

**STATE OF NEW MEXICO
ENVIRONMENTAL IMPROVEMENT BOARD**

IN THE MATTER OF PROPOSED NEW REGULATION,
20.2.50 NMAC – O&G Sector – Ozone Precursor Pollutants

No. EIB 21-27 (R)

REBUTTAL TESTIMONY OF CINDY HOLLENBERG

I. INTRODUCTION

Q. Please state your name.

A. My name is Cindy Hollenberg.

Q. By whom are you employed and in what position?

I am the Enforcement Manager of the Compliance and Enforcement Section of the New Mexico Environment Department's ("Department" or "NMED") Air Quality Bureau ("Bureau").

Q. For whom are you presenting this rebuttal testimony and what topics will you cover?

A. I am presenting this written rebuttal testimony on behalf of the Department in this proceeding in response to technical testimony by NMOGA and IPANM regarding the Department's proposed new air quality regulations at 20.2.50 NMAC ("Part 50"). In the direct testimony filed on July 28, 2021, industry witnesses repeatedly pointed out that the photochemical modeling performed by Ramboll and described in Ralph Morris's testimony at NMED Exhibit 106 shows relatively small reductions in ozone concentrations from implementation of Part 50. *See* NMOGA NOI Appendix 4A, Direct Testimony of Dennis McNally; IPANM Exhibit 6, Direct Testimony of Doug N. Blewitt. While NMED believes the reductions shown by Ramboll's modeling are meaningful, it is also important to note that the modeling assumed that all the subject sources have been in full compliance with existing permit

limits and federal regulations. My testimony will demonstrate that in fact there has been significant non-compliance across the oil and gas (“O&G”) industry in recent years, and that the provisions of Part 50 will help ensure greater levels of compliance, and therefore greater impacts on ozone concentrations in New Mexico. Specifically, my testimony will discuss the following: the Bureau’s compliance and enforcement resources with respect to the O&G industry in New Mexico; enforcement actions relating to the O&G industry in recent years; and the importance of the proposed rule provisions in helping to ensure better compliance given the Department’s limited resources.

Q. Please describe your work and educational background.

A. I have been an employee of the Department and the Air Quality Bureau for 8 years. I started with the Bureau in Control Strategies Unit of the Planning and Policy Section. After more than 5 years in the Planning Section, I moved to the Compliance and Enforcement Section as Inspections Manager. In June 2021, I started in my current position as Enforcement Manager. I hold a B.S. from Purdue University in Biology Teaching, an M.A. from the University of Notre Dame and an M.P.A. from Columbia University in Environmental Science and Policy.

My full background and qualifications are set forth in my resume, which is marked as NMED Rebuttal Exhibit 15.

II. CAPACITY AND RESOURCE CONSTRAINTS

Q. What are the Bureau’s capacity and resource constraints with respect to compliance and enforcement?

A. The Bureau’s Compliance and Enforcement Section, when fully staffed, has seven (7) inspections specialists, six (6) compliance reports specialists, and five (5) enforcement specialists. For these eighteen (18) staff, the Section has three (3) unit managers and one (1) unit

1 supervisor. Overseeing the entire Section is the Section Chief, also known as the Section
2 Manager.

3 The Section's current staffing level, however, is much lower. Currently, the Section has 3
4 inspections specialists, 3 compliance reports specialists, and 3 enforcement specialists. In
5 addition, the Inspections Manager position is currently vacant. Therefore, we have a total of 6
6 staff-level compliance specialists to complete all required inspections and report reviews for the
7 entire State, and 3 staff-level specialists to develop and complete enforcement cases for potential
8 violations found by the compliance staff. Management is currently at eighty percent (80%) of
9 full capacity. A total of thirteen (13) full-time employees are tasked with accomplishing all
10 compliance and enforcement work for the State.

