

**Pre-Hearing Statement of the New Mexico State Land Office and State Land
Commissioner Ray Powell, prior to rule-making hearings scheduled to begin on May
14th 2012**

The Commissioner of Public Lands is the state's elected Trustee for the land trust comprising almost one-tenth of the lands in the state of New Mexico. This Trust is perpetual, but it also raises current funds for the state. Each year the State Land Office raises approximately \$500,000,000.00 for the beneficiaries of the Trust: hospitals, Universities and common schools of New Mexico. The oil and gas industry, almost 40% of which is located on state trust lands, contributes over 90% of those revenues and is immensely important to the welfare of the state. Each dollar raised through royalties is one less dollar that the taxpayers need to contribute to current funding requirements. At the same time that the Commissioner recognizes this incredibly important contribution, he also has a responsibility to the long-term health of the land and water in order that state lands and their products will continue to support the state into future generations. Of particular concern for this Commissioner is not to leave liabilities to future generations. To the extent that we cut corners for today's dollar and allow oil and gas wastes into the land and water, we leave a much larger liability for the future. The Commissioner, or his designee, sits on the Oil Conservation Commission to represent these dual interests of the Trust: encouraging productivity and at the same time protecting the health of the land and water. The following are the State Land Office and Commissioner's comments on the proposed changes to the pit rule, prior to the filing of supporting documents, and prior to testimony, based solely on the mark-ups of the rules as currently proposed.

A healthful environment is of fundamental importance to the public interest, health, safety, and the general welfare, and nothing is more critical to New Mexico's future than preservation of its most precious natural resource, water – without which there is no life. In furtherance of this significant objective the New Mexico Constitution states that: "The Legislature shall provide for control of pollution and control of despoilment of the air, water, and other natural resources of this state, consistent with the use and development of these resources for the maximum benefit of the people." N. M. Const. art. XX, Section 21. The New Mexico Constitution further created the office of Commissioner of Public Lands, vesting it with the "direction, control, care and disposition of all public lands, under the provisions of the acts of congress relating thereto and such regulations as may be provided by law." N.M. Const. art. XIII, § 2. Given this, and other mandates requiring the New Mexico Commissioner of Public Lands to protect the resources under his/her jurisdiction, and the fact that much of the land leased to oil and gas exploration and production companies is managed by the State Land Office, the Commissioner has a fiduciary obligation to carefully review the amendments to Title 19, Chapter 15, Part 17 ("Pit Rule") proposed by the New Mexico Oil and Gas Association ("NMOGA") in Case No. 14784 which are substantially mirrored by the amendments to the Pit Rule proposed by the Independent Petroleum Association of New Mexico ("IPA") in Case No. 14785. These comments address major issues of concern to the SLO in the order of their appearance in the rule and the applicant's proposals for change. These comments are drafted prior to the submissions of the parties in their prehearing statements. Therefore the lack of scientific or economic arguments in support of or against the suggested changes is subject to change. This document will identify many of the areas

where changes to the rule appear to be detrimental to the long-term health of the land and also appear unsupported by evidence. This document calls for:

- Commission scrutiny of any changes called for, with the burden resting on the proponent of the change, particularly, as here, where the proponent is the object of the regulation.
- Policies affecting regulation in New Mexico should adhere to principles articulated by the National Petroleum Council's study *Prudent Development – Realizing the Potential of North America's Abundant Natural Gas and Oil Resources* (final report approved September 15, 2011). Regulators should set standards and industry should be, wherever possible, given latitude in meeting those standards. Innovation should be encouraged and the goal of industry and regulation should be continuous improvement, both in productive capacity and in protection of the environment.
- Third, where industry cannot support a requested change with scientific and economic evidence, the Commission should defer final action on that change until the proper documentation, studies, and other necessary information, including proper application of the discipline of risk assessment has been submitted for Commission review.

