

United States Department of the Interior  
Bureau of Land Management  
Farmington Filed Office  
1235 La Plata Highway, Suite A  
Farmington, New Mexico 87401

**Subject:** A Condition of Approval (COA) which limits air pollutant emissions to all Bureau of Land Management (BLM) approvals of Application for Permits to Drill (APD) under the jurisdiction of the Farmington Field Office.

**Requirement:** “This Permit [APD] is contingent on compliance with the New Mexico Environment Department, Air Quality Bureau’s recommendation that compressor engines 300 horsepower or less have NOx [total oxides of nitrogen] emissions limited to 2 [two] grams per horsepower hour.”

**Applicability:** When developing oil and gas resources, small well-head engines are often required for a variety of purposes, including, but not limited to dewatering and gas compression. The COA requirement identified above applies to all new and replacement internal combustion engines (regardless of fuel type) which are subject to BLM approval, with the Manufacturer’s maximum brake horsepower rating (as identified on the engine nameplate) of 300 or less. A separate NOx emission limit of 1.5 grams per horsepower-hour applies to Sales/Pipeline Compressor Station Engines (rated at greater than 300 horsepower.) The operator must also provide upon request the engine Manufacturer’s documentation that NOx emissions exhausted to the atmosphere do not exceed 2 grams per horsepower hour throughout the operational life of the engine. If the engine utilizes a post-combustion emission control device (such as Non-Selective Catalytic Reduction, etc.), the specific type of device should also be identified.

**Exclusions:** Non-internal combustion engines, such as electric motors, are not subject to the COA requirement. In addition, unless anticipated to cause significant adverse cumulative air quality impacts in the future, single cylinder combined combustion/compression less than 15 maximum brake horsepower are not currently subject to the COA requirement. In addition, if an applicant can demonstrate (using air pollutant dispersion modeling) that a specific higher emission rate would not cause or contribute to cumulative significant adverse air quality impacts, then a case-specific waiver of the COA requirement could be issued by BLM.

**Enforcement:** In most situations, a simple on-site inspection verifying the operating engine’s nameplate power rating matches the applicant’s horsepower and NOx emissions rates, no further action will be necessary. However, BLM reserves the right to require, on a case-specific basis, that operators obtain (through exhaust stack testing) and demonstrate actual NOx emission rates comply with COA requirements.

**Authority:** The Federal Land Policy and Management Act of 1976 (Public Law 94-579), Section 302 (b) states in part: "... In managing the public lands the Secretary [of the Interior] shall, by regulation or otherwise, take any action necessary to prevent unnecessary or undue degradation of the lands." Specifically, 43 CFR 3162.5-1 [ONSHORE OIL AND GAS OPERATIONS - Requirements for Operating Rights Owners and Operators] Environmental obligations] states: "The [oil and gas] operator shall conduct operations in a manner which protects the mineral resources, other natural resources, and environmental quality."

The BLM's Record of Decision (ROD) for the Farmington Proposed Resource Management Plan (PRMP) and Final Environmental Impact Statement (FEIS), dated September 29, 2003, identified five special mitigation measures to prevent significant adverse air quality impacts, including: "Expanded Regional Cumulative Air Quality Impact Assessment – BLM shall perform a regional cumulative far-field analysis of potential PSD [Prevention of Significant Deterioration] Class I increment, atmospheric deposition, and visibility impacts as part of the planned "Northern San Juan Basin Coalbed Methane Development EIS" air quality impact assessment. Implementation of this measure is intended to further define potential regional cumulative air quality impacts at down-wind mandatory federal PSD Class I Areas based on an assumed development patterns under the Farmington PRMP/FEIS. Based on the outcome of the regional analysis, additional mitigation may be required."

The regional cumulative air quality impact assessment prepared for the Northern San Juan Basin Coalbed Methane Development Draft EIS analyzed potential regional cumulative visibility impacts at the mandatory federal PSD Class I Mesa Verde National Park and the Weminuche Wilderness areas. Assuming half of the anticipated oil and gas production wells had small engines emitting NOx at 10 grams per horsepower-hour, potential significant adverse visibility impacts were predicted in both of these sensitive areas. A second analysis, assuming these same small well-head NOx emissions would be limited to 2 grams per horsepower-hour reduced the number of days per year potential significant adverse visibility impacts would occur in these locations.

In addition, BLM has received two letters from the State of New Mexico, Director, Department of Environmental Protection, which supported the analysis and mitigation strategies (dated June 3, 2005) and specifically "Interim control measures on all engines installed in the Four Corners region will be environmentally beneficial in reducing adverse air quality impacts and are necessary until the [Four Corners Air Quality Interagency] Task Force can develop long-term strategies. A condition in every Application for Permit to Drill that limits emissions to no more than 2 grams per horsepower hour of NOx will ensure that all new engines in the area reduce emissions" (July 5, 2005). These letters are attached in their entirety.



BILL RICHARDSON  
GOVERNOR

State of New Mexico  
**ENVIRONMENT DEPARTMENT**  
Environmental Protection Division  
Harold Runnels Building  
1190 St. Francis Drive, P.O. Box 26110  
Santa Fe, New Mexico 87502-6110  
Telephone (505) 827-2932  
Fax (505) 827-0310  
www.nmenv.state.nm.us



RON CURRY  
SECRETARY

DERRITH WATCHMAN-MOORE  
DEPUTY SECRETARY

JIM NORTON  
DIRECTOR

June 3, 2005

Mr. Steve Henke  
District Manager  
BLM Farmington District Office  
1235 La Plata Highway  
Farmington, NM 87401

Dear Mr. Henke:

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Send cc to DSD, NM  
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This letter is in regard to mitigation strategies for the proposed Northern San Juan Basin (NSJB) and the Farmington Resource Management Plans (FRMP). I appreciate your interest in understanding the air quality impacts of this development and the New Mexico Environment Department's position on mitigation strategies.

