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Mr. Steven A. Dietrich, Administrator  
Wyoming Air Quality Division  
Herschler Building 2-E  
122 W. 25<sup>TH</sup> Street  
Cheyenne, Wyoming 82022

Jim Ruby, Executive Secretary  
Environmental Quality Council

**VIA Regular Mail and Facsimile (307-777-5616)**

Dear Administrator Dietrich:

Thank you for accepting these comments on behalf of the Environmental Defense Fund ("EDF"), the Wyoming Outdoor Council, and Citizens United for Responsible Energy Development. EDF is a national membership organization with over 330,000 members residing throughout the United States who are deeply concerned about the pollution emitted from natural gas sources. The Wyoming Outdoor Council ("WOC") is Wyoming's oldest statewide environmental advocacy organization and has worked to protect Wyoming's environment and public lands for more than forty-five years. Citizens United for Responsible Energy Development ("CURED") is a Pinedale-based advocacy group and member of the state's ozone task force.

EDF, WOC and CURED support the Air Quality Division's ("Division") recommendation to incorporate by reference the U.S. Environmental Protection Agency's New Source Performance Standards for Oil and Natural Gas Production, Transmission and Distribution ("NSPS") into Chapter 6 of the Wyoming Air Quality Standards and Regulations. Oil and natural gas operations emit a variety of air pollutants, including pollutants that contribute to ground-level ozone or "smog;" toxic air pollutants including known human carcinogens; and methane, a potent climate-disrupting pollutant. Ozone pollution is linked to serious health problems, including premature mortality, heart failure, increased hospital admissions and emergency room visits for respiratory causes among children and adults with pre-existing respiratory disease, and possible long-term damage to the lungs.<sup>1</sup> Children, the elderly, and people with existing

<sup>1</sup> EPA, AIR QUALITY CRITERIA FOR OZONE AND RELATED PHOTOCHEMICAL OXIDANTS (2006); Michelle L. Bell, Roger D. Peng & Francesca Dominici, The Exposure-Response Curve for Ozone and Risk of Mortality and the Adequacy of Current Ozone Regulations, 114 ENVTL. HEALTH PERSPS. 532 (2006); Jonathan I. Levy et al., Ozone Exposure and Mortality: An Empiric Bayes Metaregression Analysis, 16 EPIDEMIOLOGY 458 (2005).



respiratory conditions are the most at risk from ozone pollution.<sup>2</sup> Air toxics emitted from oil and gas activities include benzene and formaldehyde, both known human carcinogens.<sup>3</sup> Hydrogen sulfide, a pollutant that is found in certain types of natural gas ("sour" gas), causes nausea, headaches, delirium, disturbed equilibrium, poor memory, loss of consciousness, tremors, convulsions and potentially death.<sup>4</sup> Methane, the primary constituent of natural gas, is a potent greenhouse gas with a warming potential seventy-two times that of carbon dioxide over the short term (twenty years) and twenty-five times that of carbon dioxide over a longer time-frame (one-hundred years).<sup>5</sup> In addition to its climate impacts, methane contributes to higher global background concentrations of ozone pollution.<sup>6</sup>

EPA's New Source Performance Standards ("NSPS") will reduce harmful air toxics, ozone precursors, and methane as a co-benefit using proven, cost-effective control technologies. Overall, the NSPS will remove approximately 190,000 tons of volatile organic compounds (VOCs), 1.0 million tons of methane and 11,000 tons of hazardous air pollutants (HAPs) from the atmosphere in 2015 when all standards will be fully implemented.<sup>7</sup>

That said, as currently formulated, Wyoming's adoption by reference of EPA standards in Chapter 6 would only apply to Code of Federal Regulation rules "revised and published as of July 1, 2010 2012, not including any later amendments . . . ." See [http://deg.state.wy.us/aqd/proposedrules/files/Chapter%206\\_draft%2011-8-12.pdf](http://deg.state.wy.us/aqd/proposedrules/files/Chapter%206_draft%2011-8-12.pdf) (page 6-122). However, the EPA oil and gas sector NSPS and hazardous air pollutant rule for all affected was not finalized until August 16, 2012. 77 Fed. Reg. 49490 (Aug. 16, 2012). In addition, EPA amended the storage vessel NSPS on August 5, 2013, <http://www.epa.gov/airquality/oilandgas/pdfs/20130805fr.pdf> (The official version has not yet been published in the Federal Register). Thus, we request that the quoted language for the Chapter 6 regulatory change be modified to ensure that the final EPA NSPS/hazardous air pollutant rules, and all subsequent amendments, are incorporated.

