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

IN THE MATTER OF THE APPLICATION OF THE NEW MEXICO OIL CONSERVATION DIVISION FOR REPEAL OF EXISTING RULE 50 CONCERNING PITS AND BELOW GRADE TANKS AND ADOPTION OF A NEW RULE GOVERNING PITS, BELOW GRADE TANKS, CLOSED LOOP SYSTEMS AND OTHER ALTERNATIVE METHODS TO THE FOREGOING, AND AMENDING OTHER RULES TO MAKE CONFORMING CHANGES; STATEWIDE

Case No. 14015
Order No. R-12939

ORDER OF THE OIL CONSERVATION COMMISSION

BY THE COMMISSION:

THIS MATTER came before the Oil Conservation Commission (Commission) for consideration on October 22, 2007; November 5 through 9, 13 through 16, 26, 27, and 30, 2007; December 3, 4, 6, 7, 10, and 14, 2007; February 14, 2008; March 12 and 13, 2008; and April 16, 2008; and the Commission, having carefully considered the evidence, the pleadings, comments, and other materials submitted in support of and in opposition to the proposal, now, on this 9th day of May, 2008,

FINDS THAT:

1. NMSA 1978, Sections 70-2-11 and 70-2-12(B) grant the Oil Conservation Division (Division) authority to implement rules to carry out the purposes of the Oil and Gas Act, Chapter 70, NMSA 1978 Article 2 (the Act). NMSA 1978, Section 70-2-6(B) provides that the Commission shall have concurrent jurisdiction or authority with the Division to the extent necessary for the Commission to perform its duties. Generally, the Commission adopts rules, the Division implements those rules, and the Commission hears any final administrative adjudicatory proceedings.

2. This is a rulemaking proceeding the Division initiated for the purpose of the repeal of existing rule 19.15.2.50 NMAC concerning pits and below-grade tanks and the adoption of a new rule, 19.15.17 NMAC, governing pits, below-grade tanks, closed-loop systems, and sumps as well as amending other rules to make conforming changes.

3. Notice was given of the application and the hearing of this matter, and the Commission has jurisdiction of the parties and the subject matter herein.

4. At the conclusion of the hearing, on December 14, 2007; February 14, 2008; March 12 and 13, 2008; and April 16, 2008 the Commission deliberated in open session by reviewing the proposed rule changes and voting to accept the rules with certain changes by the Commission. The following Statement of Reasons indicates the Commission's analysis of certain key provisions and of the entire proposal. Additional reasons are included in the hearing transcript of the Commission deliberations.

Background of this Proceeding and the Division's Proposal

5. The Division applied to the Commission to adopt proposed changes to the Division's rule concerning pits and below-grade tanks presently codified as 19.15.2.50 NMAC and proposed that the revised rule be re-codified as 19.15.17 NMAC. The Division also proposed revisions to certain definitions set forth in 19.15.1.7 NMAC and to 19.15.1.21 NMAC, 19.15.2.52 NMAC, 19.15.3.114 NMAC, 19.15.4.202 NMAC, and 19.15.13.1103 NMAC. These changes were made to clarify the intent of the proposed rules, and to reflect and conform to the proposed repeal of 19.15.2.50 NMAC and adoption of 19.15.17 NMAC.

6. During the hearing witnesses and members of the Commission occasionally suggested revisions to portions of the proposal. At the conclusion of the hearing, the Commission directed the parties to file a redline draft indicating all their recommended changes to the Division's proposal.

Participants in the Hearing

7. At the hearing, the Division appeared through counsel and presented testimony in support of its proposal. The Industry Committee (a group of oil and gas producers who operate wells in New Mexico), the New Mexico Oil and Gas Association (NMOGA), ConocoPhillips Company, Dugan Production Company, and Energen Resources Company appeared through counsel and offered evidence in opposition to portions of the proposal and in support of their respective alternative proposals. Yates Petroleum appeared through counsel and offered evidence in opposition to portions of the proposal and in support of its respective alternative proposal. The Independent Petroleum Association of New Mexico (IPANM) also appeared through counsel and offered evidence in opposition to portions of the proposal and in support of its respective alternative proposal. The New Mexico Citizens for Clean Air and Water, Inc. (NMCCA) appeared through counsel and an accredited representative, and offered evidence in support of portions of the Division's proposal and in support of certain alternative proposals. The Oil and Gas Accountability Project (OGAP) appeared through counsel and offered evidence in support of portions of the Division's proposal and in support of certain alternative proposals. Controlled Recovery, Inc. (CRI), an operator of an existing permitted surface waste management facility, appeared through counsel and provided certain alternative proposals.

8. In addition, numerous other individuals and organizations presented written or oral comments at the hearing.

The Evidence

9. The Division presented the testimony of Wayne Price, Environmental Bureau Chief; Edward J. Hansen, hydrologist; Carl J. Chavez, environmental engineer; Brad Jones, environmental engineer; Glenn von Gonten, senior hydrogeologist; Brandon Powell, environmental specialist; and Mike Bratcher, field supervisor. Mr. Price testified as an expert environmental engineer and as the Division's chief environmental officer. He testified about unlined pits, and infiltration, and delineation of contamination from pits. Mr. von Gonten testified concerning the hydrogeology of exempt and vulnerable areas, pit content sampling, and oil field waste management. Mr. Hansen testified about modeling of the transport of chloride and other constituents. Mr. Jones testified about the proposed rule, pit and below-grade tank standards, and the task force report. Mr. Chavez testified about pollution prevention and liner specifications. Mr. Powell and Mr. Bratcher testified about temporary pit liner failures and tears, and contamination found underneath temporary pits.

10. The Industry Committee presented the testimony of Dr. Daniel B. Stephens, a hydrogeologist; Dr. Bruce A. Buchanan, a soil physicist; and Dr. Ben Thomas, III, a toxicologist, who testified as experts in their respective fields. Dr. Stephens testified about the transport through soils to ground water of chloride mass from temporary pits used in oil and gas operations. Dr. Buchanan testified about movement of salts in soils and how these processes relate to salt migration in reconstructed soils associated with pit reclamation. Dr. Buchanan also testified concerning reclamation and re-vegetation of disturbed areas. Dr. Thomas explained principals of risk-based regulation and discussed management of risks incident to contaminants in temporary pits.