11 One experienced inspector may complete a full compliance evaluation in 2 to 5 weeks,
12 depending on the complexity of the facility. A seasoned inspector is expected to complete 15 to
13 25 inspections each year, depending on the complexity of facilities assigned. One experienced
14 compliance reports specialist may complete all required report reviews for a given facility in 3 -
15 5 days. An experienced specialist is expected to complete 78 - 120 different report reviews each
16 year.

17 III. REGULATED FACILITIES

18 **Q. How many regulated facilities exist in the State of New Mexico for which the Section**
19 **attempts to assure compliance?**

20 **A.** Regulated facilities are located throughout the State of New Mexico. Under the Air
21 Quality Control Act, the Department has jurisdiction over all sources in the state with respect to
22 the National Ambient Air Quality Standards, except for sources in Bernalillo County and on
23 tribal lands. The Bureau is responsible for assuring compliance at all facilities within our

jurisdiction – whether through scheduled inspections and report reviews or through investigations related to public complaints. Facilities emitting an air contaminant for which there is a National or New Mexico Ambient Air Quality Standard at a level of ten (10) pounds per hour or twenty five (25) tons per year, or emit five (5) tons per year or more of lead are required to apply for and obtain an air quality permit prior to construction. Facilities that emit at various levels for various toxic air pollutants are also required to apply for and obtain an air quality permit prior to construction.

Permitted facilities are grouped into 3 main categories:

1. **Major – Title V** facilities are those that emit above one hundred (100) tons per year of most criteria pollutants. A facility may also be considered a major source of hazardous air pollutants, independent of the amount of criteria pollutants emitted, if they emit 25 tons per year of total hazardous air pollutants or 10 tons per year of a single hazardous air pollutant. Title V facilities that emit more than 250,000 tons per year of volatile organic compounds must also obtain a Prevention of Significant Deterioration (PSD) permit.
2. **Synthetic Minor** facilities are those that have agreed to enforceable conditions in permits which keep the facility below the Title V thresholds. Without these conditions, the facilities would be considered Title V (or Major) facilities. Many facilities classified as Synthetic Minor obtain general construction permits.
3. **Minor** facilities are those that emit above the levels requiring a construction permit, but have less than 100 tons per year potential to emit regulated contaminants (or less than 25 tons per year of hazardous air pollutants).

The U.S. Environmental Protection Agency (“EPA”) requires the Bureau to conduct full compliance evaluations for each Major source every two years, except for those that are

1 considered “Mega-sources” for which partial compliance evaluations must be completed each
2 year. In addition, EPA requires the Bureau to complete full compliance evaluations every five (5)
3 years of Synthetic Minor sources that emit at 80% of Title V thresholds (“SM-80”), or in general,
4 80 tons per year of most criteria pollutants. Each year, the Bureau submits a Compliance
5 Monitoring Strategy (“CMS”) to EPA which sets a schedule to accomplish the required
6 inspections. The Bureau CMS plan for federal fiscal year 2021, approved by EPA, included 4
7 Mega-facilities, sixty-two (62) Major – Title V sources and sixty-four (64) SM-80 facilities. To
8 accomplish this, the Bureau would need 350 – 400 inspections staff weeks, or 7-8 full-time
9 inspectors at a minimum to fully address only its CMS obligations. The last time the Inspections
10 team was fully staffed was in 2019. Full staffing lasted two weeks. Since that time the team has
11 averaged 3.5 to 4 full time employees.

12 EPA also requires the Bureau to review all submitted Title V facilities’ annual
13 compliance certifications and semi-annual reports. That amounts to nearly 190 Title V
14 compliance reports. In addition, compliance reports specialists are expected to review
15 approximately 1,000 regulatory reports, 1,800 stack test reports and 300 other reports. To
16 accomplish this, the Bureau would need 40,000 person hours, or 15 – 20 full-time compliance
17 reports specialists at a minimum to fully address only its CMS obligations. Staffing on the
18 Reports team has averaged 4 full time employees over the last two years.

