

Vinson & Elkins

Larry W. Nettles lnettles@velaw.com
Tel +1.713.758.4586 Fax +1.713.615.5538

VIA FEDERAL EXPRESS

January 12, 2012

Ms. Florene Davidson
Commission Clerk
Oil Conservation Commission
New Mexico Department of Energy
1220 South Saint Francis Drive
Santa Fe, New Mexico 87505

2012 JAN 13 A 10:38
RECEIVED OGD

Re: Case No. 14784; Application of the New Mexico Oil and Gas Association for Amendment of Certain Provisions of Title 19, Chapter 15, Part 17 of the New Mexico Administrative Code Concerning Pits, Closed-Loop Systems, Below Grade Tanks, Sumps, and Other Alternative Methods Related to the Foregoing and Amending Other Rules and Conforming Changes Statewide.

Case No. 14785; Application of the Independent Petroleum Association of New Mexico for Amendment of Certain Provisions of Title 19, Chapter 15 of the New Mexico Administrative Code Concerning Pits, Closed-Loop Systems, Below Grade Tanks, Sumps, and Other Alternative Methods Related to the Foregoing and Amending Statewide and Amendment of Title 19, Chapter 15, Part 39.8(B) of the New Mexico Administrative Code Concerning Pits and Sierra and Otero Counties.

Dear Ms. Davidson:

Enclosed are the comments of R360 Environmental Solutions, Inc. on the above-mentioned rulemaking petitions from the New Mexico Oil and Gas Association and the Independent Petroleum Association of New Mexico. On behalf of R360 Environmental Solutions, Inc., we ask that these comments be considered by the Commission in connection with its response to the rulemaking petitions. Please do not hesitate to contact me if you have any questions regarding this matter.

Sincerely,



Larry W. Nettles
Attorney for R360 Environmental Solutions, Inc.

**COMMENTS ON NEW MEXICO OIL AND GAS ASSOCIATION'S AND THE
INDEPENDENT PETROLEUM ASSOCIATION OF NEW MEXICO'S PROPOSED
AMENDMENTS by R360 ENVIRONMENTAL SOLUTIONS, INC.**

R360 Environmental Solutions, Inc. ("R360") respectfully submits the following comments concerning the amendments to Title 19, Chapter 15, Part 17 (the "Pit Rule") of the New Mexico Administrative Code ("NMAC") proposed by the New Mexico Oil and Gas Association ("NMOGA") in Case No. 14784 and the identical amendments to the Pit Rule proposed by the Independent Petroleum Association of New Mexico ("IPANM") in Case No. 14785. R360 owns two oil and gas exploration and production ("E&P") waste treatment and disposal facilities in Lea County, New Mexico and provides various E&P waste recycling and disposal services.

1. References to closed-loop systems should not be deleted.

NMOGA and IPANM propose to eliminate all references to closed-loop systems from the Pit Rule. R360 understands the applicants' rationale for this proposed change is that the Pit Rule should be focused only on pits. This simplistic argument ignores the original intended scope of the Pit Rule. The original and current title of Part 17, "Pits, Closed-Loop Systems, Below Grade Tanks, and Sumps," demonstrates that this rule was not intended to apply only to pits, but to more broadly cover the handling, storage and disposal of E&P waste from oil and gas operations. Closed-loop systems are an appropriate, efficient and widely used alternative method for the handling of E&P waste and the Pit Rule should accordingly provide standards and permitting procedures for them.

Closed-loop systems employ a suite of solids control equipment to minimize drilling fluid dilution and provide for the economic handling of drilling wastes. In a closed-loop drilling fluid system, the reserve pit is replaced with a series of storage tanks that separate liquids and solids. Equipment to separate out solids (e.g., screen shakers, hydrocyclones, centrifuges) and collection equipment (e.g., vacuum trucks, shale barges) minimize the amount of drilling waste muds and cuttings that require disposal, and maximize the amount of drilling fluid recycled and reused in the drilling process.¹ The wastes created are typically transferred off-site for disposal at injection wells or oilfield waste disposal facilities.

