# STATE OF NEW MEXICO ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT OIL CONSERVATION COMMISSION

IN THE MATTER OF THE APPLICATION OF THE NEW MEXICO OIL AND GAS ASSOCIATION FOR AMENDMENT OF CERTAIN PROVISIONS OF TITLE 19, CHAPTER 15 OF THE NEW MEXICO ADMINISTRATIVE CODE CONCERNING PITS, BELOW GRADE TANKS, CLOSED LOOP SYSTEMS AND OTHER ALTERNATIVE METHODS TO THE FOREGOING, AND AMENDING OTHER RULES TO CONFORMING CHANGES STATEWIDE.

CASE NO. 14784 14785

# Oil and Gas Accountability Project Proposed Findings of Fact, and Conclusions of Law

## FINDINGS OF FACT

- 1. No evidence in the record established any reason, other than for the alleged convenience and financial gain of oil and gas operators, for amending or reconsidering the Pit Rule. Gantner testimony, Tr. at 66-67, 1783-1784; Testimony of Larry Scott, Tr. at 1657-1659; Testimony of Kelly Campbell, Tr. at 1789; Mullins testimony at 1393-1394; Fanning testimony, Tr. at 369.
- 2. No evidence in the record demonstrated that the proposed amendments are necessary or required, to protect public health, the environment, or fresh water supplies in accordance with the Commission's duties.
- 3. No evidence in the record demonstrates that the proposed amendments, which are in effect substantially the same as the previously repealed Rule 50, will provide adequate protection for public health, the environment or fresh water supplies. *See*, Mullins testimony at 1330-1331.

- 4. Similarly, no evidence in the record demonstrates that the proposed amendments are necessary or required to protect soil productivity and stability, agriculture, wildlife, biodiversity or the aesthetic quality of the physical environment.
- 5. No evidence in the record establishes that the Pit Rule has resulted in any oil or gas resource being permanently undeveloped, i.e., wasted.
- 6. Therefore, Petitioners NMOGA and IPANM have failed to demonstrate that their proposed amendments are needed or required to prevent waste.
- 7. No evidence in the record establishes that the Pit Rule has resulted in any oil or gas operator being prevented from developing their full share of a resource in a common pool, i.e., infringement on a correlative right. NMOGA and IPANM have therefore failed to demonstrate that their proposed amendments are needed or required to protect correlative rights.
- 8. No evidence in the record establishes that oil and gas operators are unable to comply with the Pit Rule's current requirements.
- 9. Substantial evidence in the record fails to establish that the proposed performance based standards, for example, NMOGA's proposed revisions to 19.15.17.11.F.(2) governing design and construction of temporary pits, which requires only that pit side slopes do not place "undue" stress on the liner and are "consistent" with the angle of repose, will provide protection for fresh water, human health, and the environment, that is superior to the current Pit Rule or even adequate protection. *See also, e.g.*, NMOGA proposed 19.15.17.J.(2) (multi-well pits must construct the pit so no "undue" stress is placed on the liner and the slope is "consistent" with the angle of repose); 19.15.17.J.(9) (multi-well pit leak detection systems must be designed to "adequately" detect a leak); 19.15.17.13.B.(4) (pits closed on-site must have their contents solidified to a bearing capacity "sufficient" to support the pit's final cover). The Commission

previously found such performance-based standards were inadequate to protect fresh water, human health, and the environment, and the Petitioners provided no evidence that their proposed performance-based standards. *See*, Order No. R-12393, Case No. 14015 ("Pit Rule Order") at ¶ 18. Neither Petitioner has presented evidence demonstrating that the Commission's prior finding is unnecessary or fails to protect fresh water, human health, or the environment.