19 A search of the Department’s TEMPO database revealed a total of 3,188 facilities with
20 active permits. Of these, 187 are Major sources, 1,648 facilities are synthetic minor sources, and
21 1,349 facilities are minor sources. Of the 187 Major sources, 123 (66%) are O&G-related
22 facilities. Of the 1,648 synthetic minor sources, 941 (57%) are O&G-related facilities. Of the
23 1,349 minor sources, 913 (68%) are O&G-related facilities.

1 The vast majority of O&G-related facilities, however, are not permitted. Some have
2 submitted notices of intent (“NOI”) to construct; some have requested and received a
3 determination of No Permit Required (“NPR”); and others have not submitted any type of
4 application. The Bureau has no knowledge of the actual numbers for the latter group of facilities.
5 As of August 13, 2021, the Bureau’s database shows 4,126 active NOI facilities, of which 3,735
6 (91%) are O&G-related, and 616 NPR facilities, of which 388 (63%) are O&G-related. Each
7 year since 2017, the Bureau processes 475 NOI applications on average, not including the partial
8 year of 2021. As of August 3, 2021, the Bureau has processed 425 NOI applications for 2021.
9 These NOI facilities are included in the above statistics.

10 Although the Bureau is not required to inspect some Synthetic Minor sources, or any
11 Minor, NOI or NPR sources, responses to public complaints may involve previously uninspected
12 sources. The information that will be provided under the proposed recordkeeping provisions of
13 Part 50 is necessary to determine whether facilities are in compliance with their permits and state
14 and federal regulations, and whether they have been constructed and are operating in
15 accordance with their NOI registrations and NPR applications. Gathering this information
16 ourselves could require hundreds of full-time employees working for the Bureau’s Inspections
17 team. This is not reasonable.

18 **IV. OTHER COMPLIANCE AND ENFORCEMENT RESPONSIBILITIES**

19 **Q. Are there other compliance and enforcement activities for O&G facilities for which**
20 **the Bureau takes responsibility?**

21 **A.** Yes. The Bureau has worked cooperatively with EPA for several years. For example, we
22 conducted joint inspections in 2019 – 2020 of facilities that were not included on those years’
23 CMS plans. During these inspections, EPA and the Bureau discovered widespread, systemic

1 violations of federal New Source Performance Standards, state regulations and permit conditions
2 at some companies' facilities. The Bureau continues to collaborate with EPA and the U.S.
3 Department of Justice ("DOJ") on enforcement cases related to these inspections. The Bureau is
4 also working with EPA and DOJ on violations related to a joint inspection of a New Mexico
5 refinery and noncompliance with a 2002 consent decree.

6 In addition, NMED worked with EPA on flyover surveillance of O&G facilities in the
7 Permian Basin in 2019, and in both the Permian and San Juan Basins in 2020. EPA's 2019
8 flyover captured FLIR video of 113 instances of equipment leaks, improperly operating flares
9 and unlit flares at O&G facilities. In 2020, that number increased to 369. In 2020, 264 different
10 companies were involved in the 369 potential violations.

11 As stated previously, the Bureau also responds to public complaints. One series of public
12 complaints regarding the O&G industry involved a company that chose to flare continuously in
13 violation of their permit conditions. This prompted an on-site investigation of 5 facilities that
14 were the subject of the complaints. The investigation revealed that the facilities had not been
15 constructed according to the GCP registrations and a review of records subsequently revealed
16 other serious violations of state and federal regulations. The Bureau is currently developing an
17 enforcement case for these potential violations.

18 Another series of complaints similarly prompted an on-site investigation of fifteen (15)
19 O&G facilities in the Carlsbad area. The investigation yielded potential violations for 2
20 companies.