The New Mexico Oil and Gas Act directs the New Mexico Oil Conservation Commission ("NMOCC") to regulate the disposition of non-domestic wastes resulting from the exploration, development, and production of storage of crude oil or natural gas in manner that protects the public health and the environment.² Typical reserve pits involve risks such

¹ Lisa Sumi, *Pit Pollution – Backgrounder on the Issues, With a New Mexico Case Study*, Oil and Gas Accountability Project, 14 (May 2004), available at <http://www.earthworksaction.org/files/publications/PitReport.pdf?pubs/PitReport.pdf>.

² N.M. Stat. Ann. § 70-2-12(21).

as leakage through overflow, personal injury, wildlife impact, and area exposure.³ The costs associated with pits include excavation, lining, increased location size, and either burying or the removal of solid waste.⁴

Closed-loop systems significantly reduce or eliminate many of these risks and costs.⁵ From May 22 to June 1, 2007, the New Mexico Oil Conservation Division's ("NMOCD") staff collected samples from 21 drilling/reserve pits, 2 production pits, and 2 closed-loop tanks.⁶ The NMOCD found toxic levels of lead, arsenic, chromium, mercury, benzene, toluene, and dozens of other harmful chemicals in the areas surrounding pits.⁷ NMOCD's current rules and the applicants' proposals state that the objective of the Pit Rule is to regulate waste methods used in connection with oil and gas operations for the protection of public health, welfare and the environment.⁸ The use of closed-loop systems furthers this objective, and references to closed-loop systems should remain included in the Pit Rule's requirements. The self-contained nature of closed-loop systems reduce or eliminate the possibility of soil contamination.⁹ Thus, closed-loop systems reduce the risk of soil and water contamination from E&P wastes and guard against many of the toxic pollutants the NMOCD sampling connected to traditional reserve pits.

Furthermore, NMOGA and IPANM have not supplied any information justifying why closed-loop systems should not be included in the Pit Rule or proposed a new section to include requirements for closed-loop systems. Eliminating the references and requirements for closed-loop systems would be "an unreasoned action without proper consideration or disregard of the facts and circumstances,"¹⁰ and would therefore be an arbitrary and capricious act under New Mexico law. A comparison between closed-loop systems and typical reserve pits demonstrates that closed-loop systems are not only more protective of the public health and the environment, but also cost less than typical reserve pits over the long term.¹¹ The current rules for closed-loop systems provide technical standards in order to ensure efficient and environmentally sound handling of E&P waste. Neither the facts nor the

³ Dan Arthur and David Conrue, *Technologies Reduce Pad Size, Waste*, The American Oil & Gas Reporter, 3 (Aug. 2010).

⁴ *Id.*

⁵ *Id.*

⁶ New Mexico Oil Conserv. Div., *Analytical Results of OCD's Pit Sampling Program (2007)*, available at <http://www.emnrd.state.nm.us/ocd/environmental.htm>.

⁷ *Id.*

⁸ 19.15.17.6 NMAC.

⁹ Lisa Sumi, *Pit Pollution – Background on the Issues, With a New Mexico Case Study*, Oil and Gas Accountability Project, 12 (May 2004), available at <http://www.earthworksaction.org/files/publications/PitReport.pdf?pubs/PitReport.pdf>.

¹⁰ *Paule v. Santa Fe County Bd. of County Comm'rs*, 117 P.3d 240, 249 (N.M. 2005) (defining "arbitrary and capricious" in the context of improper agency actions).

¹¹ See Railroad Comm'n of Texas, *Waste Minimization Case Histories – Closed Loop Drilling Systems*, <http://www.rrc.state.tx.us/environmental/environsupport/wastemin/wasteminchdrillingops.php> (finding that one operator saved \$10,000 per well through the use of closed-loop drilling systems).

circumstances surrounding the use of closed-loop systems at drilling sites warrant deleting the current rule's references to and standards for closed-loop systems.

For these reasons, R360 requests that the NMOCC retain paragraph 19.15.17.9.B(3) NMAC, requiring that plans for closed-loop systems be included in permit applications, as well as the design and construction standards for closed-loop systems in paragraph 19.15.17.11.H NMAC, and decline to adopt NMOGA's and IPANM's other proposed changes that eliminate the words "closed-loop systems" from the Pit Rule.

