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**BY ELECTRONIC MAIL**

Melinda Owens  
New Mexico Environment Department  
Air Quality Bureau  
Permit Section  
525 Camino de los Marquez, Suite 1  
Santa Fe, NM 87505  
[melinda.owens@state.nm.us](mailto:melinda.owens@state.nm.us)

**Re: Notification of Interest, Request for Public Hearing, Proposed Clean Air Act Air Quality Permit, XTO Energy Inc., Wildcat Compressor Station, Permit No. 7474M2**

Dear Ms. Owens:

WildEarth Guardians, New Energy Economy, Sierra Club, and Western Environmental Law Center hereby notify the New Mexico Environment Department (“NMED”) of their interest in the air quality permit application submitted by XTO Energy for the company to modify the Wildcat Compressor Station in Eddy County, New Mexico. NMED has assigned the application file Permit No. 7474M2.

Pursuant to 20.2.72.206(B)(2) NMAC, we also request NMED hold a public hearing on the proposed permit. There is a significant interest in holding a public hearing given the impacts of the proposed permitting action to air quality and public health in southeast New Mexico. As we will explain further, air quality in Eddy County, as well as neighboring Lea County, is currently violating the 8-hour ozone National Ambient Air Quality Standard (“NAAQS”) and is in nonattainment. Permitting the proposed modification will contribute to this serious health problem and is not allowed under the New Mexico State Implementation Plan (“SIP”).

To this end, we are very concerned over NMED’s conclusion that modification of the Wildcat Compressor Station will comply with all applicable requirements under the federal Clean Air Act and New Mexico Air Quality Control Act. We are particularly concerned that

neither XTO nor NMED have demonstrated that air pollution from the proposed facility will protect the NAAQS.

The region where XTO’s facility will be modified is currently in violation of applicable NAAQS for ground-level ozone. Two monitoring sites in Eddy County—one in Carlsbad Caverns National Park and one in Carlsbad—and one monitoring site in neighboring Lea County—in Hobbs—all regularly record exceedances of the ozone NAAQS. Based on most recent monitoring data, the design value (i.e., three-year average of the fourth highest annual 8-hour ozone levels) is 0.079 parts per million (“ppm”) at the Carlsbad monitor, and 0.073 ppm at Carlsbad Caverns National Park, and 0.071 ppm at the Hobbs monitor. To protect public health, the 2015 ozone NAAQS limit concentrations to no more than 0.070 ppm over an eight-hour period. See 40 C.F.R. § 50.19.

This elevated ozone pollution is not anomalous. The tables below show that ozone levels in Eddy and Lea Counties have steadily worsened over the last several years, with 19 exceedances of the NAAQS reported in Carlsbad in 2019 and 8-hour ozone levels as high as 0.095 ppm recorded.<sup>1</sup> The design values at monitors in both Lea and Eddy Counties have steadily risen and now three monitors are in violation of the ozone NAAQS. This worsening of ozone pollution coincides with a massive increase in oil and gas production in the region, including the development of new and modified production and processing facilities.

**Carlsbad, NM 8-Hour Ozone Readings (in ppm), 2015-2019**

	<b>2015</b>	<b>2016</b>	<b>2017</b>	<b>2018</b>	<b>2019</b>
1 <sup>st</sup> Max.	0.069	0.065	0.082	0.096	0.095
2 <sup>nd</sup> Max.	0.068	0.064	0.078	0.095	0.092
3 <sup>rd</sup> Max.	0.067	0.064	0.077	0.091	0.084
4 <sup>th</sup> Max.	0.067	0.063	0.076	0.083	0.080
Number of Days Above NAAQS	0	0	10	18	19

**Carlsbad Caverns National Park 8-Hour Ozone Readings, 2015-2019**

	<b>2015</b>	<b>2016</b>	<b>2017</b>	<b>2018</b>	<b>2019</b>
1 <sup>st</sup> Max.	0.068	0.070	0.069	0.099	0.082
2 <sup>nd</sup> Max.	0.068	0.069	0.065	0.081	0.080
3 <sup>rd</sup> Max.	0.065	0.069	0.065	0.080	0.078
4 <sup>th</sup> Max.	0.065	0.069	0.065	0.080	0.074
Number of Days Above NAAQS	0	0	0	10	6

<sup>1</sup> Ozone monitoring data from the U.S. Environmental Protection Agency’s AirData website, <https://www.epa.gov/outdoor-air-quality-data/monitor-values-report>.