- 10. NMOGA and IPANM witnesses testified to the increased costs allegedly associated with complying with the Pit Rule, but neither Petitioner provided any itemized documentation of costs.
- 11. Neither Petitioner presented evidence, or even considered, the long term costs or savings associated with the Pit Rule or use of closed loop systems.
- 12. Oil and Gas Accountability Project expert witness Mary Ellen Denomy provided testimony of savings associated with using closed loop systems, which the Pit Rule incentivizes and in some cases requires. Testimony of Mary Ellen Denomy, Tr. at 992-996; OGAP Exhibit 2, slides 12, 17.
- 13. Substantial evidence in the record demonstrates, and the Commission so found in adopting the Pit Rule, that damage to a pit or trench liner can provide a pathway for fluids to escape from the pit or trench, which may contaminate soils or fresh water. Testimony of Kathy Martin, Tr. at 2210, 2213, 2217, 2219, 2222; OGAP Ex. 6a, 6c, 6e, 6f, 6g; Pit Rule Order ¶ 112, ¶ 154; see also, Case No. 14015, Division Exhibit 13C; Testimony of Mike Bratcher, Tr. at 2222.
- 14. Further, neither Petitioner provided evidence to demonstrate that pit and trench liners have been or would be installed perfectly, and there will therefore likely be hundreds of

dispersed and unmonitored pit and trench burial sites if the Commission adopts NMOGA's and IPANM's proposed amendments.

- 15. Substantial evidence demonstrates that improperly installed liners are commonplace. Testimony of Kathy Martin, Tr. at 2210, 2213, 2217, 2219, 2222; OGAP Ex. 6a, 6c, 6e, 6f, 6g; Division Exhibit 13C, Case No. 14015; Case No. 14015, Testimony of Michael Bratcher, Tr. at 2163, 2170, 2178-2179; Case No. 14015, Testimony of Brandon Powell, Tr. at 2098, 2105, 2108-2109, 2111
- 16. Substantial evidence in the record demonstrates, and the Commission so found in adopting the Pit Rule, that pit wastes over time will leach to groundwater from lined pits and trenches. Martin testimony at 2151; OGAP Ex. 6a, 6c, 6e, 6f, 6g; Pit Rule Order at ¶ 74. *See also*, Case No. 14292, Division Exhibit 8, pp. 7-16; Case No. 14015, Division Exhibit 21.
- 17. On-site waste burial in a pit or trench is permanent and the wastes contained in the pit or trench do not become less toxic over time.
- 18. Nothing in the Pit Rule or the proposed amendments requires the Division to inspect pit or trench liners, or to supervise liner installation before waste is buried on-site.

  19.15.17.13 NMAC; NMOGA Attachment A, 19.15.17.13; IPANM Ex. A, § 19.15.17.13.
- 19. Neither the Pit Rule nor the proposed amendments require those who install liners have any certification or particular education or training. *Id.*
- 20. Nothing in the Pit Rule or proposed amendments requires the operator to install leak detection systems at on-site burial locations, nor do they require the operator to monitor or inspect the site for releases after closure. *Id*.

- 21. The proposed waste concentration triggers for testing are so high that most pits will not require further action and enforcement will be impossible. Martin testimony, Tr. at 2178-2181, 2194-2195; *see also*, Case No. 14015, Testimony of Wayne Price, Tr. at 402-403
- 22. Neither the Pit Rule, the proposed amendments, nor any other law, prohibits a surface estate owner or other person from using the surface area over an on-site burial location in ways that could damage the pit or trench liner or otherwise cause a release from the pit or trench. Such damaging uses may include driving and parking vehicles, building surface structures, drilling wells, and trenching for utility corridors. 19.15.17.13 NMAC; NMOGA Attachment A, § 19.15.17.13; IPANM Ex. A, § 19.15.17.13.
- 23. Neither the Pit Rule, the proposed amendments, nor any other law prohibits the surface estate owner or other persons from drilling water wells immediately down gradient from an on-site burial location. *Id*.
- 24. In adopting the Pit Rule, the Commission found that on-site burial of oil field wastes should be minimized because of threats to fresh water, public health and the environment, and because centralized waste management was preferable to thousands of waste sites throughout New Mexico. Pit Rule Order at ¶ 74.
- 25. No evidence in the record indicates this policy of minimizing on-site closure was ill-advised, improper, or that it otherwise should be reversed.
- 26. In adopting the Pit Rule, the Commission found that the decision to authorize onsite closure should be based on the waste concentrations in the waste and site specific information. Pit Rule Order at ¶ 71.
- 27. No evidence in the record demonstrates this conclusion is incorrect, improper, or should be reversed.