2. The six month time limit for storing liquids in temporary pits should not be eliminated.

NMOGA and IPANM propose to change the definition of "temporary pit" in paragraph 19.15.17.7.O NMAC to allow oil and gas well operators to store liquids in temporary pits for up to 12 months, instead of the time limit of 6 months found in the current definition. R360 suggests that the NMOCC decline to adopt this proposed change.

The current definition of "temporary pit" reflects the outcome of a two-year public process by a Pit Rule task force consisting of representatives from the oil and gas industry, environmental groups, municipalities, the cattle growers industry, and NMOCD staff.¹² Four public outreach meetings and 18 days of public hearings were held during the process.¹³ The current rule explicitly limits the time period for holding liquids in temporary pits because of concerns relating to leaks and contamination from temporary pits. During the hearings for the original Pit Rule, the NMOCD's own staff testified about instances of temporary pit liner failure, tears, and contamination found beneath temporary pits.¹⁴ When it originally adopted the Pit Rule, the NMOCC explicitly found that protection of the environment went beyond the protection of freshwater sources and included soil stability and productivity.¹⁵ The longer that E&P waste and other fluids are allowed to remain in temporary pits, the greater the likelihood of liner failure and/or groundwater/soil contamination. The applicants' proposal unnecessarily increases the threat of contamination from temporary pits.

Any action which increases the likelihood of contamination from pits conflicts with both the objective of the Pit Rule and the Oil and Gas Act. As noted above in Comment 1, the Oil and Gas Act empowers the NMOCC to regulate E&P waste to protect the public health and the environment.¹⁶ Furthermore, The New Mexico Constitution includes an environmental protection provision, providing that:

¹² New Mexico Oil Conserv. Div., *Pit Rule Guidance*, 1 (December 2010), <http://www.emnrd.state.nm.us/ocd/documents/201012-16DraftOCDPitRuleGuidanceDocument.pdf>

¹³ *Id.*

¹⁴ New Mexico Oil and Gas Comm'n Order No. R-12939, 3 (May 9, 2008).

¹⁵ *Id.* at 4.

¹⁶ N.M. Stat. Ann. § 70-2-12(21).

The protection of the state's beautiful and healthful environment is ... of fundamental importance to the public interest, health, safety, and the general welfare. 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.¹⁷

Thus, various constitutional and statutory provisions are in place to govern oil and gas development and to protect the air, water, and general environmental quality in New Mexico. The NMOCC must keep these provisions in mind as it scrutinizes the applicants' proposed changes to the Pit Rule.

Although rules, regulations and standards enacted by an agency are presumptively valid, such actions will only be upheld if they are reasonably consistent with the agency's authorizing statutes.¹⁸ The current six month limit for liquids in temporary pits is designed to minimize the potential for contamination from E&P waste from temporary pits and reflects a deliberative, well thought-out decision-making process. Raising the limit for holding liquids from 6 to 12 months increases the risk of environmental contamination from E&P waste without justification. This would not be reasonably consistent with the specific provisions of the Oil and Gas Act or the New Mexico Constitution's more general environmental protection statement.

R360 understands that the motivation behind this proposed change relates to weather conditions and their effects on the handling of E&P waste. Weather conditions in New Mexico certainly should be considered and may justify allowing the storage of liquids in temporary pits for longer than 6 months in some areas under certain circumstances. A blanket 12-month limit, however, is not appropriate for the entire state. The existing rule provides a procedure for requesting variances. Weather conditions that require special consideration should be handled with a request for a variance or exception to the rule to allow for an extension of time for the pit to dry. For those reasons, R360 requests that the NMOCC reject NMOGA's and IPANM's proposed changes to 19.15.17.7.O NMAC and retain the current definition of temporary pits.