**Hobbs, NM 8-Hour Ozone Readings (in ppm), 2015-2019**

	2015	2016	2017	2018	2019
1 <sup>st</sup> Max.	0.070	0.069	0.080	0.083	0.082
2 <sup>nd</sup> Max.	0.069	0.066	0.074	0.078	0.075
3 <sup>rd</sup> Max.	0.069	0.065	0.072	0.077	0.073
4 <sup>th</sup> Max.	0.067	0.065	0.069	0.076	0.070
Number of Days Above NAAQS	0	0	3	6	3

A violation of the 8-hour ozone NAAQS is triggered when the three-year average of the annual fourth highest daily reading exceeds the NAAQS. See 40 C.F.R. § 50.19(b). This three-year average value is commonly referred to as the “design value.” Based on this monitoring data, all three ozone monitors are in violation of the NAAQS, with the design value at the Carlsbad monitor even violating the ozone NAAQS adopted in 2008, which limited 8-hour concentrations to no more than 0.075 parts per million. This means these monitors are currently in nonattainment.<sup>2</sup> The table below shows that the design values at the Lea and Eddy County monitors have increased over the last five years and that currently, all three monitors are violating the ozone NAAQS.

**8-Hour Ozone Design Values for Lea and Eddy County, New Mexico Monitoring Sites**

Monitor	Monitor ID	2015-2017 Design Value	2016-2018 Design Value	2017-2019 Design Value
Hobbs	350250008	0.067	0.070	0.071
Carlsbad	350151005	0.068	0.074	0.079
Carlsbad Caverns	350150010	0.066	0.071	0.073

So far in 2020, ozone levels continue to rise, indicating there remains a serious air quality problem in Eddy and Lea Counties. Not only have ozone exceedances been recorded in 2020, but the 2018-2020 design value is certain to violate the NAAQS yet again at the Carlsbad monitor. As the table below shows, the Carlsbad monitor has recorded numerous high 8-hour ozone concentrations so far in 2020. **Based on the three-year average of the fourth highest annual 8-hour ozone readings the Carlsbad monitor currently has a 2018-2020 design value of 0.075 parts per million, meaning it remains in nonattainment.** In other words, the air pollution problem in southeast New Mexico persists.

<sup>2</sup> Although the region of Eddy and Lea Counties is not designated “nonattainment,” the U.S. Environmental Protection Agency (“EPA”) has been clear that in reference to air quality, a monitor in violation of the NAAQS is considered to be in nonattainment, explaining that in the context of developing and implementing SIPs under Section 110 of the Clean Air Act, “‘nonattainment’ refers to air quality, not designation status.” 63 Fed. Reg. 57,356, 57,372 (October 27, 1998).

### Carlsbad, NM 8-Hour High Ozone Readings (in ppm) so Far in 2020<sup>3</sup>

	Date	8-hour Ozone Concentration
1 <sup>st</sup> Max.	June 24	0.075
2 <sup>nd</sup> Max.	July 8	0.067
3 <sup>rd</sup> Max.	July 6	0.066
4 <sup>th</sup> Max.	June 25	0.064

In light of ozone levels in both Eddy and Lea Counties, there is no possible way for XTO or NMED to conclude that modification of the Wildcat Compressor Station would not cause or contribute to violations of the ozone NAAQS. The public notice for the proposed permit indicates that nitrogen oxides (“NOx”) and volatile organic compounds (“VOCs”)—both gases that react with sunlight to form ozone—will increase as a result of permit issuance. These increases will occur as a result of various modifications, including increased throughputs, installation of new pollutant emitting equipment, and other updates. According to the public notice, after the modifications, total NOx emissions are projected to be 200.9 tons per year and VOCs will be 247.7 tons per year.

Studies have, in fact, confirmed that oil and gas production activities contribute to ozone levels at monitors in southeast New Mexico. In a study of ozone in southern New Mexico, modeling confirmed that oil and gas sources of emissions were by far the biggest contributor to ozone at the Carlsbad monitor. In the *Southern New Mexico Ozone Study Technical Support Document* prepared in 2016, researchers reported, “Oil and gas sources make the largest contribution at the Carlsbad monitor, which is the monitor located closest to the Permian Basin.”<sup>4</sup> The report further found that “the impact of oil and gas sources increases in 2025 due to projected growth in Permian Basin emissions.”<sup>5</sup>

The graphs below, which are excerpted from that report, illustrate the contribution from oil and gas at Carlsbad. Assessing a 2011 base year design value, which was prior to the region experiencing the current level of oil and gas development and experiencing elevated ozone, oil and gas contributed 2 parts per billion (or 0.002 ppm). For that same year’s design value, on-road mobile sources, or cars and trucks, contributed only a little more than 0.5 parts per billion at Carlsbad. The report found that even at other monitoring sites in southern New Mexico, including the Solano ozone monitor in Las Cruces, other emission sectors, such as non-

