIB 20-33(A). At the public hearing, appearances were entered on behalf of WEG, the Department, 3-Bear, XTO, Spur, and the Western Environmental Law Center. Members of the public were provided opportunities to be heard during the hearing, and three individuals provided public comment.

On January 22, 2021 the Board met to deliberate and consider the Hearing Officer’s Recommended Decision. By a vote of ____, the Board decided to adopt the Hearing Officer’s Recommended Decision. This Final Order is issued pursuant to 20.1.2.403(B) NMAC.

**JOINT FINDINGS OF FACT FOR
EIB NO. 20-21(A) AND EIB NO. 20-33(A)**

I. Regulation of Ozone Under Federal and State Law

A. Ground Level Ozone Chemistry and Formation

1. The ozone molecule is composed of three oxygen atoms. Ground level ozone is formed when nitrogen oxides (“NOx”) and volatile organic compounds (“VOCs”) react in the presence of sunlight. As the amount of these compounds increase in the air during warm days and intense sunlight, the essential chemical reactions take place to form ozone. NMED Exh. 1, Direct

¹ See Procedural Order at p.3 (filed July 20, 2020)

Technical Testimony of Sufi Mustafa (“Mustafa Direct”) at 5:15-18.

2. Man-made, or anthropogenic sources of NO_x include products of fuel combustion. VOCs are emitted from various anthropogenic sources and processes such as motor vehicles; chemical manufacturing facilities; evaporative losses from crude oil holding tanks; and consumer and commercial products. Natural sources of nitrogen oxides include lightning NO_x, microbial processes that occur in soils, and wildland fires. Vegetation is the major natural source of VOCs; other natural sources include animals and microbes. *See id.* at 5:20 – 6:3.

3. Ozone is a reactive molecule that causes irritation and inflammation to the respiratory system and tissue damage to vegetation. While ozone is beneficial when it is present in the stratosphere to block harmful light radiation from reaching us, it is harmful when it is present in the lower troposphere, where we live and breathe. *See id.* at 5:4-7.

B. National Ambient Air Quality Standards

4. The federal Clean Air Act requires the U.S. Environmental Protection Agency (“EPA”) to set National Ambient Air Quality Standards for pollutants that EPA determines may endanger public health and welfare. *See* 40 U.S.C. § 7409; NMED Exh. 5, Technical Testimony of Elizabeth Bisbey-Kuehn (“Kuehn Direct”) at 3:18. These standards are in the form of maximum allowable concentrations of the pollutant in the ambient air during a specified time period, and are designed to protect the most sensitive individuals from harm from airborne pollutants. NMED Exh. 1 (Mustafa Direct) at 3:13-16.

5. Pursuant to the directives under the CAA, EPA has established NAAQS for six principal pollutants, known as “criteria pollutants”. These pollutants are carbon monoxide (“CO”); nitrogen dioxide (“NO₂”); sulfur dioxide (“SO₂”); particulate matter (“PM”) at 10 microns or less (referred to as coarse particulate matter) and 2.5 microns or less (referred to as fine particulate matter); ground level ozone; and lead. *See* 40 C.F.R. Part 50; NMED Exh. 5 (Kuehn Direct) at 4:1-

3; NMED Exh. 1 (Mustafa Direct) at 3:17-20.

6. Whether an area is in compliance with a NAAQS is measured by “design values” based on monitoring data. The design value for ozone is determined by calculating the three-year average of the annual fourth highest daily maximum 8-hour ozone concentration. *See* NMED Exh. 5 (Kuehn Direct) at 4:15-18.

7. The CAA requires EPA to review the NAAQS on a periodic basis, which may result in the standards being revised based on health and environmental criteria that apply to the concentration of a pollutant in outdoor air to limit harmful exposures and detrimental effects. *See id.* at 4:3-6.

8. In October of 2015, following a periodic review, EPA revised the ozone NAAQS downward from 75 parts per billion (ppb) to 70 ppb. *See id.* at 5:8-9.

C. Non-Attainment Designation Process

9. Following promulgation of a new or revised NAAQS, EPA undertakes a process of “designating” areas of a state as in “attainment” or “nonattainment” of the standard. The designation process entails collaborating with states and tribes and considering data and information from air quality monitors and modeling. If the concentration of a criteria pollutant in a geographic area is at or below the national standard, the area is designated as an “attainment area” for that pollutant. Conversely, an area where the concentration of a criteria pollutant is above the national standard will be designated as a “nonattainment area” with respect to that pollutant. *See* 42 U.S.C § 7407(d); NMED Exh. 5 (Kuehn Direct) at 4:7-14.

10. The Clean Air Act defines “nonattainment area” 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).

11. The definition of “nonattainment area” in the New Mexico Air Quality Control Act

(“AQCA”), NMSA 1978, §§ 74-2-1 through -17, is identical to the definition in the CAA. *See* NMSA 1978, § 74-2-2(N).

12. Section 7407(d) of the CAA lays out the process for designation of a nonattainment area, which includes each State submitting initial designations within one year of promulgation of the standard, and EPA reviewing the States’ initial designations and promulgating final designations of all areas within two years of promulgation of the standard.

13. In reviewing a state’s proposed designations, EPA can make modifications, including to the boundaries of the proposed designated areas, after which the state has an opportunity to challenge those modifications. *See* 42 U.S.C. 7407(d).

14. Once the boundaries of the nonattainment 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 contributing to that exceedance. *See* 42 U.S.C. § 7511(a)(4); NMED Exh. 5 (Kuehn Direct) at 5:1-2.

15. State and local governments are required to develop a plan, known as a state implementation plan (“SIP”), that details how nonattainment areas will improve the air quality to attain and maintain the standards. Once a nonattainment area meets the standards, states can petition EPA to designate the area as a maintenance area. *See* NMED Exh. 5 (Kuehn Direct) at 5:3-6.

D. New Mexico Designations Following Promulgation of the 2015 Ozone NAAQS

16. In October 2015, following a periodic review, EPA revised the ozone NAAQS downward from 0.075 parts per million (ppm) to 0.070 ppm. *See* NMED Exh. 5 (Kuehn Direct) at 5:8-9.

17. Until the promulgation of the 2015 ozone NAAQS, New Mexico had no designated ozone nonattainment areas in the State. *See id.* at 5:6-7.

18. Following promulgation of the revised ozone NAAQS, all states were required to submit their designation recommendations to EPA by October 1, 2016. Ozone data collected by NMED from 2014 through 2016 showed that a monitor located in the Sunland Park area in southern New Mexico was exceeding the revised ozone standard, as measured by the design values. *See id.* at 5:9-12.

19. NMED submitted a nonattainment area recommendation for the Sunland Park area and recommended attainment or attainment/unclassifiable designations for the remainder of areas in New Mexico. EPA concurred with the recommendations and finalized the area designations for New Mexico on August 3, 2018. *See id.* at 5:9-15.

20. Lea and Eddy Counties were designated as attainment areas for the 2015 ozone NAAQS, and they remain designated as such, following EPA's proposal to retain that designation as of January 16, 2018. *See* NMED Exh. 11, Rebuttal Technical Testimony of Elizabeth Bisbey-Kuehn ("Kuehn Rebuttal"), at 4:8-12.