3. The volume limit for temporary pits should remain 10 acre-feet.

NMOGA and IPANM propose to modify 19.15.17.11.F(10) NMAC by replacing the 10 acre-feet maximum volume for temporary pits with a cross references to standards for jurisdictional dams promulgated in 19.25.12.7 NMAC. Neither applicant, however, has provided a reasoned justification for this proposed change. The current rules require that the volume of a temporary pit not exceed 10 acre-feet, including freeboard.¹⁹ The applicants propose to remove a technical standard for the construction of temporary pits. This language is important as it restricts the size of temporary pits.

¹⁷ N.M. Const. art. XX, § 21.

¹⁸ *N.M. Mining Ass'n v. N.M. Water Quality Control Comm'n*, 150 P.3d 991, 995 (N.M. Ct. App. 2006).

¹⁹ 19.15.17.11(F)(10) NMAC.

As noted in the previous comment, the Pit Rule is the result of a multi-year, multi-stakeholder process and each provision of the rule reflects a reasoned choice by the NMOCC. In the order adopting the original Pit Rule, the NMOCC found that 10 acre-feet is adequate to hold liquids used or generated during the drilling process.²⁰ The NMOCC also found that limiting volume to 10 acre-feet reduces the disturbance to the surface from temporary pits.²¹

The applicants' proposal would apply the standards for jurisdictional dams to temporary pits. Under 19.25.12.7 NMAC, the Office of the State Engineer ("OSE") evaluates whether an applicant's proposed impoundment qualifies as a jurisdictional dam. If the impoundment qualifies as a jurisdictional dam, it is then subject to the OSE's design requirements found in Title 19, Chapter 25, Part 12 of the NMAC. An impoundment qualifies as a jurisdictional dam if it has a perimeter berm 25 feet or higher and a volume of 15 acre-feet or more, or if it has a perimeter berm that is 6 feet or higher with a volume of 50 acre-feet or more.²² Thus, NMOGA's and IPANM's proposal seeks to allow operators to build substantially larger pits — up to five times the current volume limit — with no additional administrative approval, or even larger pits with a permit from OSE.²³

The Pit Rule applies the same volume limit to both temporary pits and permanent pits. When it originally adopted the Pit Rule, the NMOCC set the 10 acre-feet limit and deliberately rejected larger permissible volumes so as to avoid the need for operators to comply with two different sets of administrative requirements and obtain permits from the OSE for construction of a jurisdictional dam.²⁴ The NMOCC, considering the facts and circumstances, determined that it would be unreasonable to require operators to obtain permits from two separate state agencies. The applicants' proposal in this area would unnecessarily impose greater burdens on operators. Accepting this change could appear to be unreasonable in light of additional administrative burdens it would impose on the oil and gas industry.

Furthermore, incorporating the NMAC rules for jurisdictional dams is not consistent with the applicants' proposal, which focuses on the handling and disposal of E&P waste. These proposed changes go beyond operators' temporary storage needs and increase the surface disturbance from temporary pits by allowing for substantially larger pit construction. As noted in Comment 2, the New Mexico Constitution, the Oil and Gas Act, and the Pit Rule itself all share the goal of protecting the environment. The NMOCC must carefully scrutinize any proposal that threatens to expand the impacts of E&P waste handling and disposal. The proposed change to 19.15.17.11.F(10) NMAC represents unreasoned action with disregard for the facts and circumstances. R360 requests that the Commission reject the applicants' proposed change and leave 19.15.17.11.F(10) NMAC in its current form.

²⁰ New Mexico Oil and Gas Comm'n Order No. R-12939, 18 (May 9, 2008).

²¹ *Id.*

²² 19.25.12.7 NMAC

²³ These are the volume limits for jurisdictional dams found in 19.25.12.7 NMAC.

²⁴ New Mexico Oil and Gas Comm'n Order No. R-12939, 20 (May 9, 2008).

4. The term “onsite” should not be removed from standards for onsite burial trenches.

NMOGA’s and IPANM’s proposal deletes the word “onsite” from the requirements of 19.15.17.11.J NMAC for Onsite Burial Trenches. Deleting this word has the potential to expand the environmental impact of oil and gas operations and may encourage operators to locate burial trenches farther away from oil and gas wells. The farther a burial trench is located from the well that produces the E&P waste, the greater the cost of moving the waste and the greater the likelihood of spills (if transported by truck) or leaks (if transported by pumps or pipes). Any action that increases the likelihood of such contamination is not reasonably consistent with the Oil and Gas Act’s charge to the NMOCC to regulate the disposition of oil and gas wastes in a manner that protects the public health and the environment.