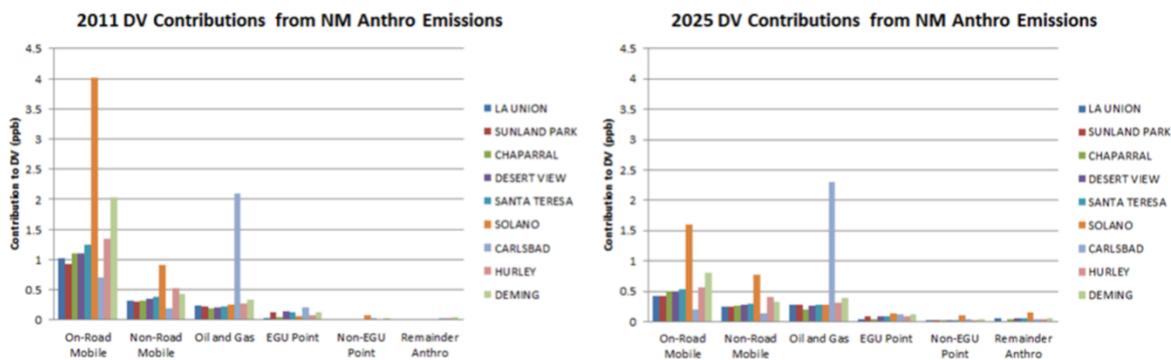
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<sup>3</sup> Ozone concentration data for 2020 was obtained from EPA’s AirNow.gov archives, <https://gispub.epa.gov/airnow/>.

<sup>4</sup> Kemball-Cook, S., J. Johnson, A. Wentland, Z. Liu, R. Morris, and Z. Adelman, *Southern New Mexico Ozone Study Technical Support Document* (Oct. 19, 2016) at 70, available at [https://www.wrapair2.org/pdf/SNMOS\\_TechnicalSupportDocument\\_19Oct2016.pdf](https://www.wrapair2.org/pdf/SNMOS_TechnicalSupportDocument_19Oct2016.pdf).

<sup>5</sup> *Id.* at 81.

road mobile sources, electric generating units, and other stationary sources, contribute far less to ozone concentrations.<sup>6</sup>



It is critical to point out that the purpose of the *Southern New Mexico Ozone Study* was to determine sources of high ozone at monitoring sites in Doña Ana County and was not a rigorous analysis of ozone at monitoring sites in Eddy or Lea Counties. Still, even the report’s limited assessment of ozone at Carlsbad revealed the industry’s heavy contribution. Given that the emissions inventory used at the time is now considerably outdated and does not reflect current levels of oil and gas production activity in Eddy and Lea Counties, it is extremely likely that the contribution of oil and gas to high ozone in the region is presently much, much higher.