11. ConocoPhillips presented the testimony of J. Gregg Wurtz, hydrologist, and John W. Poore, reservoir engineer. Mr. Wurtz testified about the results of sampling conducted of temporary pit contents for pits located in northwestern New Mexico. Mr. Poore testified concerning the costs of closed-loop systems and digging and hauling of drilling waste.

12. The IPANM presented the testimony of Samuel Small, petroleum and environmental engineer; Al Springer, engineer; Tyson Foutz, petroleum engineer; Thomas E. Mullins, engineer; and John Byrom, President of D. J. Simmons, Inc. Mr. Small testified concerning operational costs associated with dig and haul of waste and use of closed-loop systems. Mr. Springer compared the technology of drilling using temporary pits to drilling using closed-loop systems. Mr. Foutz testified about closed-loop drilling and associated costs. Mr. Mullins testified concerning closed-loop systems, samples taken from pits in northwestern New Mexico, salinity profiles, and drilling of coal bed methane wells. Mr. Byrom testified about safety concerns and economic impacts of the proposed rule.

13. The NMCCAW presented the testimony of Dr. Donald Neeper, physicist, who described research he had done regarding movement of salts in soils and modeling

of moisture flow above and beneath buried waste. Dr. Neepor also presented data regarding the salt tolerance of plants and the effects of salt-induced osmotic pressure.

14. The OGAP presented the testimony of Dr. Theo Colburn, an environmental health analyst, and Mary Ellen Denomy, an oil and gas accountant. Dr. Colburn testified about chemicals, including heavy metals, which based upon publicly available data could be present in pits in New Mexico and the possible health effects of those chemicals. Ms. Denomy testified about the economic competitiveness of closed-loop systems with temporary pits and reviewed government and industry reports that evaluated the economic costs and benefits of temporary pits and closed-loop systems.

15. The particulars of the testimony, to the extent necessary to explain the Commission's conclusions, are set forth separately in connection with the discussion of each proposed rule section and subsection.

General Findings and Conclusions

16. The Commission and the Division have the authority, pursuant to NMSA 1978, Section 70-2-12.B(15), as amended, to regulate the disposition of produced water, and, pursuant to Section 70-2-12.B(21) to regulate the disposition of nondomestic wastes resulting from oil and gas industry operations including exploration, development, production, or storage to protect fresh water, public health, and the environment.

17. 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.

18. The current rule, 19.15.2.50 NMAC, is based upon performance standards. The performance standards do not provide specific technical standards for the Division to enforce or for the regulated industry to follow. For example, 19.15.2.50 NMAC provides that an operator must use a pit liner that prevents contamination of fresh water or harm to the public health or environment. It provides no standards for the type of liner that the operator must use. Tr. 65. The lack of specific technical standards makes enforcement difficult and requires more staff resources and time because of potential disagreements between the operator and the Division about whether the operator has met the performance standard. Tr. 63 through 65, 429, 485, and 486.

19. Rule 1204.C of the Commission's procedural rules addresses proposed changes to a rulemaking proposal before the Commission. It states, in material part:

Modifications to proposed rule changes.

(1) Any person, *other than the applicant or a commissioner*, recommending modifications to a proposed rule change shall, no later than 10 business days prior to the scheduled hearing date,

file a notice of recommended modifications with the commission clerk.
[Emphasis added]

Consistent with this rule, commissioners or the applicant (in this case the Division) could propose modifications to the original proposal at any time during the hearing process, until adoption of a final order by the Commission, and the Commission has power to consider all such proposed changes.

20. Rule 1205.E(3) states, in material part:

(3) The commission shall issue a written order adopting or refusing to adopt the proposed rule change, or adopting the proposed rule change in part. . .

21. The Commission concludes that the phrase "adopting the proposed rule in part," refers to substance, not particular language. Any other construction would lead to absurd results since the Commission would be without power to correct even clerical mistakes in a proposal. Thus, the Commission concludes that it can, consistent with this provision, adopt modifications of the proposal before it, proposed by the applicant or members of the Commission during or after the hearing, so long as the modified proposal is a logical outgrowth of the original proposal.

22. All of the changes offered by the parties and made by the Commission to the Division's proposed rule are logical outgrowths of the Division's proposal and proposals made by other parties to the hearing.

19.15.17.7 NMAC: Definitions.

23. 19.15.17.7 NMAC includes definitions of terms used only in 19.15.17 NMAC.

24. The terms defined include alluvium, closed-loop system, division-approved facility, emergency pit, permanent pit, restore, significant watercourse, sump, and temporary pit.

25. The definitions of alluvium and emergency pit are contained in the current rule governing pits and below-grade tanks, 19.15.2 NMAC. Tr. 859, lines 5 and 6; Tr. 862, lines 16 and 17.

26. The definition for closed-loop system is new because 19.15.2.50 NMAC did not address closed-loop systems. Closed-loop systems are systems that use above ground steel tanks for the management of drilling or workover fluids without the use of below-grade tanks or temporary pits. Like temporary pits, which are discussed below in Paragraph 30, closed-loop systems are used to collect or hold fluids used in or generated during the drilling or workover of an oil or gas well but do so through the use of tanks instead of excavated surface impoundments. Prior to the hearing, the Industry Committee

proposed that the definition of closed-loop system be modified to include the management of solids. Management of solids, however, may vary and may include the use of a pit or a drying pad. Tr. 859, 860, and 861.

27. The definition for Division-approved facility is also new. It means a Division-permitted surface waste management or injection facility, a facility permitted pursuant to 20.6.2 NMAC, a facility approved pursuant to 19.15.9.712 NMAC, or other facility the Division approves for a specific purpose. Prior to the hearing, the Industry Committee and others proposed that small landfarms registered pursuant to 19.15.36 NMAC (the surface waste management rule) be included as a Division-approved facility. Small landfarms are not included because there are limitations on the types of waste that small landfarms may accept. Tr. 861 and 862.

28. 19.15.17 NMAC distinguishes between permanent pits and temporary pits, so definitions of both are included. Tr. 863 and 864. A pit is a surface or subsurface impoundment, man-made or natural depression, or diked area on the surface.

29. A permanent pit is a pit, including a pit used for collection, retention, or storage of produced water or brine, that is not a temporary pit. It is intended for long-term use and not just the short time needed to collect or hold the liquids used or generated in the drilling or workover of a well.