EPA's standards build on many clean air measures already required in Wyoming. Indeed, in designing the NSPS EPA relied on the Division's extensive experience regulating air emissions from oil and gas activities. This experience must not be jettisoned in the adoption of the NSPS. There are a number of areas where Wyoming's current permit requirements for minor oil and gas sources are more protective of health and the environment than EPA's. In all such instances, Wyoming must retain the more stringent state standard. The Environmental Quality Council

<sup>2</sup> See EPA, Ground-Level Ozone Health Effects, <http://www.epa.gov/glo/health.html>; EPA, Nitrogen Dioxide, Health, <http://www.epa.gov/air/nitrogenoxides/health.html>.

<sup>3</sup> See, e.g., NATIONAL TOXICOLOGY PROGRAM, REPORT ON CARCINOGENS, 12TH ED. 195 (2011), available at <http://ntp.niehs.nih.gov/ntp/roc/twelfth/profiles/Formaldehyde.pdf>.

<sup>4</sup> AGENCY FOR TOXIC SUBSTANCES AND DISEASE REGISTRY, TOXICOLOGICAL PROFILE FOR HYDROGEN SULFIDE 104 (July 2006), available at <http://www.atsdr.cdc.gov/toxprofiles/tp114.pdf>.

<sup>5</sup> The values of 25 and 72 are methane's global warming potential (GWP); GWP is a commonly used concept to compare the radiative forcing of GHGs relative to that of CO<sub>2</sub>. The Intergovernmental Panel on Climate Change (IPCC) typically uses a 100-year time horizon for the calculation of GWP, but a 20-year horizon is sometimes used.

<sup>6</sup> J. Jason West et al., Global Health Benefits of Mitigating Ozone Pollution with Methane Emission Controls, 103 PROC. NAT'L ACAD. SCI. 3988, 3989 (2006).

<sup>7</sup> EPA Final Rule, Oil and Natural Gas Sector: New Source Performance Standards and National Emission Standards for Hazardous Air Pollutants Reviews, 77 Fed. Reg. 49492 (Aug. 16, 2012).



("EQC") has clear statutory authority to do so, and such action is necessary to protect the public health and environment of Wyoming's citizens. Wyoming is now home to its first-ever ozone nonattainment area, the Upper Green River Basin, and more must be done in order to restore healthy air to this area that has been negatively affected by oil and gas development in the area. In addition, oil and gas development is briskly expanding statewide and emissions will increase if not adequately controlled.

### **Wyoming Has Authority to Adopt More Stringent Standards than Federal**

The Wyoming Environmental Quality Act clearly provides the state with the authority to adopt more stringent state requirements than federal, and we strongly urge the state to retain any such standards.

The declaration of policy and purpose elevates state control of air resources over that of other jurisdictions. This provision provides:

it is hereby declared to be the policy and purpose of this act... *to retain for the state* the control over its air, land and water and to secure cooperation between agencies of the state, agencies of other states, interstate agencies, and the federal government in carrying out these objectives. (**emphasis added**)

WY ST. § 35-11-102.

It is telling that the statute places primary emphasis on the import of state control over air resources. Indeed, the mandate to "secure cooperation" with the federal government modifies the directive to retain state control as the cooperation is expressly intended to be in furtherance of the goal of state control. The declaration of policy and purpose clearly evinces an intent on the part of the legislature for the state to retain primary responsibility and authority over its air resources.

Other provisions concerning the regulation of greenhouse gases confirm this intent. W.S. § 35-11-213, which pertains to the regulation of greenhouse gases, contains an express prohibition on state rules regulating greenhouse gases that are more stringent than federal. Section (f) of this section states "In no event shall any greenhouse gas emission regulations, new source performance standards or potential to emit thresholds promulgated pursuant to subsection (e) of this section be more stringent than those imposed or required by federal law." W.S. § 35-11-213(f). Subsection (e) authorizes the department and EQC to adopt regulations to obtain state primacy over the regulation of greenhouse gases in certain circumstances. The presence of this clear prohibition on more stringent state rules in one section of the Act, and absence of it in another, indicates that the legislature knows how to restrict the EQC authority to go beyond federal rules where it desires. The absence of any such restriction with respect to requirements to reduce criteria pollutants demonstrates that the EQC is free to retain state requirements that are more stringent than federal.



## **Wyoming Must Retain All Requirements that Are More Stringent than Federal Standards**

Wyoming's permit requirements for minor oil and gas sources provide a benchmark upon which EPA's NSPS should be measured; for this reason, and to ensure healthy air is protected and restored to all Wyoming citizens, the EQC must retain all state air requirements that are more protective than EPA's. This is particularly true with respect to certain elements of the state's green completion and flash emission requirements.

Wyoming has a long history of demonstrating national leadership when it comes to implementing clean air measures for the oil and gas industry. It was one of the first states to adopt rigorous air pollution control measures for crude oil, gas and condensate production sources in 1995. Since then it has gradually strengthened and expanded on these initial permit requirements, lowering emission thresholds and expanding requirements to other types of activities—all the while remaining at the forefront of clean air policy. The Presumptive Best Available Control Technology ("P-BACT") Permitting Guidance released in March 2010 requires leading controls, including a 98% control efficiency, for a suite of equipment and activities such as well maintenance activities, pneumatic pumps and controllers, gas and oil wells completions and production equipment with the potential for flash emissions. The 98% control requirement, as well as the specific requirements for oil well completions, maintenance activities and pneumatic pumps, stand out as they are shared by only a few other jurisdictions across the country.