21. EPA classified the Sunland Park nonattainment area as marginal, allowing NMED 3 years to develop a SIP revision that includes the planning elements required for a marginal nonattainment classification. The SIP revision outlines the strategies and emissions control measures that are expected to reduce the amount of ozone precursors emitted to the atmosphere and improve air quality in the area by August 3, 2021. States may rely on current or upcoming federal rules, new or revised state rules, and other programs, such as the New Mexico Volkswagen mitigation plan projects and the 2021 Regional Haze SIP revision. *See* NMED Exh. 5 (Kuehn Direct) at 5:16-22.

22. On July 13, 2020, EPA proposed to retain the existing 2015 ozone NAAQS. The

CAA does not require EPA to promulgate area designations when an existing NAAQS is retained following the periodic review process. *See id.* at 6:1-3.

23. While not required, the CAA provides that EPA can redesignate an area in the absence of a new or revised NAAQS. This can happen upon EPA's own initiative by notifying the Governor that available information indicates that the designation of an area within the state should be revised. The Governor of a state can also request that EPA redesignate an area of the state. However, EPA must evaluate and approve such a request. Ultimately, EPA retains the sole authority to redesignate an area from attainment to nonattainment, or vice versa. *See* 42 U.S.C. §7407(d)(3); Tr. Vol. 1, 203:9-19.

24. In deciding whether to redesignate an attainment area as a nonattainment area, EPA can consider measures being implemented by a state to address monitored exceedances. *See* Tr. Vol. 203:20 – 204:4.

25. New Mexico's current ozone designations under the CAA will remain in place unless and until the ozone NAAQS is revised again, EPA decides that a redesignation is appropriate, or the Governor requests a redesignation and EPA approves that request. *See* 42 U.S.C. § 7407(d)(3); NMED Exh. 5 (Kuehn Direct) at 6:4-6.

E. Ozone Regulation Under the New Mexico Air Quality Control Act

26. Section 74-2-5.3 of the AQCA specifically mandates that the Board take action to control VOC and NO_x emissions when the Board determines that emissions from sources within its jurisdiction cause or contribute to ozone concentrations in excess of ninety-five percent of the ozone NAAQS. *See* NMSA 1978, § 74-2-5.3.

27. Under this statutory provision, the Board is required to adopt a plan, including regulations, to control emissions of NO_x and VOCs, to provide for the attainment and maintenance of the ozone standard for those areas that exceed 95% of the ozone standard. *See id.* at 74-2-5.3(A).

28. In accordance with this section, the Board is required to consider the following in the adoption of regulations:

- (1) the public interest, including the social and economic value of the sources of emissions and subjects of air contaminants;
- (2) previous experience with equipment and methods available to control the air contaminants involved;
- (3) energy, environmental and economic impacts and other social costs;
- (4) efforts by sources of emissions to reduce emissions prior to the effective date of regulations adopted under this section; and
- (5) for existing sources of emissions, the remaining useful life of any existing source to which the regulation would apply.

Id. at 74-2-5.3(C).

29. Seven counties under the Board's jurisdiction are currently registering or contributing to ozone design values exceeding 95% of the NAAQS: San Juan, Rio Arriba, Sandoval, Valencia, Eddy, Lea, and Doña Ana. *See* NMED Exh. 5 (Kuehn Direct) at 7:11-13.

30. To address this statutory requirement, the Bureau has embarked upon the Ozone Attainment Initiative ("OAI") to develop a series of rules and voluntary measures to mitigate emissions of NO_x and VOCs in the aforementioned counties. *See id.* at 7:14-16.

31. A proposed rule to control NO_x and VOC emissions from various types of equipment related to the production of oil and gas in the South San Juan and Permian Basins has been developed, and the Bureau intends to bring this proposal to the Board for a hearing. *See id.* at 7:14-23.

F. Other Ozone Mitigation Efforts in New Mexico

32. The oil and gas industry is not the only significant contributor to monitored ozone concentrations in New Mexico; previously conducted regional modeling efforts, including the Southern New Mexico Ozone Study ("SNMOS") completed in 2016, have shown that emissions from onroad mobile sources are the largest New Mexico anthropogenic contribution to the design

values at most monitors in southern New Mexico. *See* NMED Exh. 5 (Kuehn Direct) at 8:1-5; NMED Exh. 7, 2016 SNMOS Technical Support Document, at p. 81.

33. Section 177 of the Clean Air Act allows other states to adopt California’s motor vehicle emission standards, and the Department intends to bring before the Board regulations setting standards for low emission vehicles (“LEV”), and zero emission vehicles (“ZEV”) for adoption in 2021 that will provide further mitigation of ozone precursors. *See* 42 U.S.C. §7507; NMED Exh. 5 (Kuehn Direct) at 8:6-10.

34. The Department has also submitted a letter of participation to EPA for the Ozone Advance Program. That program is a means to promote local actions in areas designated as in attainment to reduce ozone and/or fine particulate pollution for the continued maintenance of the NAAQS. The Bureau will coordinate efforts with local governments that wish to take proactive steps towards the protection of air quality. In addition to positioning areas to avoid a nonattainment designation, it can allow communities to choose control measures that are cost effective and that make the most sense for their area, potentially resulting in multi-pollutant benefits. *See* NMED Exh 5 (Kuehn Direct) at 8:11-18.

35. In addition to the OAI and Ozone Advance, the Bureau is also working with the City of Albuquerque on preparing revised Regional Haze State Implementation Plans for submittal to EPA in July of 2021. The goal of the Regional Haze provisions of the CAA is to improve visibility in national parks and wilderness areas (referred to as “Class I areas”), and states are required to make reasonable progress over time towards the long-term goal of attaining natural visibility conditions by 2064. The Regional Haze program requires states to submit Regional Haze State Implementation Plans approximately once every ten years. Additional controls for certain emission units adopted as part of the 2021 Regional Haze SIP revision will also serve to reduce the formation of ozone. *See id.* at 8:22 – 9:11.

36. While the Department and the Board have authority to take action to reduce ozone precursor emissions from anthropogenic sources in New Mexico within their regulatory jurisdiction that contribute to ozone design values, contributions from other sources are beyond the Department's and the Board's control. For instance, the SNMOS evaluated contributions to design values at monitors in southern New Mexico in the base year (2011) and a future year (2025). The most frequent contributors to the design values of the six Doña Ana County monitors were on-road mobile sources (New Mexico, Texas, and Mexico), natural sources (Mexico), electric generating units ("EGUs") (Mexico), non-EGU point sources (Mexico), and oil and gas (Texas). *See id.* at 9:14:19; NMED Exhibit 6, SNMOS Technical Support Document, at p. 67.

37. Therefore, it is possible that, even with all the regulatory efforts of the Board and the Department, some areas of the State may not be able to reach or stay in attainment of the ozone NAAQS. In that case, the regulatory path will be a formal nonattainment designation by EPA. *See* NMED Exh. 5 (Kuehn Direct) at 9:19 – 10:2.

II. Public Comment

38. Mr. Tamas-Parris gave public comment supporting WEG's position that the permits at issue are illegal, and that the Department's draft ozone precursor regulations will not be able to reduce methane pollution and other VOC emissions. *See* Tr. Vol. 1, 230:11 – 236:25.