30. Temporary pit is defined as a pit, including a drilling or workover pit, which is constructed with the intent that the pit will hold liquids for less than six months and will be closed in less than one year. Tr. 867. The primary use of a temporary pit is to collect or hold fluids used in or generated during the drilling or workover of an oil or gas well. Prior to the hearing, the Industry Committee proposed that liquids be changed to fluids. The Commission determines, however, while a liquid may be a fluid, a fluid is not necessarily a liquid because fluids can include drilling muds, gels, etc. Tr. 867, 868, and 869.

31. The definition of significant watercourse was proposed by the Industry Committee and is adopted with some modifications by the Commission to clarify the intent of the rules. See Paragraph 64 below. Significant watercourse means a watercourse with a defined bed and bank either named on a USGS 7.5 minute quadrangle map or a first order tributary of such watercourse.

32. The definition of sump originates in 19.15.2 NMAC. The definition has been modified to broaden the types of vessels that can be used as a sump. Tr. 865 and 866. A sump is an impermeable vessel, or collection device incorporated within a secondary containment device, with a capacity of less than 500 gallons, which remains predominantly empty, serves as a drain or receptacle for de minimis releases on an intermittent basis and is not used to store, treat, dispose of, or evaporate products or wastes. It is essentially used to capture small leaks. IPANM proposed that the definition be modified to remove "incorporated within a secondary containment system". However,

a sump's purpose is to serve as secondary containment - not as a primary tank. Tr. 866 and 867.

33. The Division proposed a definition for "re-vegetate". The Commission does not adopt this definition because it included specific requirements for re-vegetation in Subsection I of 19.15.17.13 NMAC, which make the definition unnecessary.

19.15.17.8 NMAC: Permit Required

34. Subsection A of 19.15.17.8 NMAC provides that a person shall not construct or use a pit or below-grade tank except in accordance with a Division-issued permit. Only an operator may apply for a permit. Facilities permitted pursuant to 19.15.36 NMAC or Water Quality Control Commission rules are exempt. This subsection is needed to instruct persons that a permit is required and advise them of who may apply for a permit. The requirement for a permit provides the Division with notice of the proposed activity and allows it to evaluate and monitor the activity to ensure that it is conducted in a manner that protects fresh water, public health, and the environment.

35. After the effective date of 19.15.17 NMAC, unlined pits are prohibited. Tr. 869. 19.15.2.50 NMAC currently allows unlined permanent pits in certain areas. Tr. 85, 104, and 174. The use of unlined pits should be discontinued because they may contaminate ground water. Tr. 104, 105, 106, and 168 through 174. The Industry Committee does not oppose the prohibition on the use of unlined permanent pits. Tr. 208.

36. A provision similar to Subsection A of 19.15.17.8 NMAC exists in the current rule, Subsection A of 19.15.2.50 NMAC, which 19.15.17 NMAC replaces.

37. Subsection B of 19.15.17.8 NMAC provides that instead of using a pit or below-grade tank an operator may use a closed-loop system or other Division-approved method. A Division-issued permit is required for a closed-loop system or other method. Tr. 870 and 871.

38. This subsection is needed to advise operators and others that the Division will process a proposed alternative as an exception under 19.15.17.15 NMAC and the operator would have to demonstrate that the alternative provides equivalent protection of fresh water, public health, and the environment.

39. The Industry Committee proposed that the Subsection C of 19.15.17.8 NMAC be added to clarify that individual permits are not needed for each pit, below-grade tank, or closed-loop system at a well site. Multiple permits for each pit, below-grade tank, or closed-loop system related to a single application for a permit to drill would waste resources and Division staff time.

40. The Commission agrees with the Industry Committee's proposal. Subsection C of 19.15.17.8 NMAC provides that the Division may issue a single permit

for all pits, below-grade tanks, closed-loop systems, and Division-approved alternative methods associated with a single application for permit to drill.

19.15.17.9 NMAC: Permit Application

41. Subsection A of 19.15.17.9 NMAC provides that an operator shall apply to the Division for a permit to construct or use a pit, closed-loop system, below-grade tank, or proposed alternative method. The operator shall use a form C-144 to apply.

42. Using one form simplifies the Division's tracking process and ensures that the appropriate Division representative reviews the application. Tr. 876 and 877.

43. Subsection B of 19.15.17.9 NMAC establishes that the permit application shall include a detailed plan so that the Division has the information it needs to evaluate the permit application. Tr. 879, 881, and 882.

44. The Division's proposal required a "detailed engineering plan". However, much of the information actually required by the plan is not related to engineering; therefore, the reference to engineering has been removed.

45. Paragraph (1) of Subsection B of 19.15.17.9 NMAC provides that for permanent pits, a registered professional engineer shall certify the engineering, design, and construction specifications. It also lists the components that the operator must include in the detailed plan. Tr. 889.

46. Paragraph (2) of Subsection B of 19.15.17.9 NMAC provides that the plan for temporary pits use appropriate engineering principles and practices and follow applicable manufacturers' requirements. The plan must include operating and maintenance procedures, a closure plan, and hydrogeologic data.

47. The Division's proposal required a hydrogeologic report. However, testimony that the Division provided indicated that its intent was to require the operator to submit sufficient hydrogeologic data in order for the Division to determine that the proposed temporary pit would meet the siting criteria in 19.15.17.10 NMAC and to determine that if a release occurred what its effects would be on soils, surface water and ground water. Tr. 881, 882, and 907. This data, rather than the detailed hydrogeologic report required for permanent pits and below-grade tanks, should be sufficient given the short term presence of a temporary pit compared to the potential long-term presence of a permanent pit or below-grade tank.

48. The Industry Committee proposed that the Commission replace the requirement that the data be sufficient for the Division to evaluate actual and potential effects on soils, surface water, and ground water with "compliance with the siting standards of 19.15.17.10 NMAC". However, the siting requirements are designed to address concerns about potential impacts on surface water and ground water, not soils. Instead the Commission adds the recommendation in addition to the Division's proposal.

The Commission makes the same change to Paragraphs (3) and (4) of Subsection B of 19.15.17.9 NMAC so that they are consistent.

