



**DRAFT MEMORANDUM**

**TO:** Elizabeth Kuehn, NMED AQB  
**FROM:** Mike Pring, Eastern Research Group, Inc. (ERG)  
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**DATE:** June 4, 2021  
**SUBJECT:** Emissions Inventory Reductions

The purpose of this memorandum is to document the emission reductions estimated to result from the requirements of the draft Ozone Precursor Rule for Oil and Natural Gas Sector under consideration by the New Mexico Environment Department (NMED).<sup>1</sup> This analysis was prepared for NMED by ERG under Professional Services Contract number 2066740400006.

Tables 1 and 2 show the estimated emission reductions as a result of the draft rule for NOx and VOC, respectively.

**Table 1. Estimated NOx Emission Reductions**

Source Type	Rule Section	Pre-Rule NOx (tons/year)	Post-Rule NOx (tons/year)	NOx Reduction (tons/year)	NOx Reduction (%)
Engines and Turbines	113	82,011	64,512	17,500	21.3%
Compressor Seals	114	22	22	-	-
Equipment Leaks	116	958	958	-	-
Gas Well Liquids Unloading	117	-	-	-	-
Glycol Dehydrators	118	10,699	10,699	-	-
Heaters	119	3,182	2,674	508	16.0%
Hydrocarbon Liquids Transfers	120	3	3	-	-
Pig Launching and Receiving	121	-	-	-	-
Pneumatic Controllers and Pumps	122	1.5	1.5	-	-
Storage Tanks	123	886	886	-	-
<b>Total</b>		<b>97,763</b>	<b>79,755</b>	<b>18,008</b>	<b>18.4%</b>

<sup>1</sup> Stakeholder Review Draft: 20.2.50 NMAC Oil and Gas Sector-Ozone Precursor Pollutants, accessed online at <https://www.env.nm.gov/air-quality/wp-content/uploads/sites/2/2021/03/Proposed-Part-20.2.50-May-6-2021-Version.pdf>

**Table 2. Estimated VOC Emission Reductions**

Source Type	Rule Section	Pre-Rule VOC (tons/year)	Post-Rule VOC (tons/year)	VOC Reduction (tons/year)	VOC Reduction (%)
Engines and Turbines	113	32,061	29,886	2,175	6.8%
Compressor Seals	114	13	6	6	51.3%
Equipment Leaks	116	26,025	6,475	19,550	75.1%
Gas Well Liquids Unloading	117	13,020	6,510	6,510	50.0%
Glycol Dehydrators	118	15,337	8,778	6,559	42.8%
Heaters	119	619	619	-	-
Hydrocarbon Liquids Transfers	120	11,681	1,542	10,139	86.8%
Pig Launching and Receiving	121	0.2	0.2	-	-
Pneumatic Controllers and Pumps	122	49,659	4,678	44,981	90.6%
Storage Tanks	123	54,424	31,429	22,995	42.3%
<b>Total</b>		<b>202,839</b>	<b>89,924</b>	<b>112,915</b>	<b>55.7%</b>

ERG estimated emission reductions based on a 2028 projected emissions inventory prepared by the Western Regional Air Partnership (WRAP).<sup>2</sup> The following emissions inventory files provided by WRAP were used in this analysis and served as the “pre-rule” inventory:

- NMED\_OG\_2028\_NONPOINT\_13Jan2021.xlsx
- NMED\_OG\_2028\_POINT\_13Jan2021.xlsx

These files contain emission estimates for nonpoint (area) and point sources, respectively, projected for the future year 2028. The pre-rule inventory accounts for expected reductions from other state and federal rules already in place, but does not consider the reductions expected as a result of the proposed NMED rule. Emission records contained in the inventory include information such as county, SCC, and pollutant (for nonpoint records) and facility name, SCC, county, and pollutant (for point source records).

Using available information on existing requirements (e.g. allowable permit limits or New Source Performance Standards requirements), existing control device data, and the proposed rule requirements, ERG estimated the percent reduction for each pollutant and SCC combination that would result from promulgation of the proposed rule.

For example, storage tank VOC emissions characterized in the nonpoint inventory under SCC 2310010200 (Oil Well Tanks - Flashing & Standing/Working/Breathing) would be reduced under the requirements in Section 123 of the draft rule, which requires storage tanks with VOC emissions between 2 and 10 tons per year to reduce emissions by 95%. Considering the

<sup>2</sup> Revised Final Report: 2028 Future Year Oil and Gas Emission Inventory for WESTAR-WRAP States - Scenario #1: Continuation of Historical Trends. Prepared by Ramboll US Corporation, March 2020.

fraction of tanks already controlled as well as the proposed rule requirements, ERG estimated that VOC emissions from storage tanks in the counties affected by the rule would be reduced by an additional 53.1% as a result of the proposed rule requirements.

Attachment A shows the pre and post-rule VOC and NO<sub>x</sub> emissions as well as total emission reduction estimates for nonpoint and point sources by SCC (“Nonpoint Reductions” and “Point Reductions” tabs), and by rule section (“Reduction Summaries” tab).

Attachments B and C show the estimated emission reductions for nonpoint and point sources, respectively, based on the estimated percent reductions calculated for each SCC and the pre-rule inventory files.