39. Yang gave public comment regarding the impact of oil and gas development on indigenous communities, and supporting WEG's request that the Board reject the permits at issue. *See* Tr. Vol. 1, 237:9 – 242:20.

40. Ms. Khalsa gave public comment regarding the health impacts of ground level ozone and supporting WEG's appeals calling for rescission of the permits at issue. *See* Tr. Vol. 1, 243:1 – 245:15.

**FINDINGS OF FACT FOR
EIB NO. 20-21(A)**

III. The 3-Bear Facility

41. 3-Bear Delaware Operating – NM, LLC (“3-Bear”), owns and operates the 3 Bear Libby Gas Plant (“Libby Plant”) located approximately 16 miles southwest of Monument, in Lea County, New Mexico. The Libby Plant uses a cryogenic gas separation train to process field gas received from three surrounding compressor stations. The Plant extracts natural gas liquids from the field gas, resulting in pipeline quality natural gas that is referred to as “residue gas.” *See* 3-Bear Hearing Exhibit 1, Direct Testimony of Jeffry D. Bennett and Lori K. Marquez filed Aug. 3, 2020 (“Bennett/Marquez Direct”) at 1:6-11.

42. Pursuant to the Board’s regulations for construction permits at 20.2.72 NMAC, the Bureau issued New Source Review (“NSR”) Permit No. 7482 for construction of the Libby Plant on January 8, 2018. *See* 3-Bear Exh. 4.

43. On September 11, 2019, 3-Bear submitted an application to amend NSR Permit No. 7482; a revised application to amend was submitted in December 2019. *See* EIB 20-21(A) Administrative Record (“AR”) 00142-00388; 00401-00638.

44. On April 8, 2020, the Bureau issued NSR Permit 7482-M1, which is the subject of the appeal in EIB No. 20-21(A). *See* EIB 20-21(A) AR 00734-00784.

45. WildEarth Guardians (“WEG”) filed its Petition for a Hearing, appealing the 3-Bear Permit, on May 11, 2020.

IV. NSR Permit Requirements

46. The AQCA and the Board’s regulations at Title 20, Chapter 2 NMAC, set forth the standards for regulated air pollutants, and the requirements with which facilities that emit such pollutants must comply.

47. The AQCA provides that the Board shall require “a person intending to construct or modify any source, except as otherwise provided by regulation, to obtain a construction permit from the Department . . . prior to such construction or modification.” NMSA 1978, § 74-2-7(A)(1). Pursuant to this statutory directive, the Board adopted the Construction Permit regulations at 20.2.72 NMAC. *See* 20.2.72.3 NMAC.

48. The 3-Bear Permit at issue in EIB 20-21(A) is governed by the Board’s permitting regulations at 20.2.72 NMAC, which apply to new sources or modifications of existing sources.

49. EPA has approved the Board’s construction permitting regulations at 20.2.72 NMAC, and that program is part of New Mexico’s federally-approved State Implementation Plan (“SIP”). *See* 78 Fed. Reg. 15296 (March 11, 2013); Tr. Vol. 1 at 166:25 – 167:9.

A. NSR Permits under 20.2.72 NMAC

50. Section 20.2.72.200.A NMAC requires that permits must be obtained from the Department by certain categories of persons or sources, including the following:

- (1) Any person constructing a stationary source which has a potential emission rate greater than 10 pounds per hour or 25 tons per year of any regulated air contaminant for which there is a National or New Mexico Ambient Air Quality Standard; and
- (2) Any person modifying a stationary source when all of the pollutant emitting activities at the entire facility, either prior to or following the modification, emit a regulated air contaminant for which there is a National or New Mexico Ambient Air Quality Standard with a potential emission rate greater than 10 pounds per hour or 25 tons per year and the regulated air contaminant is emitted as a result of the modification.

51. Section 20.2.72.208 NMAC enumerates the bases for which the Department shall deny an application for a construction permit or permit modification, which include instances where the “construction, modification, or permit revision will cause or contribute to air

contaminant levels in excess of any National Ambient Air Quality Standard . . . unless the ambient air impact is offset by meeting” the requirements for sources in nonattainment areas, as specified in 20.2.79 NMAC or 20.2.72.216 NMAC. *See* 20.2.72.208.D NMAC.

52. The term “cause or contribute” in the Board’s regulations is based on language in the federal Clean Air Act’s Prevention of Significant Deterioration (“PSD”) provisions that prohibits construction of PSD major sources unless the owner or operator can demonstrate that “emissions from construction of such facility will not cause, or contribute to, air pollution in excess of any . . . [NAAQS].” 42 U.S.C. § 7475(a)(3).

53. PSD major sources are sources that emit more than 250 tons per year of any regulated pollutant. *See* 42 U.S.C. § 7479(1); 3-Bear Exh. 2, Rebuttal Testimony of Jeffry Bennett and Lori K. Marquez (“Bennett/Marquez Rebuttal”), at 2:30-34.

54. EPA has historically used pollutant-specific concentration levels known as “significant impact levels” (“SILs”) to identify the degree of air quality impact that is considered to “cause or contribute” to a violation of a NAAQS. 3-Bear Exh. 2 (Bennett/Marquez Rebuttal) at 2:36-38.

55. According to EPA, “proposed sources have met the requirement to demonstrate that they do not cause or contribute to a violation by showing that the ambient air quality impacts resulting from the proposed source’s emissions would be below these concentration levels.” WEG Exh. 12, EPA Guidance on Significant Impact Levels for Ozone and Fine Particles in the Prevention of Significant Deterioration Permitting Program (April 17, 2018) (“EPA SIL Guidance”), at p. 5.

56. Likewise, NMED’s Air Dispersion Modeling Guidelines (“NMED Modeling Guidelines”) at Section 2.4.1 define “Significance Level” as “thresholds below which the source is not considered to contribute to any predicted exceedance of air quality standards.....” *See* 3-

Bear Exh. 7.

57. EPA has established a SIL for ozone of 1.0 parts per billion (ppb). *See* WEG Exh. 12 at p. 15.

58. NMED's Modeling Guidelines adopt EPA's ozone significance level of 1.0 ppb. *See* NMED Modeling Guidelines, Section 2.6.5 Table 5E (citing to EPA's SIL Guidance).

a. Demonstrating compliance with NAAQS for criteria pollutants other than ozone

59. Pollutants that are emitted directly by a source – such as NO_x, SO₂, PM₁₀, PM_{2.5}, and lead – are known as “primary pollutants”. *See* NMED Exh. 1 (Mustafa Direct) at 6:13-14.

60. To demonstrate compliance with the NAAQS for primary pollutants, applicants for an NSR permit under 20.2.72 NMAC use air dispersion modeling analyses to predict what the concentrations of most criteria pollutants will be after the source is constructed or modified. Dispersion modeling for primary pollutants simulates dispersion of that pollutant in the air after it is emitted from the source. *See id.* at 4:9 – 5:13; 6:16-16.