- 28. In adopting the Pit Rule, the Commission found that the concentrations of waste leachate determined whether pit or trench wastes pose a risk to public health or the environment. Pit Rule Order at 13, ¶ 78; 32, ¶ 204; Case No. 14015, Tr. at 5424-5425.
- 29. The Commission's finding was based primarily on the testimony of Dr. Ben Thomas. Case No. 14015, Tr. at 5424-5425.
- 30. Dr. Thomas testified in this proceeding on NMOGA's behalf and offered substantially identical testimony. Thomas testimony, Tr. at 475-476.
- 31. No evidence in the record, therefore, demonstrates the Commission's conclusion in the Pit Rule is incorrect, improper, or should be reversed.
- 32. Because waste leachate will eventually reach groundwater, in adopting the Pit Rule, the Commission found that as long as waste concentrations for on-site closure in a pit or trench are below levels that would result in contamination, as required by NMAC §§ 19.15.17.10 and 19.15.17.13.F, protection of fresh water, public health, and the environment is assured. Pit Rule Order at ¶ 205.
- 33. IPANM witness Mr. Tom Mullins provided testimony and modeling suggesting that pit waste would not reach groundwater in concentrations exceeding § 3103 standards for hundreds or thousands of years, if ever. Mullins testimony, Tr. at 1406-1408; IPANM Ex. 6, slide 9.
- 34. Mr. Mullins' model relied on many of the same input assumptions for his HELP model as did the Division in its modeling for the Pit Rule in 2007. Mullins testimony, Tr. at 1438.
- 35. However, Mr. Mullins testified that he changed assumptions about infiltration rates and mixing zone size. *Id.*

- 36. Mr. Mullins testified he relied on the infiltration rate proposed by Dr. Daniel Stephens in the proceeding to adopt the Pit Rule. Mullins Testimony, Tr. at 1347-1348.
- 37. Mr. Mullins testified that he could have, but did not, verify his model results with real world data of groundwater contamination from pits or trenches. *Id.*, Tr. at 1449.
- 38. During deliberations on the Pit Rule, Commissioners Olson and Bailey agreed that contaminant transport models were only useful when verified against real world data. Case No. 14015, Tr. at 5024-5025.
- 39. In the 2007 Pit Rule proceeding, Mr. Mullins testified his contaminant transport modeling experience was limited to preparing for that proceeding. Case No. 14015, Tr. at 3210.
- 40. Mr. Mullins conceded in 2007 that he was not an expert in groundwater modeling, including as it pertains to contaminant transport or delineating mixing zones. Case No. 14015, Tr. at 3256, 3262.
- 41. In the current proceeding, Mr. Mullins testified that the only additional modeling experience he gained since 2007 was in preparation for the current proceeding. Mullins testimony, Tr. at 1327.
- 42. Mr. Mullins failed to model transport of any contaminant present in pits aside from chlorides. Mullins testimony, Tr. at 1449.
- 43. Mr. Mullins also failed to present evidence of contaminant transport modeling in the absence of a liner, but guessed that absence of a liner would only cause contaminants to arrive at groundwater 100 years earlier. Mullins testimony, Tr. at 2027.
- 44. Mr. Mullins' testimony was not credible and his modeling results were not useful because Mr. Mullins's assumptions were unreasonable and his conclusions were not verified by real world data, even though they could have been.