When it originally adopted the Pit Rule, the NMOCC explicitly determined that dispersed burial sites increases the number of sites where groundwater contamination may occur.²⁵ The NMOCC also determined that dispersed burial sites increase the number of sites that require regulatory oversight and make it more difficult to determine the source of any contamination.²⁶ An unintended consequence of the proposed change is that it will increase the regulatory oversight burden on the NMOCD. The proposed change may also inadvertently increase the burden on oil and gas operators.

Onsite burial ensures a single area for both NMOCD and operators to focus their compliance efforts. This minimizes the regulatory burdens on all parties. Based on all these reasons, the applicants’ proposal in this area does not properly consider the facts and circumstances, and adoption of this proposal without factual justification would be arbitrary and capricious. R360 suggests keeping the word “onsite” throughout 19.15.17.11.F(10) NMAC and defining it in 19.15.17.7 NMAC to mean: “within the boundaries of the lease and/or development plan where in exploration and production waste continues to be under the control and management of the operator/producer.” R360 also suggests that the size restriction of 10 acre-feet should be added to 19.15.17.11.F NMAC in order to remain consistent with the requirements for temporary and permanent pits as discussed in Comment 3 above.

5. The proposed maximum chloride concentration for “low chloride drilling fluids” should be substantially lower.

NMOGA’s and IPANM’s proposal includes relaxed siting requirements for pits containing “low chloride drilling fluids.” The applicant defines “low chloride drilling fluids” as fluid that contains less than 15,000 mg/liter of chlorides.” By reference, Texas defines low chloride drilling fluids as drilling fluids with a chloride concentration of 3,000 mg/l or less²⁷ and requires that reserve pits containing drilling fluids with a chloride concentration in

²⁵ *Id.* at 12.

²⁶ *Id.*

²⁷ 16 Tex. Admin. Code. §3.8(d)(3)(C).

excess of 6,100 mg/l be dewatered within 30 days and backfilled and compacted within one year of cessation of drilling operations.²⁸ Wyoming also uses 3,000 ppm²⁹ as a limit for chlorides in drilling muds. Wyoming rules state that “to protect shallow groundwater, drilling muds with chlorides in excess of 3,000 ppm of those containing hydrocarbons cannot be used in drilling operations until after the surface casing has been set.”³⁰

Leaching of chlorides from drilling fluid with a chloride concentration above 3,000 mg/l can negatively impact the soil and poses a potential threat to groundwater.³¹ As noted above, the New Mexico Constitution and the Oil and Gas Act both contain environmental protection goals. Additionally, when it originally adopted the Pit Rule, the NMOCC found that “protection of the environment is not limited to protection of fresh water and prevention of human exposure to toxic agents, but also includes protection of soil stability and productivity, agriculture, wildlife, biodiversity and, in appropriate circumstances, the aesthetic quality of the physical environment.”³² Additionally, during the hearing adopting the original Pit Rule, the NMOCC, Industry Committee,³³ and environmental group experts all agreed that chlorides will eventually leach from temporary pits and burial trenches and reach groundwater.³⁴ Considering the recognized risk of leaks from pits, and the potential issues associated with chloride contamination, the facts and the circumstances do not warrant such a high level for “low chloride drilling fluids.”

R360 believes that the proposed 15,000 mg/l limit is extraordinarily high and cannot be supported by science. The applicants’ proposal selects an arbitrary number without any reasoned, technical, or scientific support. If the NMOCC decides to adopt the “low chloride drilling fluids” concept, R360 suggests that maximum chloride concentration should be substantially lower than 15,000 mg/L. R360 suggests that the chloride limit should be only slightly higher than 3,000 mg/L, which is currently the limit for waste buried in on-site trenches,³⁵ but in any case no more than 6,000 mg/L.