61. In general, an EPA-approved regulatory model known as AERMOD is used to model air impacts of primary pollutants. The model requires various inputs, including the post-construction emissions of various criteria air pollutants such as carbon monoxide, nitrogen oxides, sulfur dioxide, and particulate matter. The model's output are the predicted pollutant concentrations, which are compared against the NAAQS to demonstrate compliance. *See id.*

b. Demonstrating compliance with NAAQS for ozone

62. Ozone is different from the other criteria pollutants in that it is not directly emitted from sources, but instead is primarily formed in the ambient air through chemical interactions between other precursor pollutants. Pollutants that are formed through chemical interactions in the ambient air, such as ozone, are known as “secondary pollutants.” *See* NMED Exh. 1 (Mustafa

Direct) at 6:11-16.

63. In contrast to dispersion modeling for primary pollutants, modeling for a secondary pollutant such as ozone must be capable of simulating chemistry in addition to dispersion. This is commonly done using photochemical models that simulate atmospheric chemistry as well as atmospheric mixing. *See id.* at 6:17-19.

64. The addition of chemistry adds substantial complexity to the model. While the impacts of a facility's emissions on primary pollutant concentrations are typically evaluated for a facility alone based on modeling that covers an area of a few hundred square miles, the impact of a facility's emissions on secondary pollutant concentrations must be evaluated in relation to emissions from other sources, since the precursors reacting to create secondary pollutants are often emitted from multiple sources and sectors. *See id.* at 6:20 – 7:2.

65. In addition to regulated facilities, ozone precursors are emitted from numerous other anthropogenic and natural sources, as well as being transported from surrounding states and countries. Precursors can travel hundreds of miles in the atmosphere before reacting to form ozone. This makes it necessary to have not only a detailed understanding of the emissions from regulated facilities in an area, but also emissions from sources hundreds of miles away. *See id.* at 7:1-7

66. The potential complexity of photochemical modeling has led several organizations, including EPA and the Western Regional Air Partnership ("WRAP"), to develop modeling platforms that contain most of the information necessary for photochemical grid modeling exercises. Despite the development of these platforms, photochemical modeling exercises are still highly complex, and are mostly conducted by private specialists under contract with state and local air quality agencies. These specialized studies are far more costly than dispersion modeling; for instance, the photochemical modeling associated with the Department's Ozone Attainment Initiative is being performed by highly specialized contractors at a cost of over three-hundred

thousand dollars. *See id.* at 7:8-16; 3-Bear Exh. 7 (NMED Modeling Guidelines) at p. 24.

67. EPA has developed modeling guidance for assessing single-source impacts on ambient ozone concentrations from major PSD sources (sources that emit 250 tpy of any regulated air pollutant). *See* NMED Exh. 1 (Mustafa Direct) at 8:23.

68. EPA's PSD program does not require modeling for new or modified minor sources. *See* NMED Exh. 1 (Mustafa Direct) at 8:17-20; 10:9-11; NMED Exh. 11, (Kuehn Rebuttal) at 4:21 – 5:17;; Tr Vol. II, 379:1-14; 436:22 – 437:23.

69. The Board's regulations and NMED's Modeling Guidelines also do not require analysis of ozone impacts for minor sources. *See* 3-Bear Exh. 3 (NMED Modeling Guidelines), at p. 24; Tr. Vol. I, 179:4-16.

70. This approach is consistent with the extensive modeling developed by EPA for its PSD major source guidance, because application of EPA's modeling indicates that minor sources, by definition, do not cause impacts above the SIL for ozone. *See* Tr. Vol. 1, 161:8 – 162:14; Tr Vol. II, 379:1-14; 436:22 – 437:23.

71. The EPA modeling guidance for PSD major sources uses a two-tiered demonstration approach to address single-source impacts on ambient ozone. This type of demonstration is included in the NMED Modeling Guidelines and forms the basis for NMED's modeling requirements for major PSD sources. *See* NMED Exh. 1 (Mustafa Direct) at 8:21 – 9:2.

72. Tier I of the demonstration is a screening tool that uses Modeled Emission Rates for Precursors ("MERPs"). This tool is based on extensive modeling using hypothetical sources around the country to account for the sensitivity of ozone formation chemistry to local atmospheric conditions and concentrations of atmospheric species. *See id.* at 9:2-3.; Tr. Vol II, 379:23 – 380:17.

73. MERPS are applied to facility emissions of NO_x and VOCs as multiplicative factors to estimate a facility's ozone impacts. 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 will be above the SIL for ozone. *See* NMED Exh 11 (Kuehn Rebuttal) at 5:4-11.

74. Based on application of the MERPs, the air impacts of any minor source – i.e. a source that emits less than 250 tpy per year of ozone precursors – will be below the SIL and are therefore not considered to cause or contribute to ozone levels in violation of the NAAQS. *See id.* at 5:11-14; Tr. Vol. I, 163:11 – 164:6.

75. All the sources at issue in these consolidated appeals are minor sources for purposes of the PSD program. *See id.* at 5:11-12.

V. Objections Raised by WEG

76. WEG’s objection to approval of the 3-Bear Permit is based on the Board’s regulations at 20.2.72.208.D NMAC, which provides that the Department shall deny any application for a permit if “[t]he construction, modification, or permit revision will cause or contribute to air contaminant levels in excess of any National Ambient Air Quality Standard . . . unless the ambient air impact is offset ” *See* EIB 20-21(A) Petition at 4.

77. WEG asserted that because air monitors in Lea and Eddy counties have been registering exceedances of the ozone NAAQS, issuance of the 3-Bear Permit would “presumptively contribute to exceedances of the ozone NAAQS,” rendering the permit action “unlawful and in violation of 20.2.72.208.D NMAC”. *Id.*

78. WEG further stated that NMED “conducted no air quality modeling or other technical analysis of the impact of [the proposed emissions in the 3-Bear Permit application] on current ozone levels and failed to provide any support for its conclusory determination that these additional ozone precursors would not ‘contribute’ to exceedances of the NAAQS,” and therefore “NMED’s conclusion that the additional emissions will not ‘cause or contribute’ to exceedances

of the ozone NAAQS was arbitrary and capricious, and NMED’s issuance of the [3-Bear Permit] was unlawful.” *Id.* at 4-5.

79. As a remedy, WEG requested that the Board rescind the 3-Bear Permit, and prohibit NMED from issuing a permit for the 3-Bear Facility “until NMED develops and implements a formal plan, including regulations, to reduce ozone precursors in the area and further demonstrates that additional emissions of ozone precursors from any new permit issued for the [3-Bear Facility] will not ‘cause or contribute’ to violations of the ozone NAAQS.” *Id.* at 5.

80. WEG’s technical witness testified regarding monitoring data from the three monitors in Eddy and Lea counties between 2015 and 2019 that shows 2017-2019 design values above the ozone NAAQS. *See* 3-Bear Petition at p. 3-4.

81. The Department did not dispute that design values based on data from air quality monitors in Hobbs and Carlsbad, New Mexico, in 2017, 2018, and 2019 show levels exceeding the 2015 ozone NAAQS. *See* EIB 20-21(A), New Mexico Environment Department’s Answer at p. 2, ¶ 3.c. (filed 06/15/2020); NMED Exh. 5 (Kuehn Direct) at 6:7-10.

82. WEG’s witness, Dr. Ranaji (Ron) Sahu, testified that because the monitors in the counties where the permitted facilities at issue in these consolidated appeals are located are registering design values above the ozone NAAQS in recent years, and because the permitted facilities emit ozone precursor pollutants, those facilities necessarily contribute to exceedances of the ozone NAAQS. *See* Tr. Vol. 1 at 68:7-13.