21 Further, the Bureau receives notices of videos published on YouTube through the
22 Electronic Notification Tracking System ("ENTS") of leaking equipment at O&G facilities. The
23 Bureau makes every effort to follow up completely with these notices by sending a substantial

1 information request to each company to determine whether the submitted evidence indicates as a
2 potential violation. Since 2016, the Bureau has received 205 unique submissions: 4 in 2016; 0 in
3 2017; 34 in 2018; 55 in 2019; 30 in 2020; and 82 so far in 2021. Due to our CMS obligations to
4 EPA, the Bureau has not been able to follow up on all of these submissions. However, in federal
5 fiscal year 2020, EPA approved an alternative CMS plan for the Department which included
6 inspections of some O&G facilities for which we received video notifications and other
7 complaints.

8 **V. ENFORCEMENT**

9 **Q. Can you describe the enforcement cases involving O&G facilities that the Bureau**
10 **has pursued in recent years?**

11 **A.** Yes. Since 2016, the Bureau has settled a total of sixty-four (64) enforcement cases for
12 which notices of violations were issued in response to inspections, report reviews or complaint-
13 related investigations. Of these, 51 were related to O&G facilities. Additional enforcement cases
14 are in the final states of settlement for 12 O&G facilities. Of the forty (40) active cases assigned
15 to Enforcement staff, twenty-two (22) are O&G-related, with several involving multiple
16 facilities. An additional eleven (11) cases, including 5 O&G-related cases, will be added to staff
17 assignment lists by mid-September.

18 Many enforcement cases, especially those prior to 2020, involve excess emissions, which
19 are required to be self-reported to the Bureau through the Air Quality Bureau Compliance
20 Reporting tool ("AQBCR"). Excess emissions are emissions that exceed permit limits and are
21 therefore not accounted for in air dispersion modeling that demonstrates compliance with
22 NAAQS for each permitted facility and are not included in the Ramboll modeling for purposes
23 of this rule. Figure 1 below shows a yearly summary of excess emissions reported to NMED by

O&G facilities beginning January 1, 2017 through December 31, 2020. The amounts shown under each pollutant refer to the total excess pounds of pollutant by O&G facilities and the percentage of all excess emissions due to O&G facilities.

The Bureau does not have information on excess emissions from non-permitted and non-inspected facilities, and instead relies on self-reporting through the AQBCR. Only permitted facilities have emissions limits, and thus are the only facilities required to report their excess emissions. It is possible that small O&G operations exist that are below permit thresholds under normal operations but exceed permit thresholds during upset conditions. Experience with inspecting NOI facilities in 2019 and 2020, including EPA’s flyover data, suggests that actual emissions from O&G facilities are significantly higher than AQBCR data reveal.

Figure 1 – Summary of NM O&G Excess Emissions 2017-2010

Year	Pounds of Excess emissions by pollutant due to Oil & Gas facilities				
	NOx	CO	VOC	SO ₂	H ₂ S
2017	160,263	619,241	442,745	2,836,459	87,115
	99.79%	99.98%	100%	100%	100%
2018	122,379	438,282	2,002,341	3,065,615	34,862
	99.88%	99.01%	100%	100%	100%
2019	370,663	1,293,387	3,582,571	6,127,434	52,223
	99.76%	99.95%	100%	100%	100%
2020	652,912	3,162,421	4,522,942	7,343,531	72,828
	99.76%	99.95%	100%	100%	100%

As can be seen from the above figure, nearly all excess emissions reported to the Bureau involve O&G facilities. In addition, excess emissions from O&G facilities have grown significantly since 2017, at least partially due to the increase in the number of O&G facilities operating in New Mexico. Comparing 2017 – 2020: NOx increased 407%; CO increased 511%; VOC increased 1,022%; and SO₂ increased 259%. H₂S decreased 19%.