49. In Paragraph (2) of Subsection B of 19.15.17.9 NMAC, the Division's proposal provided that the operator follow the applicable liner manufacturer's recommendations. The Industry Committee proposed that the Commission replace the word "recommendations" with the word "requirements". The Commission accepts this proposed change. Manufacturer recommendations rather than actual requirements often suggest that an operator may only use the manufacturer's branded parts and materials. The use of the word requirement would prevent the operator from using another manufacturer's parts or materials even when they meet the same standards as those of the original manufacturer. The Commission makes the same change to Paragraph (3) of Subsection B of 19.15.17.9 NMAC for consistency.

50. Paragraph (3) of Subsection B of 19.15.17.9 NMAC provides that the plan for closed-loop systems shall use appropriate engineering principles and practices and follow applicable liner manufacturers' requirements. The plan must include operating and maintenance procedures and a closure plan.

51. Paragraph (4) of Subsection B of 19.15.17.9 NMAC provides that the plan for below-grade tanks shall use appropriate engineering principles and practices and follow applicable manufacturers' requirements. The plan must include operating and maintenance procedures, a closure plan, and a hydrogeologic report.

52. The information required in the plans for pits, below-grade tanks, and closed-loop systems is necessary for the Division to determine whether the pit, below-grade tank, or closed-loop system is properly sited, design, constructed, and closed. Tr. 889, 894, 896, and 897.

53. Subsection C of 19.15.17.9 NMAC provides that any required closure plan describe the proposed closure method and the proposed procedures and protocols that the operator will use to implement and complete the closure. Tr. 899, 900, and 901.

54. Subsection C of 19.15.17.9 NMAC advises operators of the information that the Division requires in submitting their closure plans. Tr. 901, 902, and 903. This subsection is needed so that operators know what information they must include in their closure plans.

55. Subsection D of 19.15.17.9 NMAC provides that an operator file an application for permanent pits or for exceptions using form C-144 with the Division's Environmental Bureau. An operator shall file an application for temporary pits, closed-loop systems, or below-grade tanks using form C-144 with the appropriate district office. This subsection is needed so that operators know which form to file.

56. Subsection D of 19.15.17.9 NMAC advises operators with which office they need to file their applications. This subsection is needed because the location

depends upon the type of application filed. Applications for permanent pits or for many exceptions must be filed with the Division's Environmental Bureau due to their technical complexity. Tr. 903, 904, and 905.

19.15.17.10 NMAC: Siting Requirements

57. Subsection A of 19.15.17.10 NMAC provides those locations where an operator shall not locate a permanent pit, temporary pit, or below-grade tank. Pits and below-grade tanks contain constituents that can be harmful if present in sufficient quantities. Tr. 475, and 1421 through 1432. Samples of pit and tank contents taken by the Division and the Industry Committee showed constituents that exceeded state water quality standards and the New Mexico Environment Department's soil screening standards. Tr. 468. Some of the samples taken by the Division would be considered hazardous if they were not exempt from the federal Resource Conservation and Recovery Act due to congressional oil and gas industry exemptions. Tr. 472 and 475.

58. The proper placement of pits and below-grade tanks is needed to prevent contamination of fresh water and protect human health and the environment. Tr. 906.

59. Subsection A prohibits the use of a temporary pit, below-grade tank, or permanent pit where ground water is less than 50 feet below the pit or below-grade tank, unless the operator is using a pit for the cavitation method of stimulation and the operator obtains the appropriate district office's approval to use a temporary pit for cavitation. Tr. 907 and 908. The cavitation method of stimulation for coal bed methane well is described at Tr. 3084 through 3086.

60. The 50 foot depth is the same as the depth required for location of small landfarms, which have similar constituents, as provided in 19.15.36 NMAC. The Commission finds that consistency in requirements between rules dealing with similar issues is a logical improvement over the Division's proposal

61. CRI proposed that the depth to ground water be changed from 50 feet to 100 feet below the pit or below-grade tank. Based on sampling from actual releases and the Division's modeling, however, a distance of 50 feet to ground water provides an adequate safety buffer in the event of a release of contaminants from the pit or below-grade tank. Tr. 378, 379, 755, and 756.

62. The Commission adds the exception for coal bed methane wells that use the cavitation method because temporary pits are needed to cavitate a well. Tr. 3084 through 3087. The exception is intended only to allow a temporary pit for cavitation activities.

63. Subsection A of 19.15.17.10 NMAC also prohibits the location of a temporary pit, below-grade tank, or permanent pit within 300 feet of a continuously flowing watercourse, or 200 feet (measured from the high-water mark) of any other significant watercourse, lakebed, sinkhole, or playa lake. These setbacks allow for

sufficient room to operate large machinery, the installation of diversion measures to control surface water run-on, and to prevent releases from the pit or below-grade tank reaching the water. Tr. 910 through 914. The Industry Committee's proposal of 30 feet and IPANM's proposal of 10 feet from any other significant watercourse, lakebed, sinkhole, or playa lake do not adequately provide for those needs. Tr. 914 and 915.

64. The Industry Committee proposed that the word "significant" be added before watercourse for the 200 feet setback. The Division's proposal did not contain the word "significant". The Commission adopts the Industry Committee's proposed definition for "significant watercourse" with the exception of the Industry Committee's proposed modifier that the watercourse must drain an area of at least five square miles. Determining whether a watercourse drains an area of five square miles is difficult and removes certainty provided by a watercourse's location on a map or its status as a first order tributary. The Commission defines "significant watercourse" as a watercourse with a defined bed and bank either named on a United States Geological Survey 7.5 minute quadrangle map or a first order tributary of such watercourse.

65. Subsection A of 19.15.17.10 NMAC also provides for setbacks from residences, schools, hospitals, institutions, or churches; from private, domestic fresh water wells or springs; within incorporated municipal boundaries or well fields under a municipal ordinance; and from wetlands. Tr. 916, 917, 921, 924, and 933. Setbacks are needed to protect private and public water supplies and public health.

66. Pits and below-grade tanks are not allowed within a 100-year floodplain. This is to ensure that pits and below-grade tanks are not constructed within areas subject to 100-year flood events. This prevents the flooding or washing away of pits or below-grade tanks and their contents, which could contaminate soils and fresh water. Tr. 927 and 933.

