

**STATE OF NEW MEXICO
BEFORE THE ENVIRONMENTAL IMPROVEMENT BOARD**

IN THE MATTER OF:

PROPOSED NEW REGULATION

20.2.50 Oil and Gas Sector — Ozone Precursor Pollutants

No. EIB 21-27(R)

**PRE-FILED TECHNICAL TESTIMONY OF MR. RANDY BARTLEY,
A WITNESS ON BEHALF OF THE GAS COMPRESSOR ASSOCIATION**

I. Introduction to My Testimony

My name is Randy Bartley. I am testifying as a technical witness on behalf of The Gas Compressor Association (The GCA) in this proceeding. My testimony supports The GCA's proposed amendments to the New Mexico Environment Department's (Department) proposed regulation set out as 20.2.50.113.C(3) NMAC in the Department's proposed rule, 20.2.50 NMAC (Proposed Rule). The GCA's proposed amendments to the 20.2.50.113.C(3) NMAC are set forth in redline in GCA Exhibit 6.

This testimony begins with an overview of my credentials. I will then go on to discuss the Department's proposed emissions testing methodology, as set forth in the Department's Proposed Rule at 20.2.50.113.C(3) NMAC. I will then provide an overview of The GCA's concerns with this proposed provision and describe the GCA's proposal to amend the regulation to allow the result of the carbon monoxide (CO) emissions testing to be used to demonstrate compliance with the emissions standards for non-methane non-ethane hydrocarbons (NMNEHC). As set forth fully herein, The GCA's proposed amendments to 20.2.50.113.C(3) NMAC provide clarity to the Department's Proposed Rule and will ensure that the requirements set forth therein are achievable based on available technology.

II. Statement of My Qualifications and Relevant Experience

My resume is attached as GCA Exhibit 26. I received a Bachelor of Business Administration from the University of Oklahoma in energy management with a minor in finance in December of 2003. I have been working in the oil and gas industry for the past twenty-six years. I have over twenty years of experience related to emissions testing natural gas compressor engines.

My current title is Chief Executive Officer at B.enviroSAFE, LLC d/b/a BAIR. My current responsibilities include directing all business activities related to all industries in which BAIR operates, including oil and gas sectors, managing the operations of the company and the resources needed to meet BAIR's demand, and ensuring that BAIR's business functions focus on safety, efficiency, and regulatory compliance. As CEO of BAIR, I also oversee BAIR's accreditation with the Louisiana Environmental Laboratory Accreditation Program (LELAP), which involves bi-annual assessments on BAIR's adherence to internal Standard Operating Procedures (SOPs) and alignment to federal and state regulations and test methods via routine audits and management reviews. I have also been a member of the Source Evaluation Society (SES), since 2012. I currently serve on the ASTM D6348 re-write committee, which involves reviewing current data quality objectives set forth in current and past versions of the method while taking into consideration common industry issues in complying with the method as well as advances in technology that would allow for simplification or removal of method objectives. As set forth fully in my resume, in my twenty-six years of experience in the oil and gas industry, I have presented many times at industry related conferences and webinars regarding oil and gas related regulations, test methods and technologies available to meet the regulatory data quality objectives.

BAIR is an environmental consulting and emissions testing company. Through training and experience, I have become familiar with the emissions standards that apply to sources in the

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1 oil and gas industry, including engines, as well as the emissions testing requirements for those
2 sources. BAIR conducts formal EPA reference method stack tests for the types of engines that are
3 subject to the Proposed Rule. BAIR also conducts emissions testing for those engines using the
4 type of portable analyzers that are identified in the Proposed Rule's emissions testing
5 requirements. I am familiar with and have conducted emissions tests using both portable analyzers
6 and traditional stack testing equipment for engines and other sources.