A. Reference to closed-loop systems

Closed-loop systems represent one of the best available technologies for the management of exploration and development (E&P) waste. The technology has been endorsed in reports written by the Texas Railroad Commission as a promising way of reducing drilling wastes. Closed-loop drilling fluid systems are reported by the Texas

Commission to offer many advantages over conventional earthen reserve pits. Most promising for regions of New Mexico without any capacity to pull additional water rights (closed water basins), are technologies to dewater waste drilling fluid. The reclaimed water can be reused on site. The requirements of closed-loop systems encourage oil companies to innovate as they search for ways to reduce their transport costs. Those innovations, in turn, benefit New Mexico by generating less on-site waste.

Closed-loop systems are part of a category of technology that provides for removal of solids from, and maintenance of drilling fluids, and at the same time, provides an economically reasonable and environmentally sophisticated approach for real time removal of drilling wastes from the well head location. When reserve pits are replaced by closed loop systems a series of mobile storage tanks are deployed along with equipment that separates liquids from solids, e.g. centrifuges. Consequently, the closed loop system optimizes the volume of fluids that can be supplemented and reused during the drilling cycle. This reuse furthers the single most important duty of the Oil and Gas Division (“OCD”) which is to prevent waste. Wastes generated in this process are incrementally transported by mobile tanks to properly permitted oil and gas waste facilities for disposal. Additional recycling may take place off site at permitted waste management facilities. Improvements in these technologies lower their cost to industry and increase the use of byproducts, ultimately limiting the generation of wastes. In part because of the expense of carting wastes off-site, the technologies are evolving to recycle water and other products at the site. In this iteration of regulation and innovation, the oil and gas industry has succeeded in making remarkable progress. By de-emphasizing the use of closed-loop systems in this rule making, the rule-change proponents may be undermining the success of both the local

and the national oil industry at the very time when safely increasing production may be critical to the nation's energy independence.

The National Petroleum Council Resource Study entitled *Prudent Development, Realizing the Potential of North America's Abundant Natural Gas and Oil Resources*, released in September 2011, applauds closed-loop systems as a major innovation of the oil and gas industry. Some of the largest national oil and gas companies have pointed to closed-loop systems as part of the industry's reassurance to the community in areas where hydraulic fracturing is controversial. Finally, a sister state agency in North Dakota, in an area of tremendous growth in drilling activity, has just moved toward close-loop system regulations in reaction to floodwaters which wreaked havoc with that state's open pits.

At a time when oil and gas companies are recognizing that closed-loop systems may be a key strategy in assuring that vulnerable water supplies are protected from the effects of drilling, well completion, and work-over activity, the state Land Commissioner expects the proponents of rule changes in New Mexico to explain how eliminating the requirement of close-loop systems near sources of water should be dropped from regulation. If removing liquids from pits assures that no leakage into water systems occurs, what assurance does the alternative provide? What additional protections are offered in the design and lining of open pits to make them more resistant to the degrading effects of solar radiation and to the impact of chemicals in the drilling wastes such as benzene? If there is hard evidence of a serious cost differential, why are respected sister regulatory agencies like the Texas Railroad Commission citing studies that conclude that when you include long-term liability, closed-loop systems are actually cheaper than properly lined open pits? If there is evidence on each side of this issue, the Land Commissioner, as steward for the future use of state lands and

their future provision of income for the school children of New Mexico, must take the position that it is prudent to defer final action on these rule changes until or unless good science supports change.