R360 also recommends that the applicants’ term “low chloride drilling fluids” found in Proposed 19.15.17.7.I NMAC, be changed to “fresh water drilling fluids.” For the sake of clarity, R360 recommends that the definition for “fresh water drilling fluids explicitly state that “freshwater drilling fluids does not include hydrocarbon-based or synthetic/chemical-based drilling fluids.” Hydrocarbon-based and synthetic/chemical-based drilling fluids

²⁸ 16 Tex. Admin. Code. §3.8(d)(4)(G)(i)(II).

²⁹ The measurement of 1 ppm is equivalent to 1 mg/L.

³⁰ 55-4 Wyo. Code R. § 1(z) (2010).

³¹ Tex. Railroad Comm’n, *Pollution Potential and Statewide Regulation*, Surface Waste Management Manual, available at <http://www.rrc.state.tx.us/forms/publications/SurfaceWasteManagementManual/chapter3.php>.

³² New Mexico Oil and Gas Comm’n Order No. R-12939, 4 (May 9, 2008).

³³ The Industry Committee represented a group of oil and gas producers who operate wells in New Mexico during the hearing adopting the Pit Rule. *See id.* at 2.

³⁴ *Id.* at 12.

³⁵ *See* 19.15.17.13.F(3)(c) NMAC.

should not be eligible for the proposed relaxed siting standards for low chloride drilling fluids, regardless of their chloride content, because they contain other chemical compounds that could be harmful to the environment.

6. Steel tanks should continue to be required for hydrocarbon-based drilling fluids.

The applicants' proposal removes the existing requirement that operators use steel tanks or other NMOCD-approved methods to contain hydrocarbon-based drilling fluids.³⁶ Hydrocarbon-based drilling fluids are more toxic than water- and synthetic-based drilling fluids.³⁷ The increased risks hydrocarbon-based drilling fluids pose warrant additional protections beyond those the Pit Rule provides for temporary pits. Steel tanks provide this additional protection. Removing the requirement that operators contain hydrocarbon-based drilling fluids in steel tanks increases the risk of contamination to groundwater and soils.

As previously mentioned, the Oil and Gas Act directs the NMOCC to regulate the disposition of non-domestic wastes resulting from the exploration, development, and production of storage of crude oil or natural gas in a manner that protects the public health and the environment. When it originally adopted the Pit Rule, the NMOCC found that steel tanks were necessary to prevent the release of hydrocarbons into the environment.³⁸ Sampling conducted by the NMOCD in 2007 in areas surrounding pits found toxic levels of lead, arsenic, chromium, mercury, benzene, toluene, and dozens of other harmful chemicals.³⁹ Between the mid-1980s and 2003, the New Mexico Environmental Bureau recorded nearly 7,000 cases connecting pits to soil and water contamination. Additionally, the NMOCD released data in 2005 showing that close to 400 incidents of groundwater contamination had been documented from oil and gas pits.⁴⁰ Hydrocarbon-based drilling fluids contain many of the types of toxic chemicals that the Pit Rule is designed to protect against. Reducing the protections the Pit Rule provides from the potential risks associated with discharges of hydrocarbon-based drilling fluids is not consistent with the Oil and Gas Act or the previous findings of the NMOCC.

For these reasons, R360 recommends keeping the sentence in Section 19-15-17-12.B(1) NMAC, "[t]he operator shall use a tank made of steel or other material which the appropriate Division district office approves, to contain hydrocarbon-based drilling fluids." This is consistent with longstanding industry practices and recognizes the disposition or disposal of such waste as being regulated differently by rule. It is also consistent with the definition of "closed-loop system" found in 19.15.17.7.C NMAC.

³⁶ 19.15.17.12.B(1) NMAC.

³⁷ Dept. of Energy, *Environmental Benefits of Advanced Oil and Gas Production Technology*, DOE-FE-0385, 109 (1999), available at: http://www.osti.gov/bridge/product.biblio.jsp?osti_id=771125.) (comparing the environmental benefits of advanced (synthetic) drilling fluids with oil-based (hydrocarbon-based) drilling fluids).

³⁸ New Mexico Oil and Gas Comm'n Order No. R-12939, 26 (May 9, 2008).