7 My experience with emissions testing and the two different test methods identified in the
8 Proposed Rule gives me an understanding of the relative advantages and disadvantages of the
9 different methods, including the differences in cost and convenience. More importantly, however,
10 my experience is that both EPA reference method testing and testing with a portable analyzer
11 represent accurate and reliable methods to determine the actual emission rates from an engine,
12 when the testing is properly conducted.

13 Additionally, I am familiar with the common practice of using the test results for one
14 pollutant to serve as a surrogate for determining the emission rate of another pollutant. State and
15 federal testing requirements and permit conditions widely recognize the use of surrogate pollutants
16 in emissions testing, particularly when two different pollutants' emission rates will be a function
17 of the same control measure. For example, emissions of CO and non-methane, non-ethane
18 hydrocarbon (NMNEHC) in the vent stream from an engine will both be reduced by good
19 combustion practices and the engine operating properly. The same conditions that will lead to low
20 emissions of CO in the vent stream will also lead to low emissions of NMNEHC. In those
21 circumstances, it makes sense to allow the test results of one pollutant demonstrating compliance
22 to serve as a surrogate for demonstrating compliance with the emission standard for the other
23 pollutant. Passing CO results reflect good combustion practices, which will also be associated

1 with a hydrocarbon emission rate that meets a hydrocarbon emission standard that was also set
2 based on the engine employing good combustion practices. The use of surrogate pollutants is a
3 way to streamline and lower the costs associated with emissions testing requirements while
4 assuring that the tests still provide a reliable means of evaluating compliance with the applicable
5 emission standards or permit limits.

6 **III. The New Mexico Environment Department's Proposed Rule**

7 1. Introduction to the Department's Proposed Emissions Monitoring and Demonstration
8 Requirements for Engines and Turbines.
9

10 The Department's Proposed Rule includes regulations specifically applicable to portable
11 and stationary natural gas-fired spark ignition engines, compression ignition engines, and natural
12 gas-fired combustion turbines located at wellhead sites, tank batteries, gathering and boosting sites,
13 natural gas processing plants, and certain transmission compressor stations. *See* Proposed Rule,
14 20.2.50.113.A NMAC. These regulations, set forth in 20.2.50.113 NMAC, include emissions
15 standards for various types of engines, as set out in 20.2.50.113.B NMAC, as well as monitoring
16 requirements and methods to demonstrate emissions compliance, as set out in 20.2.50.113.C
17 NMAC. As proposed, 20.2.50.113.C NMAC attempts to direct how compliance with emissions
18 standards is to be demonstrated. There are a number of ambiguities and deficiencies with the
19 Department's proposed 20.2.50.113.C NMAC regulation. As set forth more fully below, the
20 Department should amend its proposed regulation to clarify the proposed testing methodology set
21 forth in 20.2.50.113.C NMAC and to ensure that entities are able to demonstrate compliance based
22 on available technology.
23

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- 1 2. The GCA's Concerns with the Department's Proposed Emissions Monitoring and
2 Demonstration Requirements for Engines and Turbines and Proposed Amendments
3 Thereto.

4
5 The language the Department has proposed in the Proposed Rule at 20.2.50.113.C(3)
6 NMAC should be amended because, as currently drafted, it is vague and requires the use of
7 technology that cannot measure the pollutants required by the Proposed Rule. For example,
8 20.2.50.113.C NMAC provides that

9 [f]or equipment operated for 500 hours per year or more, compliance with the emission
10 standards in Subsection B of 20.2.50.113 NMAC shall be demonstrated by performing an
11 initial emissions test, followed by annual tests, for NO_x, CO, and non-methane non-ethane
12 hydrocarbons (NMNEHC) using a portable analyzer or U.S. EPA reference method.

13 Similar language is found in 20.2.50.113.C(3)(b) NMAC, which states that "emissions testing
14 utilizing a portable analyzer shall be conducted in accordance with the requirements of the current
15 version of ASTM D6522." My concern with this language is that portable analyzers do not have
16 the capability of measuring NMNEHC. Furthermore, the proposed language in
17 20.2.50.113.C(3)(b) NMAC references ASTM D6522, a test method that does not apply to the
18 measurement of NMNEHC.