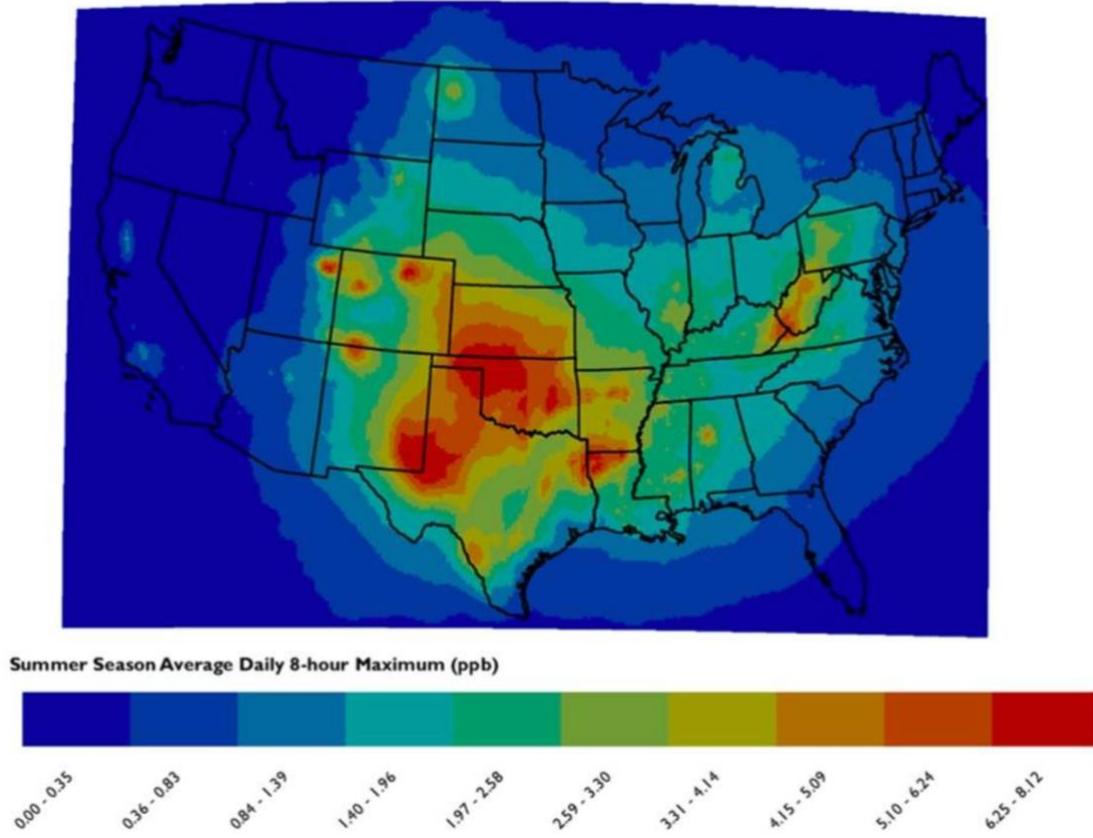
Indeed, in a 2018 article published in *Environmental Science and Technology*, researchers reported on the impact of oil and gas emissions in the U.S. on ozone concentrations nationwide and disclosed much a more significant contribution.<sup>7</sup> The modeling data revealed the summer season daily average contribution of oil and gas to 8-hour ozone concentrations to be higher than six parts per billion for the Eddy and Lea County region. The image below from that article confirms that emissions from oil and gas production have a major impact on southeast New Mexico.

<sup>6</sup> These charts also confirm that oil and gas emissions contribute to high ozone at the Chaparral, Desert View, and Santa Teresa monitors, all of which are also currently in violation of the ozone NAAQS.

<sup>7</sup> Fann, Neal et al. “Assessing Human Health PM<sub>2.5</sub> and Ozone Impacts from U.S. Oil and Natural Gas Sector Emissions in 2025.” *Environmental science & technology* vol. 52,15 (2018): 8095-8103.

doi:10.1021/acs.est.8b02050, available online at <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6718951/>.

## Summer Season Average Daily 8-Hour Maximum Ozone

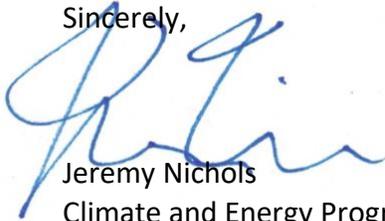


More air pollution from oil and gas production activities in Eddy and Lea Counties will contribute to ozone levels at monitors that are currently violating the NAAQS. Therefore, it is clear that approval of the proposed modification would lead to emissions that would contribute to violations of the ozone NAAQS in the region. Accordingly, NMED must deny the permit in accordance with 20.2.72.208(D) NMAC.<sup>8</sup>

<sup>8</sup> Additionally, NMED must also ensure that emissions from the Wildcat Compressor Station do not cause or contribute to ozone NAAQS violations at other monitors currently violating both within and outside of New Mexico. Other nearby monitors currently in violation of the NAAQS include the Foothills monitor in Bernalillo County, New Mexico (site id 35-001-1012), the Chaparral, Desert View, and Santa Theresa monitors in Doña Ana County, and monitors in and around neighboring El Paso, Texas, including the UTEP, Chamizal, and Skyline Park monitors.

Thank you for the opportunity to provide these initial comments. We look forward to further reviewing the permit application, any proposed permit, and NMED's analysis. We also look forward to participating in a public hearing before the Department. We intend to provide more detailed comments after an opportunity for further review.

Sincerely,



Jeremy Nichols  
Climate and Energy Program Director  
WildEarth Guardians  
(303) 437-7663  
[jnichols@wildearthguardians.org](mailto:jnichols@wildearthguardians.org)

Mariel Nanasi  
Executive Director  
New Energy Economy  
(505) 469-4060  
[mariel@seedsbeneaththesnow.com](mailto:mariel@seedsbeneaththesnow.com)

Camila Feibelman  
Director  
Sierra Club: Rio Grande Chapter  
(505) 715-8388  
[Camilla.feibelman@sierraclub.org](mailto:Camilla.feibelman@sierraclub.org)

Erik Schlenker-Goodrich  
Executive Director  
Western Environmental Law Center  
(575) 613-4197  
[eriksg@westernlaw.org](mailto:eriksg@westernlaw.org)