67. Subsection B of 19.15.17.10 NMAC provides that an emergency pit is exempt from the siting criteria in 19.15.17.10 NMAC. This promotes the application of immediate safety protocols for the protection of public health, fresh water, and the environment. Tr. 933 and 934. An emergency pit is defined in 19.15.17.7 NMAC as a pit that is constructed as a precautionary matter to contain a spill in the event of release. Construction of an emergency pit requires a Division-issued permit unless the emergency pit is described in a spill prevention, control and countermeasure plan that the United States Environmental Protection Agency requires, the operator removes all fluids from the pit within 48 hours, and the operator has notified the appropriate district office of the pit's location.

68. Subsection C of 19.15.17.10 NMAC specifies those locations where an operator may not implement on-site closure methods (where the waste that is generated from the drilling or workover of the well is buried on or near the well pad). On-site closure includes burial in-place in a temporary pit or trench burial in a lined trench constructed specifically for burial of the waste. Many of the siting criteria are the same as those for temporary pits and below-grade tanks. Tr. 934 and 935.

69. In addition to the siting criteria that are the same as those for temporary pits and below-grade tanks, on-site closure is prohibited where ground water is between 50 and 100 feet below the bottom of the buried waste or over 100 feet below the bottom of the buried waste unless the treated and stabilized waste meets the standards specified in Paragraphs (2) or (3) of Subsection F of 19.15.17.13 NMAC.

70. An operator may bury waste in a lined trench if ground water is more than 100 feet below the bottom of the buried waste and the waste meets specified criteria in Subsection F of 19.15.17.13 NMAC.

71. The Division's proposal would have prohibited on-site burial where there was a Division-approved disposal facility or an out-of-state waste management facility within a 100-mile radius of the site unless the operator obtained the Division's approval for an exception. The Commission does not adopt this requirement because on-site closure should be based on the level of various constituents in the waste and site specific information rather than on the distance to a disposal facility.

72. NMCCAW, OGAP, and CRI proposed that no on-site burial of waste be allowed. The Commission does not adopt these proposals because the Commission finds there are circumstances where waste can be safely buried on-site. See Paragraph 75, 76, 77, and 79 below.

73. Mr. Hansen, Dr. Stephens, and Dr. Neeper used different models and inputs to determine whether waste buried in a temporary pit or trench would reach ground water and contaminate ground water above the state's ground water standards. However, each determined that waste constituents such as chlorides would eventually leach from the pit or trench and reach ground water.

74. Because waste constituents over time will leach to ground water, the waste should only be buried on-site if the constituents in the waste are at levels that will not result in ground water contamination. This is particularly important given that there are hundreds of wells drilled each year and the wells are located over large areas. The dispersed on-site closure of temporary pits that contain waste with levels of constituents that will likely result in contamination of ground water is not preferable to disposing of the waste in a limited, known number of commercial landfills. Dispersed burial sites increase the potential number of sites where ground water contamination may occur, increase the number of sites that require regulatory oversight, and make it more difficult to determine the source of contamination. Tr. 220, 221, 261, 349, 691, and 692.

75. The Commission previously determined in adopting the surface waste management rules, 19.15.36 NMAC, that when a landfarm is closed, the treated soils can be left in place without endangering ground water when the soil has a chloride concentration that does not exceed 500 mg/kg and ground water is between 50 and 100 feet below the lowest elevation of the landfarm. It also determined that when a landfarm is closed, the treated soils can safely be left in place when the soil has a chloride

concentration that does not exceed 1000 mg/kg and the ground water is more than 100 feet below the lowest elevation of the landfarm. Subsections F and G of 19.15.36 NMAC.

76. Therefore, where the distance to ground water is 50 to 100 feet below the bottom of the buried waste, which has been treated or stabilized, and the waste does not contain more than 500 mg/kg of chlorides and does not exceed the criteria for the other constituents listed in Subparagraph (c) of Paragraph (2) of Subsection F of 19.15.17.13 NMAC the operator may bury waste in-place in a temporary pit. An operator may also bury waste, which has been treated and stabilized, in a temporary pit where ground water is more than 100 feet below the bottom of the buried waste and the waste does not contain more than 1000 mg/kg of chlorides and does not exceed the criteria for the other constituents listed in Subparagraph (d) of Paragraph (2) of Subsection F of 19.15.17.13 NMAC.

77. Where the bottom of the waste will be more than 100 feet below ground water and the waste has higher concentrations of chlorides than those allowed for in-place burial in a temporary pit, an operator may construct a separate lined trench to bury the waste if the waste meets criteria contained in Subparagraph (c) of Paragraph (3) of Subsection F of 19.15.17.13 NMAC. The waste may not contain a chloride leachate concentration of more than 250 mg/l of chlorides as determined by an approved leaching procedure. This equates to a chloride concentration of 5000 mg/kg prior to leaching.

78. Dr. Thomas testified that the determination of whether constituents in waste pose a risk should be based on the constituent's leachate concentration. Tr. 4303 through 4313.

79. The 250 mg/l chloride leachate concentration is protective of ground water because if a chloride leachate of 250 mg/l reaches ground water it will not cause an exceedance of the state ground water standard, which is 250 mg/l as established in 20.6.2 NMAC. Tr. 5316. Chloride is a good tracer for contamination because it is rarely inhibited as it passes through the soil. Tr. 3949.

80. Dr. Stephens testified that a leachable standard of 3500 mg/l of chlorides was protective of ground water assuming a 3:1 mixing ratio of soil to waste. Tr. 3841. At a 1:1 ratio the leachable standard was 1240 mg/l. Industry Committee Exhibit 2.

81. However, Dr. Stephens' modeling was based on using a 50 foot thick mixing zone in the aquifer rather than the 10 foot thick mixing zone used by the Division. Tr. 1346 through 1350, 1381, and 4431 through 4434. A large mixing zone allows for greater aquifer dilution in the modeled results. When you reduce the mixing zone in the aquifer to a thickness of 10 feet, the modeled concentration would be reduced by a fifth, so a 1240 mg/l chloride modeled result would be reduced to 248 mg/l. Tr. 1350. The Division uses an approximate 10 foot thick mixing zone in its modeling because monitoring wells installed for sampling ground water for compliance with state standards contain a 10 foot well screen length. The 10 foot thickness is commonly used in

monitoring ground water for contamination. Tr. 1348 through 1350. Therefore, water quality modeling of chloride migration in the subsurface, for purposes of estimating compliance with state water quality standards, should only consider mixing effects that occur in the first 10 feet of the aquifer. Also mixing is unlikely to occur rapidly over the entirety of a 50 foot thick aquifer. Tr. 2030, and 4431 through 4434.

