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David Catanach  
Director, Oil Conservation Division  
Energy, Minerals and Natural Resources Department  
1200 South Saint Francis Drive  
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via e-mail

February 3, 2015

**RE: Case No. 15239 - Application of the New Mexico Oil and Gas Association to Repeal and Replace Title 19, Chapter 15, Part 34 of the New Mexico Administrative Code Addressing Produced Water, Drilling Fluids and Other Liquid Oil Field Waste; and to Amend the Definition of Produced Water in Title 19, Chapter 15, Part 2 of the New Mexico Administrative Code.**

Dear Mr. Catanach,

Earthworks and its Oil and Gas Accountability Project, San Juan Citizens Alliance, New Mexico Interfaith Power and Light, and Sierra Club Rio Grande Chapter, wish to submit additional comments regarding proposed changes to the New Mexico Administrative Code (NMAC) concerning produced water recycling and impoundment pits associated with oil and gas facilities. These comments are to supplement technical comments submitted jointly last week by Earthworks and the Environmental Defense Fund.

### **Background**

The New Mexico Oil and Gas Association has requested changes to the New Mexico Administrative Code that it suggests will reduce freshwater demand by allowing for produced water to be stored in lined earthen impoundments for later re-use and recycling. The rule changes are presumably intended to facilitate the ease with which industry can build and operate these impoundments, as well as allow for additional applications of produced water considered in the rule to be "disposition by use." This includes the direct surface application of produced water for purposes such as dust suppression and water needed for construction of new facilities, for example. The rule also amends the definition of produced

water to include a broader range of fluids – some of which may be more harmful than what had been historically considered to be produced water.

We believe that the conservation of freshwater in arid environments is critical and should be applauded. However, we also believe the Oil Conservation Division (OCD) must objectively weigh any benefits of reduced freshwater consumption with the impacts resulting from the changes to NMAC in terms of threats to soils, surface and groundwater quality, and plants and wildlife.

We share the following concerns:

- 1.) It appears that “disposition by use” would be allowed without being subject to numerical standards for pollutants. Under the code, an operator simply has to file a form C-147 with OCD and can then be allowed to dispose of potentially toxic water directly on the surface of roadways and for use in other land-based applications it may consider a “use.” We believe that numerical standards must apply to any water discharged from oil and gas operations into the environment. Since these are point-source discharges, they should be regulated as such.

OCD should evaluate existing state and/or federal discharge standards for all harmful environmental contaminants, including naturally occurring radioactive materials, BTEX compounds, residual contaminants from fracking fluids, diesel fuel and other drilling lubricants, salinity, pH, dissolved solids, heavy metals, and a host of other pollutants commonly associated with oil and gas operations in produced water. The OCD division director should not have free reign to approve form C-147's without being subject to strong numerical standards rooted in existing policies and regulations regarding water discharges to any location.

- 2.) Changes to NMAC should ensure that the public can access records of all industry paperwork filings with OCD online that deal with the discharge of produced water. Those living or working near oil and gas facilities have a vested interest in the environmental protection of their lands and lands adjacent to them. Indeed, it should not be a burden to them to have to file a FOIA request or track down paper copies of relevant forms at a division office. Any water discharged near an individual's property (or even on their property) and recorded on a form C-147 (or other similar forms) should be easily accessible online in a user-friendly format which is simple to navigate. Lab results should be included, so that, for example, a farmer knows what is being discharged on roadways near his or her crop, and can take corrective action if adverse impacts are observed.

- 3.) It remains unclear to us the quantity of produced water, and duration of time, that each form C-147 is needed for. Currently it appears that a single C-147 may be applied to a major produced water source and that the submitted form has no time limit cap until a new one must be submitted to OCD.

Since new produced water impoundments are likely to be centralized -- taking in water from numerous wells -- the chemistry of produced water from each impoundment will be quite dynamic. This may also occur from a single well source as the deep hydrogeological dynamics shift over the course of oil or gas production. Pollutant levels could change -- perhaps dramatically -- over the lifespan of a single C-147 form. Therefore, we urge OCD to require that water quality testing (by a third party independent lab) be done for each discharge event rather than a single test for the life of a particular source of produced water. In addition, the particular source containment of produced water should not receive additional inputs during the time lab analysis is occurring. This will ensure that the water that is being discharged has not changed since the analysis was performed, and that the actual discharge meets applicable water quality standards.

In cases where periodic testing shows negligible variations in water quality and no exceedances of applicable water quality standards are noted, we believe these testing requirements could be relaxed over time in a controlled, transparent, and phased approach. For example, testing for each discharge event could be lowered to every 5 discharge events if the first dozen tests show favorable water quality and only minor variations.

- 4.) "Disposition by use" should be limited to commonly performed practices already employed by the oil and gas industry and deemed necessary for operations. In light of the recent oil price crash, it is clear that industry will need to lower operating costs as soon as possible, and this can be partially achieved by reducing the amount of water that would otherwise be trucked to injection disposal wells. It's possible that as a result of the desire to save money, industry will attempt to find new methods of "disposition by use" that were not commonly practiced previously. For example, while dust abatement is often essential, we are concerned that it may go too far if it is used simply as a method of disposal rather than to solve a genuine problem with dust. This could lead to worse road conditions, rather than better conditions, as roads become more muddy and rutted.

Similarly, industry could create new disposal techniques simply to justify the use of produced water. For example, while road wetting for dust suppression usually occurs on the surface of the roadway itself, industry could suggest that it wishes to widen the applied area, spraying down well beyond the road and into undisturbed ground adjacent to it. To us, this would not seem a "use" of produced water that would achieve freshwater reductions, but rather a method of disposing of produced water to reduce the costs of injecting it into disposal wells. Adverse impacts could include soil erosion and the spread of invasive weeds next to the road. If the produced water exceeds applicable water quality standards, a host of environmental issues will exist as well.

- 5.) Analysis should be performed with regard to evaporation rates from new impoundments. As you know, warm arid climates have significant evaporation rates that can exceed 90 inches per year from standing water. In the case of potentially hundreds of impoundments being constructed in the ensuing years to contain water for recycling and disposition by use, cumulative evaporation from the impoundments must be considered and weighed against the freshwater savings that may occur. If evaporation exceeds reductions in freshwater withdrawals, the changes to NMAC are, in fact, counterproductive.

We appreciate your time in considering these comments, and hope that OCD will think critically about potential adverse and unintended consequences before approving any changes in NMAC regarding the handling of, definition of, and disposition by use, of produced water.

We also invite you to clarify any issues brought up in this letter by contacting Earthworks directly by phone, email, or postal mail.

Finally, we wish to applaud the efforts of industry and OCD alike if indeed the rule changes will reduce freshwater consumption from the oil and gas sector. With that in mind, we believe all efforts to track freshwater savings in a publicly transparent manner will be greatly appreciated by the conservation community in New Mexico. We therefore request that one year after implementation of the rule changes, OCD will work with industry and NMOGA to release a report documenting the ways in which precious freshwater has actually been conserved as a result of OCD policy. We believe the public would be keen to know the results.

Sincerely,

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