As noted above, EPA relied on Wyoming's extensive experience implementing the best available control requirements for oil and gas sources in devising its NSPS. Even though EPA's final NSPS departs from similar Wyoming requirements in certain instances, we do not believe this is a reason for the EQC to relax its standards. To the contrary, existing unhealthy air quality in the Upper Green River Basin and expanding development throughout the state mandates the opposite. This is particularly true with respect to retention of those aspects of the state's green completion requirement that are more protective than federal, in particular the scope of the rule in applying to oil wells and the Division's approach to reducing flash emissions from storage vessels and separators.

## **The EQC Should Continue to Require "Green Completions" at Oil Wells and Expand this Requirement Statewide**

We urge the EQC to continue to require oil well operators, in addition to gas well operators, to utilize green completion practices to reduce harmful emissions. This requirement provides an important gap-filling measure as EPA's "reduced emission completion" requirement applies only to gas wells. To adequately protect all citizens in Wyoming, wherever they reside, we urge the EQC to extend the green completion requirement statewide to all oil and gas wells. It currently applies only in the Jonah Pinedale Anticline Development and Concentrated Development Areas. Oil production is briskly expanding east outside of the JPAD and CDAs and with it will come an increase in oil well completion emissions if the statewide green completion requirement is not extended.



## **The EQC Should Retain its 98% Control Requirement and Approach to Reducing Flash Emissions from Storage Vessels**

A number of aspects of Wyoming's flash emission requirements for storage vessels and separators are more protective than EPA's and thus should be maintained.

First, Wyoming requires 98% control of VOCs and HAPs from all storage tanks and separation vessels. EPA's NSPS requires only 95% control from storage vessels; it does not apply to separators. Modern pollution controls such as enclosed flares and vapor recovery devices are capable of achieving at least 98% control of VOCs and HAPs. Accordingly, the EQC should retain its 98% control requirement.

Second, the EQC should continue to define a storage vessel as all storage vessels at a facility for purposes of determining whether controls must be installed or removed. EPA defines a storage vessel as a single tank. This distinction is important. For example, assume the presence of five storage vessels at a facility, each of which emits five tons per year of VOCs. Under EPA's approach, no controls would be required on any storage vessel because the emissions potential of each individual tank falls below six tons per year. The Wyoming Air Quality Division takes a different, and more protective, approach. It sums the emissions of all tanks at a facility for purposes of determining whether controls are required. Thus, in this current example, for a facility located statewide, if the sum flash emissions from all tanks and separators equaled 10 Tpy, controls would be required even though each individual tank's emissions fall below 6 Tpy.<sup>8</sup> Because the state's approach is more protective than EPA's, we urge the EQC to retain its current method for determining whether or not tanks must install controls.

## **The EQC Should Adopt the Proposed Emission Inventory Rule**

We further support the EQC's proposed emission inventory rule. With the designation of the UGRB as a marginal ozone nonattainment area the EQC is required to develop a "a comprehensive, accurate, current inventory of actual emissions from all sources of the relevant pollutant or pollutants in such area, including such periodic revisions as the Administrator may determine necessary to assure that the requirements of this part are met." 42 U.S.C. § 7502(C)(3). The proposed rule meets this Clean Air Act statutory requirement. Specifically, the proposed rule requires operators of permitted facilities, individual oil and gas facilities, or facilities or sources with actual emissions greater than or equal to 25 Tpy of VOCs or NOx, in the nonattainment area to submit actual emissions of VOCs and NOx annually. Operators must maintain copies of inventories and records indicating how the information was determined for at least 5 years. Each inventory submission must be accompanied by a certification by a responsible official attesting to its truth, accuracy and completeness.

<sup>8</sup> Note, this is not the case for tanks in the JPAD and CDAs where all tanks, regardless of emissions, must be controlled by 98%. We support the retention of this approach to requiring 98% control of flash emissions in the JPAD and CDA, regardless of the potential to emit. Such standards are necessary to ensure clean air to citizens residing in and near the ozone nonattainment area.

We support the proposed inventory rule, in particular the recordkeeping and reporting requirements which are essential to ensuring compliance with the statute's requirement that inventories be "accurate." We further support the application of the inventory requirement to all oil and gas facilities and sources, regardless of emissions potential or permit status. This is necessary to attaining a comprehensive inventory and critical to the state's efforts to bring the UGRB back into compliance with the CAA requirements as the state and EPA have recognized oil and gas industry's contribution to the current nonattainment problem.

Thank you,



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EDF

And on behalf of:

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Chief Legal Counsel  
WOC

Elaine Crumpley  
Chairperson  
CURED