- 45. The only additional testimony provided with respect to the risks associated with pit contaminants was provided by Dr. Thomas.
- 46. Dr. Thomas testified there was little risk to public health (but did not address risk to the environment) from the Petitioners' proposed waste concentration standards. Thomas testimony, Tr. at 467; NMOGA Ex. 11, slides 17-18.
- 47. However, as Dr. Thomas conceded, this testimony was not substantially different from the testimony he presented to the Commission in the 2007 Pit Rule proceeding. Thomas testimony, Tr. at 475-478.
- 48. The Commission implicitly rejected Dr. Thomas' 2007 testimony about risk to public health, except to the extent that it found that contaminants in leachate were important, when it concluded that pit and trench waste leachate must meet the surface waste standards in 19.15.36 NMAC. Pit Rule Order ¶ 75-77.
- 49. Nothing in the record indicates that the proposed amendments will protect fresh water for reasonably foreseeable future use, which under Division precedent may occur thousands of years in the future and is never considered less than 200 years in the future.
- 50. Moreover, nothing in the record supports a finding that the "reasonably foreseeable future" should be universally defined by or limited to any particular time horizon with respect to the Pit Rule or the proposed amendments.
- 51. Petitioners failed to conduct any studies or produce any data to support their proposed changes in pit siting criteria.
- a. NMOGA witness Dan Arthur testified that he did not base his conclusion that the proposed siting requirements for depth to groundwater would protect public health and

the environment on any contaminant transport modeling, but instead reviewed the Daniel B. Stephens model used in the 2007 Pit Rule proceeding. Tr. at 629.

- b. Mr. Arthur further conceded that his conclusion that the setbacks in the siting requirements were sufficient was not based on any data or studies, but his anecdotal experience. Tr. at 646.
- c. Finally, Mr. Arthur conceded that none of his testimony was based on scientific analysis. Tr. at 672.
- d. NMOGA witness Bruce Buchanan testified that he was not competent to offer an opinion on whether the proposed siting requirements were sufficient to protect human health and the environment. Tr. at 933-934.
- e. Dr. Buchanan also testified that he had no data on whether the proposed siting requirements are sufficient to protect waterways or wetlands. *Id.*
- f. NMOGA witness Mike Lane testified that he had not done any analysis on the cost differences between the siting requirements for temporary pits and permanent pits. Tr. at 292.
- 52. The Commission has previously rejected similar siting requirements proposed by the oil and gas industry. Pit Rule Order, ¶ 63.
- 53. Substantial evidence in the record does not support any distinction between "confined" and "unconfined" groundwater. The definition of "confined groundwater" should be rejected and all distinctions between "confined" and "unconfined" groundwater should be eliminated.
- 54. IPANM witness Tom Mullins testified that the distinction between "confined" and "unconfined" groundwater was to ensure that depth to groundwater at a particular site was

accurately reflected and not the result of water rising in a well. Mullins testimony, Tr. at 1414.

- 55. Making a distinction between "confined" and "unconfined" groundwater does not address this problem.
- 56. In its Order adopting the Pit Rule, this Commission found that temporary pits were intended to "collect or hold fluids in or generated during the drilling or workover of an oil or gas well" and were intended to be operational for only short time periods. Pit Rule Order, ¶¶ 29, 30, and 47.
- 57. The Commission further found that because of their long term nature, permanent pits should be designed and constructed similar to evaporation ponds and should have similar specific technical design standards. *Id.*, ¶¶ 106-117.
- 58. The Commission further found that permanent pits' volume should not exceed 10 acre feet to avoid conflict with the Office of the State Engineers' jurisdictional dam requirements. *Id.*, ¶ 116.
- Based on testimony offered during this proceeding, it is evident that multi-well fluid management pits are intended to remain operational for many years, service a large number of wells, and hold very large volumes of fluids. Mike Lane testimony, Tr. at 236, 246, 275; Dan Arthur testimony, Tr. at 543, 544, 643; Larry Scott testimony, Tr. at 1678; Ed Martin testimony, Tr. at 1935; Mary Ellen Denomy testimony, Tr. at 992; Kathy Martin testimony, Tr. at 2155-2156.
- 60. Based on the insufficiency of evidence in the record on the design and operational aspects of multi-well fluid management pits, and the virtual absence of evidence in the record on the environmental and public health impacts of multi-well fluid management pits, the

Commission has no basis to promulgate rules that adequately address the technical, environmental, and public health impacts of those pits.