1 It is critical for the Board to take note of the more than 4.5 million pounds per year of
2 reported VOC emissions in excess of permit limits in 2020. 4.5 million tons is equivalent to 22
3 additional major Title V sources that would require permitting (over 100 tons per year) based on
4 VOC emissions alone. The excess VOC emissions in 2020 are equivalent to 22 individual major
5 sources that were not modeled to determine compliance with the NAAQS and were not included
6 in the Ramboll modeling because Ramboll assumed that all sources are in compliance with
7 existing permit limits. And these numbers only account for self-reported excess emissions from
8 permitted sources; flyover information suggests that excess emissions are far more widespread
9 across the major O&G producing basins in New Mexico.

10 VI. CONCLUSION

11 **Q. What conclusions can you draw from the information you have provided?**

12 **A.** O&G facilities are the majority of the Bureau's permitted and NOI-registered facilities.
13 O&G facilities also represent a significant challenge to the Bureau regarding reported excess
14 emissions. Reliance on self-reporting is integral to the Bureau's compliance and enforcement
15 strategy. While not ideal, it is preferable to no reporting at all. Until the Bureau has adequate
16 staff to inspect not only those facilities for which inspections are required by EPA, but also those
17 that are not the focus of yearly CMS plans, we will continue to rely on self-reporting. The
18 proposed rule is a major step in the direction of gaining access to adequate information from
19 O&G facilities so that the Bureau's Compliance and Enforcement Section can fulfill its goal of
20 assuring compliance by affected facilities.

21 Ramboll's modeling assumed that O&G facilities will be in compliance with permitted
22 emission limits. If the recent past is any indication, it is very likely that O&G facilities will
23 exceed permit emission limits in the years to come, especially without more robust oversight,

1 such as that provided by the proposed requirements of Part 50. Because emissions from these
2 facilities will be greater than assumed by Ramboll's conservative modeling, the emission
3 reductions and ozone benefits from Part 50 are likely underestimated.

Education

Columbia University, New York, New York
MPA, Environmental Science and Policy (2012)

University of Notre Dame, South Bend, Indiana
MA, International Peace Studies (1995)

Purdue University, Fort Wayne, Indiana
BS, Biology Teaching (1987)

Experience

New Mexico Environment Department, Air Quality Bureau, Planning Section
June 2021 – present, Enforcement Manager

Responsible for overseeing all responses to discovered compliance issues from inspections, report reviews and complaint investigations, including determination of appropriate enforcement actions, building defensible cases for alleged violations and drafting legal documents leading to settlement or compliance orders.

2019 – 2021, Inspections Manager

Responsible for overseeing all air quality-related inspections and investigations in the State, including preparation, logistical problem-solving, post-inspection notifications of violations and report drafting. Managed staff rotation for public complaints and assured timely responses. Helped develop plans for inspecting facilities per EPA obligations.

2013 – 2019, Environmental Analyst, Control Strategies

Analysis of proposed rule changes, preparation of reports to the US EPA, data visualization and mapping using GIS, assisting with affirmative defense reviews for excess emissions, and environmental impact reviews.

EnviroLogic, Inc.
2012 – 2013, Research Associate

Collected data from various agencies and organizations for hydrologic modeling, as well as prepared data for inclusion in GIS applications. Contributed to reports for international clients regarding nuclear safety case issues (using WIPP as a case study) and completed modeling parameter analysis for testimony preparation.

Mountainair Public Schools
2004 – 2011, Educator and Program Coordinator

Developed and implemented curricula for 10 high school and middle school science laboratory classes, 3 levels of Spanish, and Communications and managed the high school Chemistry / Physics lab. Coordination responsibilities included the high school Student Assistance Team and the Anti-Bullying Program, which I helped develop for the school system.

Fort Wayne Community Schools, South Side High School

2001 – 2004, Educator and Program Coordinator

Developed and implemented curricula for 4 levels of Chemistry, taught department-developed curricula for Biology and Earth Science and managed the Chemistry lab. I also co-coordinated the International Baccalaureate Program for the school.

Previous experience included a short-term teaching assignment (Biology, Chemistry, Physics), President of my own start-up company, and significant pro bono work for several non-profit organizations.