The title of Part 17 (*Pits, Closed-Loop Systems, Below Grade Tanks, and Sumps*) captures the intent of the pit rule drafters that the rule should apply to a range of improved options for the proper management and disposal of E&P waste from oil and gas operations including closed-loop systems. Where industry has other ways of protecting groundwater, certainly the rules should provide for innovation and new technologies. However, the closed-loop systems set a safety standard which may well become the standard for oil and gas operations nationwide. If the method of achieving that standard needs to be changed, and that need for change is supported by hard evidence, there also needs to be evidence that the new methods will not lower the standard. In its submission, the proponents of change consistently avow a belief in maintaining New Mexico's healthy waters and land. The key to maintenance is to keep to standards, unless or until there is scientific evidence that a standard can be altered without increasing risk to the waters and land. This adherence to standards is especially critical when industry requests additional flexibility in the methods by which to meet those standards. The concept of continuous improvement, as embraced by the national oil and gas industry, is a concept of raising, not lowering, the bar.

B. Siting Requirements

The rule-change proponents also request to reduce the efficacy of, or eliminate, many of the siting criteria identified in Section 19.15.17.10. To date, we have not seen the technical or regulatory basis for the wholesale reduction in buffer zones called for in this section. In

fact, most of the siting criteria in this section are comparable to those used in other regulatory frameworks that control the management and disposition of wastes, most notably, the New Mexico Solid Waste Management Regulations (Rule 20.9.2.20.9.10 NMAC), and OCD Rule 19.15.36 NMAC for Oil and Gas Waste Disposal Facilities. These generic siting criteria have been tested in rigorous scientific and technical discussions for the better part of two decades. The primary difference between the Pit Rule Criteria and the other two rules is that the Pit Rule already allows deposition of material in settings where ground water is less than 100 feet below ground surface. Consequently, the State Land Commissioner expects to review hard scientific evidence, including risk assessment studies, on each of the proposed changes in the Siting Requirements section.

C. Time Frames for Temporary Pits

The rule-change proponents also want to extend the active life of a temporary pit as defined in 19.15.17.7(O) NMAC from six months to as long as twelve months. The limit of six months was put in place to accommodate industry needs, and to limit risk of contamination to the underlying soils and ground water. Clearly the risk from open pits increases over time as UV radiation damages the relatively thin liner materials exposed to sunlight, and as some of the chemicals react to degrade the integrity of liner materials used in temporary open pits.

The existing time limit for use of a temporary pit is the product of a lengthy and transparent process conducted by the Pit Rule Task Force which was populated with representatives from industry, environmental, and regulatory groups. The effort included

several public outreach meetings and three weeks of adjudicatory hearings. The outcome of that effort, the existing Pit Rule, limits the time for leaving E&P fluids in temporary pits for obvious reasons. They are likely to leak and become a source of contamination. In the initial hearing on the Pit Rule, OCD testified regarding examples of leakage and subsequent contamination found in substrata below temporary pits. This section of the existing Pit Rule provides credible short term protection of soils and ground water resources. From a purely practical perspective, given that typical well drilling timetables range from two to three weeks, six months is a reasonable amount of time for closing a pit. Although the existing rule contains a relatively straightforward variance process, the state Land Commissioner would be open to exploring a longer variance timetable for closing temporary pits. The proponent of a variance would have to reasonably demonstrate that a longer time frame for closing a temporary pit will not contaminate ground water.

With the exception of a more flexible variance process, there has been no basis offered that addresses the risk factors of a generic request for drilling wastes to remain in a temporary pit longer than six months. The rule change proponents could, of course, offer to apply different standards for the liner materials in temporary pits, enabling those pits to resist the degradation of chemical and other physical impacts. To date, no alternative methods of achieving comparable safety standards have been offered.