Air dispersion modeling conducted by the BLM for the NSJB Environmental Impact Statement (EIS) predicts that the cumulative effect of maximum development in NSJB, the FRMP and Southern Ute Indian Tribe development will result in significant degradation of visibility at Mesa Verde National Park and the Weminuche Wilderness Area. According to the modeling, full development of the area could result in 15 to 32 days of degraded visibility in Mesa Verde National Park and 11 to 25 days of degradation in the Weminuche. These predictions are based on emissions only from new oil and gas development and do not include emissions from all sources in the area. These adverse impacts to visibility at Class I areas are predicted even with strict prescriptive measures, which indicates that the potential impacts of all three projects must be carefully considered and mitigated.

Fortunately, cumulative visibility impacts can be reduced if emission controls are required on new oil and gas related emission sources of nitrogen oxides (NOx). The New Mexico Environment Department has taken a lead role in establishing a working group to form the Four Corners Air Quality Interagency Task Force. One of the duties before this group is to determine interim and long-term mitigation strategies that address the visibility impacts of this development. Participants on the Task Force working group to date include representatives from New Mexico, Colorado, Utah, Arizona, the US Forest Service, National Park Service, Bureau of Land Management, EPA Regions 6, 8 and 9, the Navajo Nation EPA and the Southern Ute Tribe.

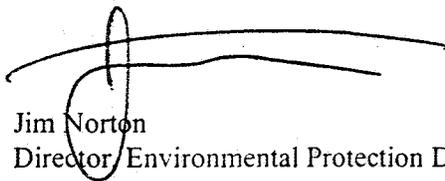
Mr. Steve Henke  
June 3, 2005  
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The Task Force working group has determined that interim control measures on all engines installed in the Four Corners region will be environmentally beneficial in reducing adverse air quality impacts and are necessary until the Task Force can develop long-term strategies. The best mechanism for implementing these interim measures is to require them as a condition of lease approval. It could take a few years for the Task Force to develop long-term strategies and without interim measures, the emissions from newly installed compressor engines could degrade the visibility in effected Class I areas. In addition, greater emission controls now will help assure the full development of the resource in the future.

For smaller engines (300 hp or less), the Task Force working group has recommended an emission limit of 2 grams per horsepower hour of NOx. The group has determined that this limit is technically feasible and in fact, is an air quality permitting requirement in Wyoming. The New Mexico Environment Department, Colorado Department of Environmental Quality, the US Forest Service, National Park Service and the BLM Denver and Durango offices all support this interim measure for smaller engines. Attached is a letter from Colorado DEQ to the BLM expressing their support for this interim limit. This interim measure should not apply to pump jack engines, which are typically less then 40 hp. These interim measures are necessary based on modeling analyses completed for the area and discussions and analyses conducted within the Task Force working group. In addition, the Task Force working group is currently evaluating interim measures for larger engines (greater than 300 hp).

The New Mexico Environment Department will continue to work with Farmington BLM and other members of the Task Force to study air quality in the Four Corners region. I appreciate your participation and assistance with the Task Force working group. Your participation will help ensure that New Mexico retains its scenic vistas and pristine environment that attracts visitors from all over the world. If you have any further questions, please contact Mary Uhl at 955-8086 or Sandra Ely at 827-0393.

Sincerely,



Jim Norton  
Director, Environmental Protection Division

JN:MU:elf

cc: Four Corners Interagency Air Quality Task Force members  
Bob Gallagher, The New Mexico Oil and Gas Association



**BILL RICHARDSON**  
Governor

*State of New Mexico*  
**ENVIRONMENT DEPARTMENT**

**Air Quality Bureau**  
2048 Galisteo St.  
Santa Fe, NM 87505  
Phone (505) 827-1494  
Fax (505) 827-1523  
[www.nmenv.state.nm.us](http://www.nmenv.state.nm.us)



**RON CURRY**  
Secretary

**DERRITH WATCHMAN-MOORE**  
Deputy Secretary

**JIM NORTON**  
Director

July 5, 2005

Steve Henke  
District Manager  
BLM Farmington District Office  
1235 La Plata Highway  
Farmington, NM 87401

Dear Mr. Henke:

This letter further clarifies comments in my June 3, 2005 letter regarding mitigation strategies for the proposed Northern San Juan Basin (NSJB) and the Farmington Resource Management Plans (FRMP). I would like to ensure that the New Mexico Environment Department's position on mitigation strategies is clear.

Interim control measures on all engines installed in the Four Corners region will be environmentally beneficial in reducing adverse air quality impacts and are necessary until the Task Force can develop long-term strategies. A condition in every Application for Permit to Drill that limits emissions to no more than 2 grams per horsepower hour of NO<sub>x</sub> will ensure that all new engines in the area reduce emissions.

I appreciate your attention to this clarification of our previous letter. If you have any further questions, please contact Mary Uhl at 955-8086 or Sandra Ely at 827-0393.

Sincerely,

**Jim Norton**  
Environmental Protection Division Director

cc Four Corners Interagency Air Quality Task Force members  
The New Mexico Oil and Gas Association