- 61. Alternatively, because of the long term nature of multi-well fluid management pits, the Commission should find that those pits are most analogous to permanent pits and adopts the design (19.15.17.11.G), operational (19.15.17.12.C), siting (19.15.17.10), and closure (19.15.17.13.C) requirements for permanent pits contained in the current Pit Rule to apply to multi-well fluid management pits.
- 62. The angle of repose is an insufficient slope design to ensure that pit liners will not rip or tear due to stress. Martin testimony, Tr. at 2165-2166.
- 63. The safety factor is a more appropriate way to design the slope of a pit to ensure liner integrity. *Id.*
- 64. The safety factor is determined by evaluating site-specific soil characteristics and specific liner characteristics. *Id.* at 2166.
- 65. In the 2007 Pit Rule, the Commission found that pit wastes would invariably leach from a pit and reach groundwater. Pit Rule Order, ¶ 73.
- 66. The Commission further found that since waste would eventually reach groundwater, waste should be treated to levels that will not result in groundwater contamination. Pit Rule Order, ¶ 74.
- 67. The Commission's also determined that greater waste concentrations could be allowed the further the waste was located from groundwater sources. Pit Rule Order, ¶¶ 75-77.
- 68. The industry's proposed waste concentrations in section 19.15.17.13, Tables 1 and 2 are significantly higher than the waste concentrations currently allowed by the Pit Rule.

- 69. Neither NMOGA nor IPANM presented any credible evidence to demonstrate that the proposed increased waste concentrations would protect fresh water, human health, or the environment, as required by the Act and Commission's regulations.
- 70. Industry's proposed waste concentrations in Table I are so high that if a leak from a pit is detected, almost no circumstances would exist where an operator would be required to conduct further sampling for contamination or where abatement would be required. Martin testimony, Tr. at 2178-2181; Case No. 14015, Testimony of Wayne Price, Tr. at 402-403.
- 71. Neither Petitioner presented any evidence about the cumulative impacts on the environment, fresh water or public health their proposed changes to waste concentrations would have.
- 72. Neither NMOGA nor IPANM presented any credible evidence to demonstrate that the waste concentration limits currently in the Pit Rule are insufficient, unnecessary, or should be changed
- 73. Surface owners provided testimony that the current Pit Rule is effective.

  Testimony of Carl Johnson, Tr. at 113; Testimony of Phil Bidegain, Tr. at 872-873; Testimony of Irvin Boyd, Tr. at 1181-1183; Testimony of Jose Varela Lopez, Tr. at 1548-1550.

### CONCLUSIONS OF LAW

1. The Commission adopted the Pit Rule in May 2008 pursuant to its environmental powers, principally its power under NMSA 1978, § 70-212(15) (2004) to regulate the disposition of produced water "in a manner that will afford reasonable protection against contamination of fresh water supplies" and its power under NMSA 1978, § 70-212(21) (2004) to regulate the disposition of oil field waste "to protect public health and the environment." Pit Rule Order at ¶ 16.

- 2. The purpose of the Pit Rule is, among other things, to protect "fresh water, public health, and the environment." Pit Rule Order at ¶ 16; NMAC §§ 19.15.17.7(C), 19.15.17.10(C)(11), 19.15.17.11(A), 19.15.17.12(A)(1), and 19.15.17.13(A).
- 3. An important purpose of the Pit Rule, moreover, is to prevent water contaminants from reaching fresh water in excess of the groundwater quality standards set out at NMAC §§ 20.6.2.3103 (A), (B), and (C) ("§ 3103 standards"). NMAC § 19.15.17.13(F)(3); see also, § 19.15.30.9(B)(2) (abatement standards).
- 4. "Fresh water" must be protected for present and reasonably foreseeable future use, and the term "reasonably foreseeable" generally means "a time period of not less than 200 years in the future, and ... [may] mean much longer times (thousands of years)." OCD Order No. R-3221-D; see also, 19.15.2.7(E)(3) NMAC; 19.15.30.9(B) NMAC.
- 5. Protection of the environment is not limited to protection of fresh water and prevention of 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. Pit Rule Order at ¶ 17.
- 6. Any amendment or reconsideration of the Pit Rule must be consistent with the Commission's statutory authority and purpose in adopting the original Pit Rule.
- 7. In adopting, reconsidering, or amending regulations, the Commission cannot act "fraudulently, arbitrarily or capriciously." SCRA 1986, 1-075(R)(1).
- 8. The Commission must act "in accordance with law" and within its scope of authority, and its final decision must be supported by "substantial evidence" in the record. *Id.* at 1-075(R)(2)-(4).