83. Witnesses for NMED and 3-Bear testified that long-standing guidance from both EPA and NMED provides that the phrase “cause or contribute” in the CAA and its corresponding federal and state regulations is interpreted to include a significance threshold that must be met before a source’s impacts on ambient air quality will be considered to “cause or contribute” to a NAAQS violation. *See* Tr. Vol. 1 at 166:25 – 167:9; Tr. Vol. II at 372:1 – 376:13.

84. Witnesses for 3-Bear provided testimony demonstrating that Colorado, Oklahoma, and Texas interpret the term “cause or contribute” as requiring a significance threshold, in the same manner as NMED and EPA. *See* 3-Bear Exh. 2 (Bennett/Marquez Rebuttal) at 4:25 – 7:10; Tr. Vol. II, 340:10 – 342:18.

85. Dr. Sahu was not able to point to any other jurisdiction in the U.S. that applies the “cause or contribute” standard without using a significance threshold. *See* Tr. Vol. 1 at 103:1 – 104:2.

86. Dr. Sahu further testified that EPA’s guidance for PSD major sources required that NMED make a specific determination as to whether the 3-Bear Facility would contribute to ozone concentrations above the NAAQS, and that NMED should have required a Tier 2 case-by-case analysis of the facility’s impacts on ozone concentrations under the PSD guidance in order to make such a determination. *See* WEG Exh. 11, Rebuttal Expert Report by Dr. Ranajit (Ron) Sahu, Consultant, In Support of Petition in EIB No. 20-33(A) and 20-21(A) (“Sahu Rebuttal”) at p. 6.

87. Witnesses for the Department and 3-Bear testified that the PSD Guidance applies only to major sources, and the 3-Bear Facility is a minor source for purposes of the PSD regulations. Tr. Vol. I, 160:21 – 161:7; 163:19 – 164:6.

88. NMED’s and 3-Bear’s witnesses testified that, in the context of an individual minor source permit application such as the one for the Libby Plant, the Board’s Regulations and NMED’s Modeling Guidelines do not require the applicant to demonstrate or NMED to determine that the source will not cause or contribute to ozone levels. They pointed out that no such specific determination is required is because, under the Tier 1 analysis in EPA’s PSD Guidance, impacts from minor sources will always be below the SIL for ozone, and therefore minor sources, by definition, are not considered to contribute to ozone concentrations above the NAAQS. *See* Tr. Vol. 1, 161:8 – 162:14; Tr. Vol. 1 at 166:25 – 167:9; *See* Tr. Vol. 1, 207:6 – 208:8; Tr. Vol. II at

372:1 – 376:13; Tr Vol. II, 379:1-14; 436:22 – 437:23.

89. 20.2.79 NMAC governs permitting in nonattainment areas. Subsection 20.2.79.7.AA of those rules defines “Nonattainment Area” as follows:

for any air pollutant an area which is shown by monitored data or which is calculated by air quality modeling (or other methods determined by the [EPA] administrator to be reliable) to exceed any national ambient air quality standard for such pollutant. Such term includes any area identified under Subparagraphs (A) through (C) of Section 107(d)(1) of the federal Clean Air Act.

90. WEG argues that this definition includes, but is not limited to, areas formally designated as nonattainment by EPA under the CAA, and because the monitors in Lea and Eddy Counties are registering exceedances of the ozone NAAQS, the Department must consider those counties to be “nonattainment areas” for ozone, even though EPA has not designated them as such. *See* WEG opening statement, Tr. Vol. 1, 29:8-23.

91. Ms. Kuehn testified that the AQCA expressly addresses how the Board must act with respect to counties in New Mexico, such as Lea and Eddy, that are currently designated as EPA as attainment areas for the ozone NAAQS, but which are registering design values close to or in excess of the standard. Specifically, she pointed to the provisions of NMSA 1978, § 74-2-5.3, which require the Board to take action to control ozone precursor emissions from sources within its jurisdiction in counties that have monitors registering design values over 95% of the NAAQS. *See* NMED Exh. 5 (Kuehn Direct) at 7:10 – 9:11.

92. Ms. Kuehn testified that action is currently being taken as required by Section 74-2-5.3 of the AQCA to address the seven counties under the Board’s jurisdiction that are currently registering design values over 95% of the NAAQS. Specifically, the Department has undertaken its Ozone Attainment Initiative to develop a series of regulations to bring before the Board, as well as other measures to mitigate ozone precursor emissions from contributing sources. *See id.* at 7:10 – 9:11.

93. Ms. Kuehn explained that a fundamental aspect of the OAI is determining exactly what sources are contributing to ozone concentrations in the State. To this end, the Department has contracted with the Western States Air Resources Council and Ramboll to conduct photochemical grid modeling for ozone to determine which sectors within the Board’s regulatory jurisdiction are contributing to ozone concentration and to support proposed regulations that will target ozone precursor emissions from those sectors. The modeling will identify anthropogenic, non-anthropogenic, and interstate and international contributions to monitored ozone concentrations in the counties of concern. The results of this modeling are expected in late 2020. *See id.*; Tr. Vol. 1 at 200:13-20.

94. Witnesses for NMED, 3-Bear, and XTO testified to the complexities, both procedural and substantive, of a nonattainment designation, and the lack of any authorization, guiding principles in the AQCA or Board’s regulations, or resources for the Department to conduct such a process. They highlighted the uncertainty and confusion that would arise if the definition of “nonattainment area” were interpreted to include counties with monitors that were registering design values above the NAAQS, as well as the unworkability as a practical matter of such an interpretation in terms of administering the Board’s construction permitting program regulations. *See, e.g.* NMED Exh. 11 (Kuehn Rebuttal) at 3:13 – 4:7; Parmley Rebuttal at 5:17 – 8:15; 3-Bear Exh. 2 (Bennett/Marquez Rebuttal) at 12:22 – 14:11; Tr. Vol. 2 at 316:20 – 317:16.

CONCLUSIONS OF LAW FOR EIB 20-21(A)

VI. Standard of Decision

95. In a permit appeal hearings before the Board, “the petitioner has the burden of going forward with the evidence and of proving by a preponderance of the evidence the facts relied upon to justify the relief sought in the petition.” 20.1.2.302 NMAC.

96. Following the establishment of a prima facie case by the petitioner, “any person

opposed to the relief sought in the petition has the burden of going forward with any adverse evidence and showing why the relief should not be granted.” *Id.*

97. On appeal, board decisions will be set aside where they are “(1) arbitrary, capricious, or an abuse of discretion; (2) not supported by substantial evidence in the record; or (3) otherwise not in accordance with law.” NMSA 1978 74-2-9(C)

VII. The 3-Bear Permit

98. The Board’s regulations at 20.2.72.208.D NMAC require the Department to deny a permit application under part 20.2.72 if “[t]he construction, modification, or permit revision will cause or contribute to air contaminant levels in excess of any [NAAQS] . . . unless the ambient air impact is offset by meeting the requirements of 20.2.79 NMAC or 20.2.72.216 NMAC.”