19.15.17.11 NMAC: Design and Construction Specifications

82. Subsection A of 19.15.17.11 NMAC requires that an operator design and construct a pit, closed-loop system, below-grade tank, or sump to contain liquids and solids and prevent contamination of fresh water and protect public health and the environment. Tr. 936.

83. Subsection B of 19.15.17.11 NMAC requires that prior to constructing a pit or closed-loop system, except for a pit constructed in an emergency, an operator shall strip and stockpile the topsoil for use as the final cover or fill once it closes the pit or completes use of the closed-loop system.

84. While not contained in 19.15.2.50 NMAC, the practice of stockpiling topsoil is currently included in the current Division guidelines for pits and below-grade tanks. Stockpiling topsoil allows for it to be used as the final cover upon closure of a pit or below-grade tank. Tr. 938 and 939.

85. Subsection C of 19.15.17.11 NMAC requires an operator to post an upright sign in a conspicuous place on the fence surrounding a pit, closed-loop system, or below-grade tank unless the pit, closed-loop system, or below-grade tank is located on a site where the operator already has another well that has signs in compliance with 19.15.3.103 NMC. The sign must be at least 12 inches by 24 inches in size and have lettering that is not less than two inches in height. The sign must provide the operator's name, emergency telephone numbers, and the location of the site by quarter-quarter or unit letter, section, township, and range.

86. The sign provides information to the Division and the public to identify the responsible operator in case of an emergency or outstanding compliance or safety issues. Tr. 939.

87. Subsection D of 19.15.17.11 NMAC provides requirements for fencing of pits or below-grade tanks. The operator must fence or enclose a pit or below-grade tank in a manner that prevents unauthorized access and must maintain fences in good repair. An operator is not required to fence a pit or below-grade tank if there is already an adequate perimeter fence that prevents unauthorized access to the well site or facility, including the pit or below-grade tank. During drilling or workover operations, the operator is not required to fence the edge of the pit adjacent to the drilling or workover rig until the drilling or workover is complete.

88. If the pit or below-grade tank is within 1000 feet of a permanent residence, school, hospital, institution, or church, the operator must fence the pit or below-grade tank with a chain link security fence that is at least six feet in height and has a least two strands of barbed wire at the top. The operator must ensure that all gates associated with the fence are closed and locked when responsible personnel are not on-site. During drilling or workover operations, the operator does not have to fence the edge of the temporary pit that is adjacent to the drilling or workover rig.

89. For any other pit or below-grade tank the operator must fence the pit or below-grade tank to exclude livestock. The fence must be at least four feet in height and have at least four strands of barbed wire evenly spaced in the interval between one and four feet above ground level. The Division's proposal stated that a fence must be five foot in height and exclude wildlife. Five foot is not a standard fence post length and the New Mexico Department of Game and Fish commented that this type of fence was not adequate to exclude wildlife. Tr. 942. Therefore, the Commission changes the height to four feet and removes the reference to wildlife. The district office where the pit or below-grade tank is located may require the operator to meet additional fencing requirements for protection of wildlife in particular areas.

90. Specific design and construction standards for fences are needed in order to establish a minimum standard of protection for the public as well as to exclude livestock. Tr. 940.

91. Subsection E of 19.15.17.11 NMAC requires an operator to screen, net, or otherwise render non-hazardous to wildlife, including migratory birds, a permanent pit or a permanent open top tank. This is needed to prevent wildlife from drowning or being trapped. Where netting or screening is not feasible, the operator must inspect the permanent pit or the permanent open top tank on a monthly basis and report, within 30 days of discovery, the discovery of dead migratory birds or other wildlife to the appropriate wildlife agency and the appropriate district office. This is required in order to facilitate the assessment and implementation of measures to prevent such incidents from reoccurring. Tr. 942 and 943. The Commission adds the 30 day reporting time limit and the monthly requirement for inspections so that operators will know how often they must inspect and how long they have to report a discovery. The Division's proposal stated that an operator must routinely inspect but did not provide a definitive timeframe.

92. Subsection F of 19.15.17.11 NMAC provides the requirements for designing and constructing a temporary pit. The operator must construct a temporary pit to ensure confinement of liquids and to prevent unauthorized releases. In order to accomplish this, the temporary pit must have a properly constructed foundation and interior slopes consisting of a firm, unyielding base, smooth and free of rocks, debris, sharp edges, or irregularities. This is needed to prevent the liner's rupture or tear.

93. The operator must construct the temporary pit so that the slopes are not steeper than two horizontal feet to one horizontal foot. Slopes that are greater than two to one place undue static stress on the liner material and liner seams as the drilling fluids

and cuttings accumulate. Tr. 944 and 945. In addition, steeper slopes create a safety hazard for people and animals because they are difficult to climb out of. Tr. 945 and 946.

94. The operator must design and construct a temporary pit with a geomembrane liner. The geomembrane liner shall consist of 20-mil string reinforced linear low-density polyethylene (LLDPE) or equivalent liner material that the Division approves. The operator must minimize the liner seams and orient them up and down, not across a slope and shall use factory welded seams where possible. If factory welded seams are not possible personnel trained in field seaming must perform field seaming and shall weld the field liner seams. Minimizing liner seams and orienting them up and down reduces the potential for leaks.

95. The Industry Committee proposed that only a 12-mil liner be required. A 12-mil liner is what is currently suggested in the Division's guidelines for pits and below-grade tanks. Tr. 345. However, in rocky or caliche areas a 20-mil liner has a lower chance of being punctured. Tr. 2049. Division inspectors have noted liner failures or tears during their inspections and received reports of liner failures or tears. Tr. 1178, 1305, 2078, 2083, 2085, 2088, 2089, 2091, 2093, 2094, 2122, 2149, 2151, and 2152. The current rule, 19.15.2.50 NMAC, does not require the operator to notify the Division if a liner tears or is otherwise compromised. If a liner failure results in a release as provided in 19.15.3.116 NMAC the operator must report the release.