D. Volume limits for temporary pits

The rule-change proponents want to amend language in 19.15.17.11.F(10) by eliminating the 10 acre-feet maximum capacity for temporary pits. As is the case in the other recommended changes, a reasoned argument has not yet been given for proposing the

amended language. The existing rule limits the capacity of a temporary pit to a maximum of 10 acre-feet. The decision was based on a range of reasons from practical to regulatory considerations. Part of the OCC rationale was linked to the regulation of impoundments by the Office of the State Engineer (“OSE”) under 19.25.12.7 NMAC. A volume limit for a temporary pit of 10 acre feet obviated the need for an applicant for a temporary pit under OCD rules to apply for a permit from the OSE. The NMOGA and IPA Applications actually intend to use that process to significantly increase larger pit volumes. In the initial hearing on the Pit Rule, the OCC determined that a pit capacity of ten acre feet was adequate for managing fluids used for drilling wells within the range of depths typically reached in the oil and gas production zones developed in New Mexico. Also, limiting pit volume to 10 acre feet reduces the aerial extent of surface disruption caused by construction of the pit. The pit may be temporary, but the disturbance to the surface is not. The applicants propose to expand the de facto limit for pit capacity up to an astounding 50 acre-feet. In the context of a **temporary** pit, that proposal is simply not justifiable. The state Land Commissioner is not anticipating evidence that a five-fold increase in volume, combined with a longer period of time for temporary pits will provide the same safety standard as the current rule. Absent additional industry proposals for equivalent environmental protection standards, the idea of larger pit sizes should be deferred pending further study.

E. Onsite burial trenches

The Applicants also propose to delete the word **Onsite** from subsection (19.15.17.11.J) dedicated to standards for Onsite Burial Trenches. This request should be denied. The duty of the state Land Commissioner is unquestionably to be a steward to the land and water of New Mexico. To allow waste disposal in unmarked and unregulated sites is to give up any regulatory oversight. To agree to this requested change would be a complete abdication of the Land Commissioner's responsibility to future generations and would effectively eliminate the word permanent in the State Land Office's trust obligation to preserve a Permanent Fund.

If the proposed activity of waste burial in unmarked sites was regulated under the Solid Waste Management Regulations of the New Mexico Environment Department it would be called "illegal dumping." The greater the distance a burial trench is located from the well that produces the E&P waste, the greater the probability that the waste will be disassociated from the point of origin. Ultimately, this kind of practice has the potential to produce "orphan" waste deposits with no accountable party to monitor or, if necessary, remediate contamination. The proposed change substantially increases the probability of contamination from burial trenches and is on the face of it at odds with the statutory mandate for the OCC to sufficiently regulate the management of oil and gas waste in a fashion that is protective of the environment.

It is a geographic fact that remotely located burial sites will increase the number of unrelated locations that will require additional regulatory surveillance and that fact alone

makes it much more difficult to detect contamination and to determine the source of the problem. In the alternative, onsite burial provides a common area for maintaining compliance. With state agencies held to modest staffing, and with his constitutional obligations as a steward of a Permanent Fund, the state Land Commissioner cannot condone production of wastes on state land which are taken to unknown destinations. The risk of those wastes appearing on state lands or contaminating water systems is simply too high. While the Land Commissioner appreciates the revenues generated by the oil and gas industry and understands that regulation should be flexible, he cannot abdicate his responsibility to the Trust.

F. Definition of low chloride drilling fluid

The Applicants also request a reduction in siting standards for pits designated for management of what they identify as **low chloride drilling fluid**. They propose to define low chloride drilling fluid as that which contains chloride concentrations up to 15,000 mg/liter. Both Wyoming and Texas regulators, however, define low chloride drilling fluid as having a chloride concentration of 3,000 mg/l or less. In reality, chlorides that leach out of drilling fluid containing concentrations **at or below** 3,000 mg/l can still negatively impact the soil and pose a potential risk to groundwater. Given that temporary pits and burial trenches by definition lack robust design, it is a virtual certainty that chlorides will eventually leach out and reach shallow groundwater. Considering the risk of leaks from pits, and the potential for chloride contamination, the Land Commissioner would expect to see scientific studies

showing that the current regulations and those regulatory levels set by sister regulatory agencies can be reduced and still protect ground water resources.