99. Where the Board’s regulations have been approved by EPA as part of the New Mexico State Implementation Plan, and where the language in the Board’s regulations mirrors language from the CAA, it is appropriate for NMED to interpret such language in the same manner as it is interpreted by EPA.

100. Pursuant to long-standing EPA and NMED guidance, for a source to be considered to “cause or contribute” to ozone concentrations in excess of a NAAQS, its impacts on ozone concentrations must be above the “significant impact level” as established by EPA.

101. Sources that emit below 250 tpy of ozone precursor are “minor sources” for purposes of the Board’s PSD permitting regulations.

102. Pursuant to EPA guidance, NMED guidance, and the Board’s permitting regulations at 20.2.72 and 20.2.74 NMAC, a permit applicant for a minor source is not required to make an individual demonstration of its impacts on ambient ozone concentrations.

103. Application of EPA modeling guidance establishes that sources in Lea and Eddy County whose emissions of ozone precursor pollutants are below 250 tpy will be below the

significant impact level for ozone.

104. Because their impacts are below the SIL for ozone, minor sources by definition do not “cause or contribute to” ozone concentrations in excess of the NAAQS.

105. The Department does not have authority or discretion to deny a permit or require offsets for an individual new or modified minor source in a designated attainment area on the basis that the facility will “cause or contribute” to ozone levels above the NAAQS.

106. WEG failed to establish by a preponderance of the evidence that the Department’s determination that the modifications to the Libby Plant proposed in the 3-Bear Permit application would not cause or contribute to concentrations in excess of a NAAQS was arbitrary, capricious, or otherwise contrary to law.

107. WEG’s technical witness did not offer any testimony establishing that the Department should have disregarded EPA’s and NMED’s long-standing historical interpretation of the phrase “cause or contribute” to find that a minor source that emits any amount of ozone precursors in a county designated as attainment but with monitors registering exceedances of the ozone NAAQS will necessarily contribute to ozone concentrations above the NAAQS.

108. WEG has not identified any other jurisdiction in the United States that interprets the phrase “cause or contribute” in the manner advocated by WEG.

109. At least three other similarly-situated jurisdictions take the same approach to permitting minor sources under the CAA as the Department did with respect to 3-Bear’s Libby Plant.

110. The Board finds that in total WEG has not met the requirement in 20.1.2.302 of proving by a preponderance of the evidence that the Department issued Air Quality Permit No. 7482-M1 in violation of the AQCA or Board regulations. Accordingly, it is the Board’s decision that the relief sought in WEG’s petition as to the 3-Bear Permit be denied.

**FINDINGS OF FACT
FOR EIB NO. 20-33(A)**

VIII. Registrations 8729, 8730, and 8733 under GCP For Oil and Gas Facilities

111. XTO Energy Inc. (“XTO”) owns and operates the Big Eddy Unit DI 38 Tank Battery and the Corral Canyon 23 Tank Battery, both of which are located in Eddy County, New Mexico.

112. On February 24, 2020, XTO submitted an application to register its proposed Corral Canyon 23 Tank Battery under the GCP Oil & Gas. *See* EIB 20-33(A) AR 0008-0215.

113. On March 27, 2020, the Department approved registration of the XTO Corral Canyon 23 Tank Battery under Air Quality General Permit GCP-O&G No. 8729. *See* EIB 20-33(A) AR 0220-0232.

114. On February 18, 2020, XTO submitted an application to register its proposed Big Eddy Unit under the GCP Oil & Gas. *See* EIB 20-33(A) AR 0240-0445.

115. On March 27, 2020, the Department approved registration of the XTO Big Eddy Unit Tank Battery under Air Quality General Permit GCP-O&G No. 8730. *See* EIB 20-33(A) AR 0450-0461.

116. Spur Energy Partners LLC (“Spur”) owns and operates the Dorami 2H, 4H and 9H Federal Tank Battery, located in Eddy County, New Mexico.

117. On February 10, 2020, Spur submitted an application to register its proposed Dorami 2H, 4H and 9H Federal Tank Battery under the GCP O&G. *See* EIB 20-33(A) AR 0500-0597.

118. On March 23, 2020, the Department approved registration of the Spur Dorami 2H, 4H and 9H Federal Tank Battery under Air Quality General Permit GCP O&G No. 8733. *See* EIB 20-33(A) AR 0660-0671.

IX. The GCP for Oil & Gas Facilities

119. The AQCA provides that the Board shall require “a person intending to construct or modify any source, except as otherwise provided by regulation, to obtain a construction permit from the Department . . . prior to such construction or modification.” NMSA 1978, § 74-2-7(A)(1). Pursuant to this statutory directive, the Board adopted the Construction Permit regulations at 20.2.72 NMAC. *See* 20.2.72.3 NMAC.

120. The Registrations under the GCP at issue in EIB 20-33(A) are governed by the Board’s permitting regulations at 20.2.72 NMAC, which apply to new sources or modifications of existing sources.

121. EPA has approved the Board’s construction permitting regulations at 20.2.72 NMAC, and that program is part of New Mexico’s federally-approved State Implementation Plan (“SIP”). *See* 78 Fed. Reg. 15296 (March 11, 2013); Tr. Vol. 1 at 166:25 – 167:9.

122. Section 20.2.72.220 NMAC allows the Department to issue one or more general construction permits (“GCP”) that cover numerous similar sources. *See* 20.2.72.220.A(1) NMAC. Prior to issuing a GCP, the Department must give notice of the draft GCP under Subsections A and B of 20.2.72.206 NMAC, and hold a public hearing with opportunity for public participation under Subsection C of 20.2.72.206 NMAC. *See id.* Sources registered under a GCP “shall be generally homogeneous in terms of operations, processes and emissions, subject to the same or substantially similar requirements, and not subject to case-by-case standards or requirements.” *Id.*

123. The GCP O&G was issued under 20.2.72.220 NMAC, and was developed to replace two previously issued GCPs for oil and gas facilities: the GCP-1 (Level One Oil and Gas Installations) and the GCP-4 (Combustion Sources and Related Equipment). The GCP O&G addressed a broader range of equipment than was covered by the previous GCPs. *See* Spur Exh. 3, Direct Testimony and Exhibits of Adam Erenstein, Trinity Consultants (“Erenstein Direct”), at p.

2:21-22, 3:15-17.

124. Prior to issuing the GCP O&G, the Department undertook a lengthy stakeholder and public outreach and comment process. The Department released the initial draft of the GCP O&G for public comment in May of 2017, and released a revised draft in December of 2017 which incorporated changes based on revised modeling analyses and comments received. In January of 2018, the Department published a completeness determination for the draft permit, which initiated a formal 30-day comment period, and held open houses on the proposed permit. A hearing on the permit was held before a Department hearing officer in February of 2018. The final GCP O&G was issued on April 27, 2018. *See* Spur Exh. 3 (Erenstein Direct) at 3:22 – 4:1.

125. Throughout the development and hearing process on the GCP O&G, the Department elicited input regarding the proposed permit conditions, and the assumptions and modeling that formed the basis for those conditions. *See id.* at 4:2-7.

126. In issuing the GCP O&G, the Department determined that if facilities are operated in accordance with the provisions of the GCP O&G, they will not cause or contribute to any concentrations above air quality standards and PSD increments. *See* GCP O&G, B100A.