- 15. The Commission therefore has no general authority to restrict land use or prevent surface estate owners or others from building permanent structures on trench or in place pit disposal sites or making other use of the surface as the law may allow.
- 16. Oil and gas lessees and operators do not own the subsurface pore space and generally have no right under an oil and gas lease to use another's land for permanent disposal of toxic wastes.
- 17. The Commission has no statutory authority to take private property or to authorize operators to use another's land for waste disposal.
- The Commission has no statutory authority to adopt a rule for the purpose of reducing costs for operator or oil and gas lessees, and such a purpose would be inconsistent with the state purposes of the Pit Rule and the Oil and Gas Act. *See*, NMSA 1978, § 70-2-12; *cf*. *Public Svc. Co. v. N.M. Envtl. Improvement Bd.*, 89 N.M. 223, 227, 549 P.2d 638, 643 (Ct. App. 1976) (holding that the Environmental Improvement Board had no authority to adopt a regulation based on perceived need to allow "more room" for economic development.).
- 19. The Pit Rule allows the Division to grant exceptions to most of the Rule's requirements, based on site specific conditions, including requirements relating to on-site pit closure and trench burial. 19.15.17.15 NMAC.
  - 20. The proposed amendments to the Pit Rule are therefore unnecessary.
- 21. The Commission can adopt modifications of the rulemaking proposal before it, whether such proposed modifications are made by the applicant or members of the Commission during or after the hearing, provided the modified proposal is a logical outgrowth of the original proposal. Pit Rule Order at ¶ 21.

- 22. Because the Pit Rule and chloride standard amendment are currently under appeal, the Commission lacks jurisdiction to adopt the proposed amendments until the District Court has ruled on the pending appeals.
- 23. Given the formality of the Commission's rulemaking process, it is consistent with Legislative intent for the Commission to apply the doctrines of res judicata, collateral estoppel and judicial estoppel to the Commission's rulemaking cases.
- 24. Based on the doctrines of res judicata and collateral estoppel, Petitioners are precluded from presenting the same arguments and evidence that they provided, or could have provided, to the Commission in the 2007 Pit Rule proceeding (Case No. 14015) and chloride standard amendment proceeding (Case No. 14292).
- 25. Based on the doctrine of judicial estoppel, NMOGA and IPANM are precluded from advocating the reconsideration of the Pit Rule after failing to persuade the Commission to reconsider the Pit Rule in Proceeding #1 or Proceeding #2.
- 26. It is contrary to legislative intent under the Oil and Gas Act and contrary to sound public policy (and therefore arbitrary, capricious, an abuse of discretion, and not in accordance with law) for the Commission to reconsider a regulation based on the same disputed evidence and arguments that it heard when it originally adopted the regulation.
- 27. The notice provided for multi-well fluid management pits was inadequate to reasonably inform the public of the issues to be presented with respect to that topic.
- 28. Substantial evidence in the record does not support IPANM's proposed revisions requiring that variances from any regulation should be automatically granted if the Division fails to act on a variance application.

29. For all the foregoing reasons, NMOGA's and IPANM's petitions should be denied.

Submitted this 17<sup>th</sup> day of September, 2012.

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### CERTIFICATE OF SERVICE

I hereby certify that on this 8<sup>th</sup> day of May, 2012, I have delivered a copy of the foregoing pleading in the above-captioned case via electronic mail and/or US Mail, First Class to the following:

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