



December 21, 2007

Brad Musick
New Mexico Environment Department
Air Quality Bureau
1301 Siler Rd., Building B
Santa Fe, NM 87507

Dear Mr. Musick:

Rocky Mountain Clean Air Action, the Natural Resources Defense Council, Oil and Gas Accountability Project, and Western Environmental Law Center submit the following comments in response to the New Mexico Environment Department's ("NMED's") "Oil and Gas Greenhouse Gas Emissions Reductions," Staff Draft Report (hereafter "draft OGRE report"), released for public review and comment on December 10, 2007. The draft OGRE report represents NMED's efforts to respond to Governor Richardson's Executive Order 2006-069, which states that NMED "shall conduct a study of the voluntary and mandatory mechanisms for reducing greenhouse gas emissions from oil and gas processes by January 1, 2008[.]" These comments are submitted by December 21st via e-mail, as requested by the NMED.

At this point, the draft OGRE report appears to be incomplete in some regards, although it represents a good step forward in understanding the nature of the goals that need to be achieved. Namely, the draft OGRE report presents a clearer sense of what emission reductions will be needed to meet Governor Richardson's goal of reducing methane emissions from oil and gas operations by 20% and reducing carbon dioxide emissions from fuel combustion. This is very helpful.

The draft OGRE report is a good step forward, but ultimately does not present the many mechanisms that may exist to reduce greenhouse gas emissions from oil and gas processes to meet Governor Richardson's goals. In particular, the OGRE study seems to focus only on existing voluntary and mandatory mechanisms to reduce greenhouse gas emissions, but does not necessarily investigate potential future mechanisms that could be pursued. We understand though, that the NMED has solicited our comments to address some of these potential shortcomings so that the final report can both be comprehensive and a product worthy of presenting to Governor Richardson.

We therefore would like to provide suggestions for where NMED may be able to refine and improve the draft OGRE report so that the final product is representative of the full array of

options available and opportunities—both voluntary and mandatory—that are at hand. Our comments hope to build on the NMED’s noble effort, and are as follows.

- **Methane Emission Reductions**

In its study of mandatory mechanisms for reducing methane emissions, we would strongly urge the NMED to consider proposing additional rulemaking scenarios. For example, a mandatory mechanism to reduce methane emissions could involve a proposal that requires all oil and gas operations to replace or retrofit high-bleed pneumatic devices with low-bleed or no-bleed pneumatic devices. Such a strategy has been found to be extremely cost-effective.¹

Indeed, a number of cost-effective opportunities exist to adopt rules that lead to methane emission reductions among oil and gas operations. For example, the State of Colorado has already adopted rules that require all condensate storage tanks that emit 20 tons/year or more of VOCs to reduce emissions by 95%, and all glycol dehydrators that emit 15 tons/year or more of VOCs to reduce emissions by 90%.² Although these rules related to the protection of air quality, they also achieve methane reductions. The State of Colorado’s efforts to reduce emissions from condensate tanks will achieve a 5,637 ton/year reduction in VOCs. Assuming that VOCs comprise only 15% of the total emissions from condensate tanks, and methane comprises approximately 85%, this means the rules will achieve a 37,580 ton/year reduction in methane, or a 789,180 ton/year in CO₂ equivalency.³

The State of Wyoming has similarly required VOC reductions from oil and gas operations through presumptive Best Available Control Technology requirements, which require condensate tanks, glycol dehydrators, and pneumatic pumps to reduce emissions.⁴ Such proposals could be a mechanism to achieve methane reductions in New Mexico as well.⁵

To that end, it would be worthwhile for the NMED to investigate how it may be able to develop a cost-effective rulemaking proposal that leads to reductions in methane emissions from oil and gas operations. Such a mechanism must be explored, especially since other oil and gas producing states have clearly shown that cost-effective emission reductions are reasonable and feasible.

We request that any final OGRE report investigate rulemaking mechanisms that could implement cost-effective, mandatory methane reductions. A number of options exist, many of which have been identified by the oil and gas industry as cost-effective measures. For example, a 2005 study entitled “Cost-effective methane emissions reductions from small and midsize

¹ See, http://www.epa.gov/gasstar/pdf/lessons/ll_pneumatics.pdf.

² See, http://www.cdphe.state.co.us/ap/down/sbap_oil_gas_factsheet.pdf.

³ According to analyses of emissions from condensate tanks in Colorado, average tank emissions are approximately 15% VOCs and 85% methane. These values are approximate, and serve to illustrate that methane reductions can be cost-effectively achieved through mandatory mechanisms. Total CO₂ equivalency reductions are assumed to represent 21 times the amount of methane reduced.

⁴ See, <http://deq.state.wy.us/aqd/Oil%20and%20Gas/AUGUST%202007%20O&G%20GUIDANCE%20-%20FINAL.pdf>.