G. Steel tanks for hydrocarbon-based drilling fluids

The rule-change proponents suggest eliminating requirements that E&P operators deploy steel tanks (or other approved methods) to confine hydrocarbon-based drilling fluids. Hydrocarbon-based drilling fluids are typically more environmentally destructive than those based primarily on water or synthetic constituents. The increased risks associated with hydrocarbon-based drilling fluids literally require more robust containment systems than that afforded by the use of temporary pits. Tanks made of steel or comparably effective materials are likely to provide the necessary level of confinement. The regulatory flexibility is already present in this rule because it allows industry to use materials other than steel as long as those materials have comparable capacity for containment. Eliminating the requirement to confine hydrocarbon-based drilling fluids at the current safety standard substantially increases the risk of contamination to ground water. Again, this would violate an articulated purpose of the proponents' submission: the protection of New Mexico's ground waters.

The requirements for steel tanks or tanks made of other suitable materials found in 19.15.17.12.B(1) of the existing rule were based on data collected between 1985 and 2003. OCD documented approximately 7,000 locations at which leaking pits were linked to water and soil contamination. More recent data generated by OCD indicate that approximately 400 cases of significant ground water contamination can be linked to E&P waste management pits (Analytical Results of OCD's Pit Sampling Program, 2007).

H. Maximum chemical concentrations for closure

Finally, the rule-change proponents want to make dramatic revisions in the closure criteria for chemical concentration limits for waste left in pits, drying pads, below grade tanks, and soil horizons in related substrata for benzene, Total Petroleum Hydrocarbons (“TPH”) and chlorides (Proposed Tables I and II).

The benzene limit set forth in the existing rule is 0.2 mg/kg. The Applicants are recommending an increase in this limit to 10 mg/kg (irrespective of the depth to groundwater) for contaminated materials left in pits or burial trenches. The maximum contaminant level (“MCL”) for benzene set by EPA pursuant to the Federal Safe Drinking Water Act is 0.005 ppm (40CFR 141.61). The Oil and Gas Conservation Commission of Colorado prohibits the impoundment of materials in pits in which benzene concentrations exceed 0.17 kg/mg (Colorado Oil and Gas Conservation Commission Rule 905(a)(1), 2011).

Because E&P waste is exempt from federal hazardous waste regulations (40 CFR Part 261.4 (b)(5)) the OCC was able to set the existing limit at a level of 0.2ppm which is 40 times greater than the EPA MCL value. By comparison, the concentration value suggested by NMOGA and IPA (10 mg/kg) is 2000 times higher than the EPA standard. This proposed standard lacks any sense of proportionality. Benzene is a known carcinogen and should be regulated as such.

Given the known carcinogenic effects of benzene and the evidence of benzene contamination associated with oil and gas waste pits, there is no rational basis for such an

increase in the concentration levels of benzene in the closure criteria. Adoption of the proposed increase would substantially violate the OCC's statutory mandate to protect the public health, and the environment. Consequently, the Commissioner recommends denial of the proposed change for benzene concentrations in the closure criteria.

NMOGA and IPA also propose to dramatically raise chloride concentrations to 20 times greater than existing limits for soils and 10 times greater than existing limits for waste left in place. The closure criteria for chloride concentrations in soils beneath pits, drying pads, and below grade tanks is 500 mg/kg where the depth to groundwater is between 50 and 100 feet, and up to 1,000 mg/kg where the depth to groundwater is greater than 100 feet. The Applicants propose to change those limits, respectively, to 10,000 mg/kg and 20,000 mg/kg. These numbers have no known link to good practice. Moreover, the state Land Commissioner is unaware of any known scientific or technical rationale for the standards proposed in the applicants' proposed 19-15-17-13 Table I and II.

This concludes the State Land Office's and the Land Commissioner's pre-hearing statement on proposed rule changes. Based on what has been submitted to date, and without hearing whatever evidence and risk assessment studies are put forward, the Commissioner would defer adopting the rule changes pending further scientific evidence, additional economic studies, and reassurance that the health of the land and water is not compromised.