19 In order to address these concerns, The GCA proposes amending the language in the
20 Proposed Rule to reflect accurate alignment of pollutants to be sampled with the correct test
21 methods and analytical technologies. The GCA's proposed amendments, as reflected in GCA
22 Exhibit 6, revise the proposed regulation's requirement to sample for NMNEHC to allow the
23 measurement of CO to act as a surrogate for NMNEHC for the initial and annual tests as prescribed
24 in the Proposed Rule. Because good combustion conditions will reduce the concentration and mass
25 emissions of both CO and hydrocarbons in an engine's vent stream, the use of CO test results as a
26 surrogate provide a reliable means of confirming compliance with the engine emission standards

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1 for NMNEHC. This change would align the Proposed Rule with the New Mexico Air Quality
2 Bureau's current practices regarding emissions testing for engines, which allow test results that
3 demonstrate compliance with CO emission limits also to demonstrate compliance with emission
4 limits for VOCs. *See New Mexico Air Quality Bureau, NSR & TV: IC Engines Monitoring*
5 *Protocol – Permit Template Language* at Note 3 (Version: May 23, 2016), GCA Exhibit 27.

6 This amendment is also necessary in order to allow the use of portable analyzers for initial
7 and annual testing under as proposed by the 20.2.50.113.C(3) NMAC provision. Without an
8 allowance of surrogate testing for NMNEHC, a fully equipped mobile laboratory would be needed
9 to meet the requirement. Portable analyzers and auxiliary equipment needed to sample for nitrogen
10 oxide (NOx) and CO using ASTM D6522 are more readily available for use than a fully equipped
11 mobile laboratory capable of sampling for NOx, CO, and NMNEHC. Portable analyzer testing
12 offers a reliable method for testing emission rates from these engines and demonstrating
13 compliance with the emission standards for both NOx, CO, and NMNEHC, while reducing the
14 costs, time, and business interruptions associated with testing performed using a fully equipped
15 mobile laboratory.

16 The Department should not establish annual stack testing requirements for NMNEHC for
17 engines as part of the new ozone precursor rules. Such a testing requirement would be unduly
18 burdensome and costly, and the same result can be achieved through the use of portable analyzer
19 testing and the use of CO test results as a surrogate. The Proposed Rule recognizes, in
20 20.2.50.13.C(3)(h) NMAC, that "Emissions testing required by Subparts GG, IIII, JJJJ, or KKKK
21 of 40 CFR 60, or Subpart ZZZZ of 40 CFR 63, may be used to satisfy the emissions testing
22 requirements if it meets the requirements of 20.2.50.113 NMAC and is completed at least once per
23 calendar year." Depending on rule applicability, some engines may be subject to hydrocarbon

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1 stack testing requirements under federal rules. The Proposed Rule should not expand hydrocarbon
2 stack testing requirements for engines beyond those circumstances where it is already required
3 under federal rule, given the ability to generate reliable emissions test results for engines using
4 less-costly portable analyzer testing and surrogate pollutants.

5 **IV. Conclusion**

6 The Department's proposed requirement to measure NMNEHC using portable analyzers
7 and ASTM D6522, as set forth in Proposed Rule 20.2.50.13.C NMAC, is inconsistent with the
8 actual measurement capabilities of portable analyzers. The GCA's proposed amendments to
9 20.2.50.13.C NMAC correct this regulatory error by allowing the measurement of NMNEHC, as
10 required by the Proposed Rule, to be satisfied by the measurement of CO as a surrogate. For these
11 reasons, The GCA's amendments to 20.2.50.13.C NMAC as set forth in GCA Exhibit 6, should
12 be adopted.

13 This concludes my direct technical testimony in this matter.