96. The Division proposed the addition of the requirement that field seams be welded. The Commission adopts this requirement because stitched seams weaken the integrity of the liner and create a pathway for fluids to escape. Tr. 947 through 950.

97. During construction of the temporary pit, the operator shall avoid excessive stress-strain on the liner and shall place geotextile under the liner when needed to reduce localized stress-strain or protuberances that may otherwise compromise the liner's integrity. This addresses situations where the existing subgrade consists of rocks, which can puncture the liner and provide pathways for fluids to escape. Tr. 981.

98. The operator must ensure that the liner is protected from any fluid force or mechanical damage at any point of discharge into or suction from the lined temporary pit. Damage to the liner can provide a pathway for fluids to escape.

99. The operator must anchor the liner's edges in the bottom of a compacted earth-filled trench, which shall be at least 18 inches deep.

100. The anchor trench ensures that the liner is secured from forces such as wind and prevents erosion around the surface edges of the liner. This prevents the liner edge from being blown or washed into the pit and decreases the potential for a release of fluids from the pit. Tr. 951.

101. The Industry Committee proposed that the requirement that the anchor trench be at least 18 inches deep be removed. However, this requirement is needed to ensure that the anchor trench is deep enough that the liner will remain in place.

102. The operator shall design and construct the temporary pit to prevent run-on of surface water. Run-on can collect in the pit and result in the pit becoming full and fluid overflowing onto the surrounding ground surface. Run-on can also result in erosion around and beneath the pit, which can compromise the liner's integrity. Tr. 953 and 954. The temporary pit shall be surrounded by a berm, ditch, proper sloping, or other diversion in order to prevent run-on of surface water. During drilling or workover operations, the edge of the temporary pit adjacent to the drilling or workover rig is not required to have run-on protection if the operator is using the temporary pit to collect fluids escaping from the drilling or workover rig. The Industry Committee proposed that "proper sloping" be one of the means allowed to prevent run-on. The Commission adopts this proposal because operators currently use engineered sloping and it is a reasonable method for addressing run-on.

103. The temporary pit's volume shall not exceed 10 acre-feet including freeboard. This volume is adequate to hold the fluids used in or generated during drilling or workover operations and prevents more surface disturbance than necessary for a temporary pit.

104. The part of the temporary pit used to vent or flare gas during a drilling or workover operation that is designed to allow liquids to drain to a separate temporary pit does not have to have a liner unless the appropriate district office requires an alternative design in order to protect surface water, ground water and the environment. The operator shall not allow freestanding liquids to remain on the unlined portion of a temporary pit the operator is using to vent or flare gas. This provision recognizes that due to the venting or flaring of gas, which would compromise the liner's integrity it is not prudent to line that portion of the pit and that lining would provide little additional protection because the liner would be melted or otherwise compromised. Tr. 954. The Division proposed a modification to its original proposal to not allow freestanding liquids to remain on the unlined portion of the temporary pit. The Commission adopts this proposal because freestanding liquid, particularly where there is not a liner, may travel downward and contaminate ground water.

105. Subsection G of 19.15.17.11 NMAC provides the requirements for designing and constructing a permanent pit.

106. Given their long-term nature it is appropriate that permanent pits be designed and constructed in a similar manner to evaporation ponds, which are regulated under 19.15.36 NMAC, and have similar technical standards. Tr. 955, 956, and 957.

107. Therefore, each permanent pit must have a properly constructed foundation consisting of a firm, unyielding base, smooth and free of rocks, debris, sharp edges, or irregularities to prevent the liner's rupture or tear. The operator must construct

the permanent pit so that the inside grade of the levee is no steeper than two horizontal feet to one vertical foot. The levee must have an outside grade no steeper than three horizontal feet to one vertical foot. The levee's top shall be wide enough to install an anchor trench and provide adequate room for inspection and maintenance.

108. Each permanent pit, at a minimum, must contain a primary and secondary liner with a leak detection system appropriate to the site's conditions. All liner edges must be anchored in the bottom of an earth-filled trench, which is at least 18 inches deep. The primary and secondary liners must be geomembrane liners consisting of 30-mil flexible poly vinyl chloride (PVC) or 60-mil high-density polyethylene (HDPE), or an equivalent material that the appropriate district office approves. The geomembrane liner must be composed of an impervious, synthetic material that is resistant to petroleum hydrocarbons, salts, and acidic and alkaline solutions. The material shall also be resistant to ultraviolet light. The permanent pit has a thicker liner than a temporary pit because it is intended for long-term use and the longer fluids remain in a pit the greater the potential for releases of the pit's contents into the underlying soil.

109. The Division's Environmental Bureau may approve other liner media if the operator demonstrates to the Environmental Bureau's satisfaction that the alternative protects fresh water, public health, safety, and the environment as effectively as the specified media.

110. The operator shall minimize liner seams and orient them up and down, not across the slope and shall use factory welded seams where possible. If factory welded seams are not possible the operator shall weld the seams in the field. The operator must ensure that any field seams in geosynthetic material are thermally seamed with a double track weld to create an air pocket for non-destructive air channel testing. The operator shall test a seam by establishing an air pressure between 33 and 37 pounds per square inch in the pocket and monitoring that the pressure does not change by more than one percent during five minutes after the pressure source is shut off from the pocket. The operator shall overlap liners four to six inches before seaming, and orient the seams parallel to the line of maximum slope. The operator shall minimize the number of field seams in corners and irregularly shaped areas to reduce the potential for leaks. The operator shall not locate horizontal seams within five feet of the slope's toe. Personnel trained to perform seaming shall perform field seaming.

111. The Division's proposal provided that in testing a seam "a stabilized air pressure of 35 psi, plus or minus one percent, shall be maintained for at least five minutes". NMCCAW recommended that the language be revised to provide that an operator test a seam by establishing an air pressure between 33 and 37 pounds per square inch in the pocket and monitoring that the pressure does not change by more than one percent during five minutes after the pressure source is shut off from the pocket. The Commission adopts the proposed change because equipment may not provide one percent absolute accuracy.

112. The operator shall ensure that the liner is protected from excessive hydrostatic force or mechanical damage at a point of discharge into or suction from the lined permanent pit. The operator shall also ensure that external discharge or suction lines do not penetrate the liner. Damage to the liner can provide a pathway for fluids to escape, which may contaminate soils or fresh water.