³⁹ New Mexico Oil Conserv. Div., *Analytical Results of OCD's Pit Sampling Program* (2007), available at <http://www.emnrd.state.nm.us/ocd/environmental.htm>.

⁴⁰ *Id.*

7. The applicants' proposed maximum chemical concentrations for closure should not be adopted.

The applicants propose to change the chemical concentration limits in the closure criteria for soils beneath and for wastes left in place in pits, drying pads, and below grade tanks for benzene, Total Petroleum Hydrocarbons ("TPH") and chlorides.⁴¹ Benzene is a toxic chemical and known carcinogen. The benzene limit under the current Pit Rule's closure criteria is set at 0.2 mg/kg. NMOGA and IPANM propose to increase this limit to 10 mg/kg, regardless of the depth to groundwater, for both soils beneath and waste left in place in pits, drying pads, and below grade tanks. Benzene is a recognized threat to the public health for many different agencies. For example, Colorado requires that pits be constructed such that benzene concentrations in soil do not exceed a standard of 0.17 kg/mg, which certainly highlights concerns of regulators in that state when it comes to benzene.⁴² Additionally, under the federal Safe Drinking Water Act ("SDWA"), EPA's maximum contaminant level ("MCL") for benzene is set at 5 ppb (0.005 ppm).⁴³

The NMOCD currently provides a limit of 0.2 ppm, which is already 40 times less stringent than the MCL value. R360 understands and appreciates the differences between standards for drinking water and permissible benzene concentrations in soil, but the proposed limit of 10 mg/kg is 2,000 times higher than the SDWA standard. This standard endangers soil viability and productivity, and represents an unreasonable threat to groundwater supplies. The applicants' proposal would increase the benzene limit to 10 ppm without any scientific basis for choosing 10 ppm. In light of the carcinogenic effects of benzene and the documented history of benzene contamination associated with pits noted in Comment 6, neither the facts nor the circumstances warrant such an increase in the limits for the closure criteria for soils as related to benzene. Adoption of this increase without factual justification would be not only arbitrary and capricious but also inconsistent with the NMOCC's statutory charge to protect the public health and the environment.

NMOGA's and IPANM's proposal also seeks to establish new chloride concentrations 20 times greater than current limits for soils and 10 times greater than current limits for wastes left in place. The current 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 1,000 mg/kg where the depth to groundwater is greater than 100 feet. The applicants' proposal changes those limits to 10,000 mg/kg and 20,000 mg/kg, respectively. The environmental and contamination concerns associated with chloride levels previously discussed in Comment 5 also apply here. Adopting the proposed change would not be consistent with the Oil and Gas Act.

⁴¹ See Applicant's Proposal, 19.15.17.13 Table I.

⁴² See Colorado Oil and Gas Conserv. Commission R. 905(a)(1) (2011); see also *id.* at Table 910-1, available at http://cogcc.state.co.us/RR_docs_new/rules/900Series.pdf.

⁴³ 40 C.F.R. 141.61 (2011).

Furthermore, the current limits for chloride in soils reflect the NMOCC's Surface Waste Management rules and should not be changed.⁴⁴ The NMOCC previously determined that when a land farm is closed, the treated soils can be left in place without endangering groundwater when the soil has a chloride concentration that does not exceed 500 mg/kg and the depth to ground water is between 50 and 100 feet.⁴⁵ The NMOCC also determined that 1,000 mg/kg chloride concentration was appropriate where the depth to groundwater was greater than 100 feet. The NMOCC carefully considered the facts and the circumstances involved when it originally adopted the Pit Rule's chloride concentration limits. The applicants have provided no additional evidence to justify such dramatic increases in the chloride limits. R360 does not believe the standards shown in the applicants' proposed 19-15-17-13 Table I and II are science based or reasonable. R360 therefore recommends that the NMOCC reject these changes in their entirety.

⁴⁴ See 19.15.36.F-G NMAC. See also New Mexico Oil and Gas Comm'n Order No. R-12939, 12 (May 9, 2008).

⁴⁵ New Mexico Oil and Gas Comm'n Order No. R-12939, 12 (May 9, 2008).