127. Only minor sources are eligible to register for the GCP O&G. *See* GCP O&G, A106A, Table 106.

128. The AQCA defines “source” as “a structure, building, equipment, facility, installation or operation that emits or may emit an air contaminant.” NMSA 1978, § 74-2-2(D).

129. The Board’s permitting regulations at 20.2.72.220.EE NMAC define “source” as “any building, structure, equipment, facility, installation (including temporary installations), operation or portable stationary source which emits or may emit any air contaminant.”

X. Objections Raised by WEG

130. Dr. Sahu testified that the “collective impact of the three challenged facilities

registered under the GCP O&G assuming the maximum allowable emissions of 95 tons per year each for NO_x and VOCs is 1.82 ppb,” implying that, when considered collectively, the impact of GCP registrations is above the ozone SIL. WEG Exh. 11 (Sahu Rebuttal), at p. 6.

131. Dr. Sahu was unable to identify any provisions in the AQCA or the Board’s permitting regulations that would allow the Department to collectively consider multiple separate GCP registration applications for different facilities in different locations and under different ownership with respect to potential emissions for purposes of determining emissions levels, source classifications, or impacts on ozone concentrations. *See* Tr. Vol. 1 at 80:2 – 81:2.

132. WEG’s objection in the GCP Petition is based on Sections A103 and A100H(6) of the GCP O&G. Section A103 states that “the permittee shall comply with all applicable sections of the requirements listed in Table 103 [of the GCP O&G].” Table 103 lists “40 CFR 50 National Ambient Air Quality Standards” as a requirement, and the 2015 ozone NAAQS is set forth at 40 C.F.R. § 50.19(a). WEG asserts that because the monitors in Eddy and Lea Counties have been registering exceedances of the ozone NAAQS, there is “no way for the permittees to comply with the ozone NAAQS, as required for registration under the [GCP O&G].” EIB 20-33(A) Petition at 3.

133. Section B100 of the GCP Oil & Gas states that “The Department has determined that all facilities registered under and operating in accordance with this permit will meet all applicable requirements under [the CAA, the AQCA, and the Board’s regulations at Title 20, Chapter 2], and will not cause or contribute to air contaminant levels in excess of any national or New Mexico ambient air quality standard.” Spur Exh. 5 (GCP Oil & Gas) at p. 31.

134. WEG also points to Section A100H(6) of the GCP O&G, which states that the Department shall deny a registration under the permit if “[t]he Facility is located in a nonattainment area [defined by 20.2.72.216 and 20.2.79 NMAC]” *Id.* at p. 4-5.

135. 20.2.79 NMAC governs permitting in nonattainment areas. Subsection 20.2.79.7.AA of those rules defines “Nonattainment Area” as follows:

for any air pollutant an area which is shown by monitored data or which is calculated by air quality modeling (or other methods determined by the [EPA] administrator to be reliable) to exceed any national ambient air quality standard for such pollutant. Such term includes any area identified under Subparagraphs (A) through (C) of Section 107(d)(1) of the federal Clean Air Act.

136. WEG argues that this definition includes, but is not limited to, areas formally designated as nonattainment by EPA under the CAA, and because the monitors in Lea and Eddy Counties are registering exceedances of the ozone NAAQS, the Department must consider those counties to be “nonattainment areas” for ozone, even though EPA has not designated them as such. *See* WEG opening statement, Tr. Vol. 1, 29:8-23.

137. Accordingly, WEG claims that “NMED’s decision to approve the [GCP Registrations] – and thereby authorize additional emissions of ozone precursor pollutants in an area already exceeding the ozone NAAQS – was unlawful, arbitrary, and capricious.” GCP Petition at 3.

138. As a remedy, WEG requests that the Board rescind the GCP Registrations, and prohibit NMED from approving any new registrations under the GCP O&G in Eddy and Lea Counties “until NMED develops and implements a formal plan, including regulations, to reduce ozone precursors in the area and further demonstrates that additional emissions of ozone precursors from any new permit registrations will be able to fully comply with the ozone NAAQS.” *Id.* at 6.

139. Dr. Sahu testified that because the monitors in Lea and Eddy Counties are registering design values in excess of the 2015 ozone NAAQS, those counties are “actual nonattainment areas” to which permitting requirements for nonattainment areas must apply, positing that there can be a nonattainment area even in the absence of a nonattainment designation by EPA. *See* WEG Exh. 1, Expert Report by Dr. Ranajit (Ron) Sahu, Consultant, In Support of Petition in

EIB No. 20-33(A) and 20-21(A) (“Sahu Direct”) at p. 2.

140. Witnesses for the Department and XTO contradicted Dr. Sahu’s testimony, explaining that there cannot be a “nonattainment area” in the absence of a formal designation by EPA. *See* NMED Exh. 11 (Kuehn Rebuttal) at 1:7 – 4:7; Direct Testimony of Randy Parmley, P.E., On Behalf of XTO Energy Inc., In Support of General Construction Permit, Oil and Gas Registration Nos. 8729 and 8730 (“Parmley Direct”), generally; Rebuttal Testimony of Randy Parmley, P.E., On Behalf of XTO Energy Inc., In Support of General Construction Permit, Oil and Gas Registration Nos. 8729 and 8730, generally.

141. Ms. Kuehn explained that, while monitoring data are a critical piece of a nonattainment designation, a county does not automatically become a “nonattainment area” when a monitor in that county registers design values above the NAAQS. *See* NMED Exh. 11 (Kuehn Rebuttal) at 2:10-12.

142. Ms. Kuehn testified that nothing in the CAA, the AQCA, or their corresponding regulations gives the Board or the Department the authority to designate an area of the state as a nonattainment area; it is solely within EPA’s authority to make such designations. Nor do the AQCA or the Board’s regulations set forth a process by which the Board or the Department could designate a given area as nonattainment. *See id.* at 3:4-18.

143. Ms. Kuehn testified that she was the primary draftsman for the GCP Oil & Gas, and that the intent of the language in Section A100H(6) was intended to preclude registration under of facilities in designated nonattainment areas. Tr. Vol. 1, 251:1-18.

144. Ms. Kuehn testified that the AQCA expressly addresses how the Board must act with respect to counties in New Mexico, such as Lea and Eddy, that are currently designated as EPA as attainment areas for the ozone NAAQS, but which are registering design values close to or in excess of the standard. Specifically, she pointed to the provisions of NMSA 1978, § 74-2-

5.3, which require the Board to take action to control ozone precursor emissions from sources within its jurisdiction in counties that have monitors registering design values over 95% of the NAAQS. *See* NMED Exh. 5 (Kuehn Direct) at 7:10 – 9:11.

145. Ms. Kuehn testified that action is currently being taken as required by Section 74-2-5.3 of the AQCA to address the seven counties under the Board’s jurisdiction that are currently registering design values over 95% of the NAAQS. Specifically, the Department has undertaken its Ozone Attainment Initiative to develop a series of regulations to bring before the Board, as well as other measures to mitigate ozone precursor emissions from contributing sources. *See id.* at 7:10 – 9:11.