⁵ To that end, we request the NMED investigate opportunities to both reduce VOCs, which contribute to the formation of ground-level ozone, and methane. This approach promises to protect air quality and reduce greenhouse gases simultaneously, a win-win situation that we can all be proud of.

natural gas producers,” noted that a number of cost-effective mechanisms exist to reduce methane.⁶ The NMED must explore implementing these cost-effective strategies as mandatory measures, particularly given the potential for paybacks to the oil and gas industry.

- **Carbon Dioxide Emission Reductions**

On the same note, we request the NMED consider mandatory carbon dioxide emission reduction strategies from oil and gas operations. For example, the NMED could adopt a rule adopting a performance standard for carbon dioxide emissions from natural gas compressor engines. This standard could be based on what is achievable through increased efficiency, which could be achieved by replacing older engines with newer engines, or by installing automated air/fuel ratio controllers. As a preliminary matter, we request the NMED consider adopting a rule that would require the use of automated air/fuel ratio controllers on all compressor engines located at Title V sources. Automated air/fuel ratio controllers are not only effective at increasing compressor efficiency and reducing carbon dioxide emissions, but they also yield a payback due to the increased efficiency at which methane is used as fuel. Estimates indicate that oil and gas companies can reduce methane emissions by 18-24% through the use of automated air/fuel ratio controllers.⁷

We also request the NMED seek opportunities to bundle cost-effective methane reduction strategies with carbon dioxide emission reduction strategies. For example, the NMED should look for opportunities to both reduce methane emissions from natural gas compressor engines and reduce carbon dioxide emissions. Methane emission could be reduced from compressor engines, such as through periodic rod and packing replacement, and actually yield a payback.⁸ This payback could be used to install automated air/fuel ratio controllers or other efficiency improvements.

The NMED must look at opportunities to reduce carbon dioxide emission from fuel combustion together with opportunities to reduce methane emissions from these same fuel combustion operations. Such an approach promises to enhance the cost-effectiveness of carbon dioxide reductions from fuel combustion at oil and gas operations. We request the NMED consider mandatory options that reduce methane and carbon dioxide together among oil and gas operations in the state.

We are also concerned that the NMED appears to have given short shrift to the potential for utilizing combined heat and power (“CHP”) systems with regards to natural gas compressor engines. CHP systems promise to harness heat generated from compressor engines to create electricity, a win-win situation that promises enormous paybacks to the State of New Mexico.

Despite the potential paybacks, the NMED appears to dismiss this proposal as technically infeasible, but only because NMED “has not received any additional data that would help in determining how many ORC CHP systems could potentially be installed, nor the costs and

⁶ Fernandez, R., R. Petrusak, D. Robinson, and D. Zavadil. 2005. Cost-effective methane emissions reductions for small and midsize natural gas producers. *Journal of Petroleum Technology*, June 2005. Online at <http://www.epa.gov/gasstar/pdf/CaseStudy.pdf>

⁷ See, http://www.epa.gov/gasstar/pdf/pro_pdfs_eng/auto-air-fuel-ratio.pdf.

⁸ See, http://www.epa.gov/gasstar/pdf/lessons/ll_rodpack.pdf.

benefits of this measure.” We wonder, has the NMED actually solicited information regarding the costs and benefits of CHP systems, or the extent to which they could be installed? It doesn’t appear so, which is confusing. Our impression of the OGRE report was that the NMED was going to seek such information to ensure a high quality and thorough investigation of mechanisms to reduce greenhouse gas emissions from oil and gas operations. It appears the NMED instead has actually sought no information to inform the draft OGRE report. We are disappointed the NMED has not been more proactive in investigating the opportunities to reduce carbon dioxide emissions through CHP systems.

- **Technical Feasibility**

Throughout the draft OGRE report, the NMED appears to disparage certain control options, such as automated air/fuel ratio controllers and combined heat and power systems, because the agency has not received additional information from the oil and gas industry regarding the technical feasibility of such control strategies. We request the NMED initiate an information request to industry under its authority to gather such information, rather than insinuating that no such information exists.

Furthermore, to the extent that any technical infeasibilities may remain unresolved, we request the NMED take advantage of stakeholder meetings and/or rulemaking processes to ferret out information regarding claimed infeasibilities. Rather than rejecting mandatory options due to a lack of information, the NMED should seek to compel the disclosure of information to ensure that the intent of Governor Richardson’s Executive Order is fully met. A lack of information does not indicate infeasibility. To that end, the NMED must take advantage of its authorities, such as recently adopted greenhouse gas reporting rules, to accurately assess the feasibility of any greenhouse gas reduction strategies.

The NMED is blessed. A number of cost-effective options exist to reduce both methane and carbon dioxide emissions from oil and gas operations. We are confident that the agency will take advantage of these opportunities, follow the lead of other states, and seek to ensure that New Mexico’s greenhouse gas reduction efforts both reduce emissions and help industry make money. With such a win-win situation, the NMED cannot possibly fail. We are confident the NMED is moving in the right direction. We appreciate the opportunity to comment. If the NMED has any questions or concerns, please contact us at the information below. Thank you.

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