146. Ms. Kuehn explained that a fundamental aspect of the OAI is determining exactly what sources are contributing to ozone concentrations in the State. To this end, the Department has contracted with the Western States Air Resources Council and Ramboll to conduct photochemical grid modeling for ozone to determine which sectors within the Board’s regulatory jurisdiction are contributing to ozone concentration and to support proposed regulations that will target ozone precursor emissions from those sectors. The modeling will identify anthropogenic, non-anthropogenic, and interstate and international contributions to monitored ozone concentrations in the counties of concern. The results of this modeling are expected in late 2020. *See id.*; Tr. Vol. 1 at 200:13-20.

147. Witnesses for NMED, 3-Bear, and XTO testified to the complexities, both procedural and substantive, of a nonattainment designation, and the lack of any authorization, guiding principles in the AQCA or Board’s regulations, or resources for the Department to conduct such a process. They highlighted the uncertainty and confusion that would arise if the definition of “nonattainment area” were interpreted to include counties with monitors that were registering design values above the NAAQS, as well as the unworkability as a practical matter of such an interpretation in terms of

administering the Board’s construction permitting program regulations. *See, e.g.* NMED Exh. 11 (Kuehn Rebuttal) at 3:13 – 4:7; Parmley Rebuttal at 5:17 – 8:15; 3-Bear Exh. 2 (Bennett/Marquez Rebuttal) at 12:22 – 14:11; Tr. Vol. 2 at 316:20 – 317:16.

CONCLUSIONS OF LAW FOR EIB 20-33(A)

XI. Standard of Decision

148. In a permit appeal hearing before the Board, “the petitioner has the burden of going forward with the evidence and of proving by a preponderance of the evidence the facts relied upon to justify the relief sought in the petition.” 20.1.2.302 NMAC.

149. Following the establishment of a prima facie case by the petitioner, “any person opposed to the relief sought in the petition has the burden of going forward with any adverse evidence and showing why the relief should not be granted.” *Id.*

150. The Board’s regulations at 20.2.72.208.D NMAC require the Department to deny a permit application under part 20.2.72 if “[t]he construction, modification, or permit revision will cause or contribute to air contaminant levels in excess of any [NAAQS] . . . unless the ambient air impact is offset by meeting the requirements of 20.2.79 NMAC or 20.2.72.216 NMAC.”

151. Where the Board’s regulations have been approved by EPA as part of the New Mexico State Implementation Plan, and where the language in the Board’s regulations mirrors language from the CAA, it is appropriate for NMED to interpret such language in the same manner as it is interpreted by EPA.

152. On appeal, board decisions will be set aside where they are “(1) arbitrary, capricious, or an abuse of discretion; (2) not supported by substantial evidence in the record; or (3) otherwise not in accordance with law.” NMSA 1978 74-2-9(C)

XII. The GCP Registrations

153. Only minor sources can register for the GCP Oil & Gas.

154. Under the definitions set forth in the CAA and the AQCA, a “Nonattainment Area” means an area designated by EPA as such pursuant to Section 7407(d) of the CAA.

155. It is within EPA’s sole authority to identify the boundaries of an area and designate the attainment status of that area with respect to any NAAQS.

156. The Department cannot consider a county in the State to be a “nonattainment area” solely because data from a monitor in that county show design values above the NAAQS at a given moment in time.

157. The Board’s regulations do not provide a process by which the Department or the Board could designate a nonattainment area.

158. To the extent that the definition of “nonattainment area” in the Board’s regulations at 20.2.72.7.T NMAC can be regarded as inconsistent with the language of the definition of that term in Section 74-2-2(N) of the AQCA, it is the statutory definition that takes precedence.

159. The Department’s longstanding interpretation of the definition of “nonattainment area” in the Board’s regulations at 20.2.72.7.T NMAC as meaning only an area that has been formally designated as such by EPA is reasonable, and is required by the definition of “nonattainment area” in the AQCA.

160. Lea and Eddy Counties, being currently designated by EPA as attainment for the 2015 ozone NAAQS, do not meet the definition of “nonattainment areas” under the CAA or the AQCA.

161. Where a company seeks to register a source under the GCP O&G and the source is

located in an area designated by EPA as in attainment of the ozone NAAQS, the Department does not have authority to deny the registration on the basis that the proposed source is located in a nonattainment area for the ozone NAAQS.

162. WEG failed to establish by a preponderance of the evidence that the Department's approval of the GCP Registrations was arbitrary, capricious, or otherwise contrary to law.

163. WEG's technical witness did not offer any testimony establishing that the Department should have disregarded the definition of "nonattainment area" in the CAA and the AQCA and the long-standing interpretation of the Board's regulations at 20.2.72.7(T) NMAC to reject an application for registration under the GCP O&G for a source located in a county designated by EPA as attainment but with monitors registering exceedances of the ozone NAAQS on the basis that the source is located in a nonattainment area and is not in compliance with the NAAQS.

164. WEG has not identified any other jurisdiction in the United States that interprets the term "nonattainment area" in the manner advocated by WEG.

165. The testimony of witnesses for the Department and XTO established that WEG's interpretation of "nonattainment area" would be unworkable, and would result in serious disruption to the Department's permitting program and significant uncertainty for regulated entities seeking permits for new or modified facility, and would call into question the status of permits for existing sources.

166. There are no provisions in the AQCA or the Board's regulations under which the Department could consider multiple separate permit applications for different facilities in different locations and under different ownership in the aggregate with respect to potential emissions for purposes of determining emissions levels, "major" or "minor" source classifications, or impacts

on ozone concentrations.

167. Section 74-2-5.3 of the AQCA expressly provides for how the Board is required to address counties in the State that have monitors registering ozone levels close to or above the ozone NAAQS.

168. The OAI and the other programs the Department's witnesses discussed in their testimony are the proper mechanisms by which the Department and Board can address the exceedances of the NAAQS in Lea and Eddy Counties as required under the AQCA.

169. The Board finds that in total WEG has not met the requirement in 20.1.2.302 of proving by a preponderance of the evidence that the Department issued Registrations 8729, 8730, and 8733 under the GCP for Oil and Gas Facilities in violation of the AQCA or Board regulations. Accordingly, it is the Board's decision that the relief sought in WEG's petition as to the GCP Registrations be denied.

ORDER BASED ON FINDINGS AND CONCLUSIONS

Based on the foregoing findings and conclusions it is ORDERED that the requests for relief in the Petition for Hearing in EIB 20-21(A) and the Petition for Hearing in EIB 20-33(A) be DENIED.

STATEMENT AS TO AVAILABILITY OF JUDICIAL REVIEW

Judicial review of this Final Order shall be as provided by law. 20.1.2.404 NMAC. The filing of an appeal does not stay the Final Order, unless otherwise ordered by the board or a court. *Id.* Any person adversely affected by an administrative action taken by the environmental improvement board, the local board, the secretary or the director may appeal to the court of appeals. NMSA 1978 § 74-2-9. All appeals shall be upon the record made at the hearing and shall be taken to the court of appeals within thirty days following the date of the action. *Id.*

IT IS SO ORDERED.

John Volkerding, Board Chair
New Mexico Environmental
Improvement Board

Date

Certificate of Service

I hereby certify that on December 23, 2020 a copy of the Hearing Officer Recommended Decision was emailed to the persons listed below. A copy will be mailed first class upon request.

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