113. The operator must place a leak detection system between the upper and lower geomembrane liners that consists of two feet of compacted soil with a saturated hydraulic conductivity of 1×10^{-5} cm/sec or greater to facilitate drainage. The leak detection system must consist of a properly designed drainage and collection and removal system that the operator places above the lower geomembrane liner in depressions and sloped to facilitate the earliest possible leak detection.

114. The operator must notify the Division's Environmental Bureau at least 72 hours prior to installing the primary liner. Such notice allows a representative of the Environmental Bureau an opportunity to inspect the leak detection system before it is covered.

115. The operator must construct the permanent pit in a manner that prevents overtopping due to wave action or rainfall and maintain a three foot freeboard at all times. Adequate freeboard is important to prevent overflows of pit fluids that may contaminate soils or fresh water.

116. The volume of the permanent pit shall not exceed 10 acre-feet including the freeboard. This requirement is necessary in order to avoid the need for a dam permit from the Office of the State Engineer.

117. The operator must maintain the permanent pit to prevent run-on of surface water. A permanent pit must be surrounded by a berm, ditch, or other diversion to prevent run-on. Run-on can collect in the pit and result in the pit becoming full and fluid overflowing onto the surrounding ground surface. Run-on can also result in erosion around and beneath the pit, which can compromise the liners' integrity. Tr. 953 and 954.

118. Other than NMCCAW's recommendation for changes to the liner seam testing method, which the Commission adopts, the parties did not propose changes after the conclusion of the testimony to the Division's proposed design and construction requirements for permanent pits.

119. Subsection H of 19.15.17.11 NMAC provides the requirements for designing and constructing a closed-loop system.

120. The operator must design and construct a closed-loop system to ensure the confinement of oil, gas, or water in order to prevent uncontrolled releases. If not confined these fluids may contaminate soils or fresh water.

121. An operator of a closed-loop system that uses temporary pits for solids management must comply with the requirements for temporary pits in 19.15.17 NMAC.

122. An operator of a closed-loop system that uses drying pads shall design and construct the drying pads to include appropriate liners that prevent the contamination of fresh water and protect public health and the environment, sumps to facilitate the collection of liquids from drill cuttings, and berms to prevent run-on of surface water. These requirements reduce the potential for contaminating soils or fresh water.

123. The parties did not propose changes after the conclusion of the testimony to the Division's proposed design and construction requirements for closed-loop systems.

124. Subsection I of 19.15.17.11 NMAC provides the requirements for designing and constructing a below-grade tank. The Commission has revised this subsection based upon testimony from ConocoPhillips' witnesses and public comments from Dugan Production Company. The Division's proposed design and construction requirements for below-grade tanks would not have allowed ConocoPhillips to continue to use its current Division approved design. This design is a below-grade-tank without double walls where the side walls are open for visual inspection. The below-grade tank is elevated above the underlying ground surface and is placed above a geomembrane liner.

125. The Industry Committee proposed that the Commission adopt a definition for a category of tanks called "sub-grade tanks" in order to continue the use of the ConocoPhillips-type tanks. The Commission does not adopt this proposal because it has instead revised the design requirements for below-grade tanks to allow for below-grade tanks that are designed in the manner that the ConocoPhillips witnesses supported. See Subparagraph (a) of Paragraph (4) of Subsection I of 19.15.17.11 NMC.

126. After the amendments to 19.15.2.50 NMAC in 2004, ConocoPhillips worked with the Division's Aztec District Office and the Division's Environmental Bureau to develop the design it now uses. Tr. 4024 and 4026. The Division's proposal would have required the retrofitting or replacement of thousands of tanks currently used by operators such as ConocoPhillips and Dugan Production Company that were installed or retrofitted to comply with the 2004 amendments. ConocoPhillips alone has spent over \$125 million retrofitting its tanks to comply with the 2004 amendments to 19.15.2.50 NMAC and replaced approximately 5000 tanks. Tr. 4022, 4023, and 4024.

127. The operator must ensure that a below-grade tank is constructed of materials resistant to the below-grade tank's contents and resistant to damage from sunlight. The intent of this provision is to ensure that the below-grade tank is capable of containing its contents and that its integrity is not compromised by exposure to sunlight. Tr. 971.

128. The below-grade tank system must have a properly constructed foundation consisting of a level base free of rocks, debris, sharp edges, or irregularities to prevent punctures, cracks, or indentations of the liner or tank bottom. This is to ensure that the

below-grade tank's integrity is not compromised and to prevent releases of the tank's contents. Tr. 968 and 969. This provision is currently contained in the Division's guidelines for pits and below-grade tanks.

129. The operator must construct a below-grade tank to prevent overflow and the collection of surface water run-on. This provision is currently contained in the Division's guidelines for pits and below-grade tanks. Run-on can collect in the below-grade tank and result in the below-grade tank becoming full and fluid overflowing onto the surrounding ground surface. Such events can contaminate soils and may result in contamination of ground water.

130. An operator must use a below-grade tank that meets one of two designs.

131. The first design, which is that used by ConocoPhillips, is a below-grade tank without double walls where the below-grade tank's side walls are open for visual inspection for leaks; the below-grade tank's bottom is elevated a minimum of six inches above the underlying ground surface and is placed above a geomembrane liner; and the below-grade tank is equipped with an underlying mechanism to divert leaked liquid to a location that can be visually inspected. The operator must equip the below-grade tank with a properly operating automatic high-level shut-off control device and manual controls to prevent overflows. The geomembrane liner shall consist of a 30-mil flexible PVC or 60-mil HDPE liner, or an equivalent liner material that the appropriate district office approves. The liner must be composed of an impervious, synthetic material that is resistant to hydrocarbons, salts, and acidic and alkaline solutions and is impervious to ultraviolet light.

132. The second design is where the side walls are not open for visible inspection. In that case, the below-grade tank must be double walled with leak detection capability. Given that the side walls are not open for inspection, the double walled design provides secondary containment in the event the first wall fails.

133. The operator of a below-grade tank that was constructed and installed prior to the effective date of 19.15.17 NMAC, which has side walls open for visual inspection and is placed upon an impermeable geomembrane liner that does not meet the requirements of Paragraphs (1) through (4) of Subsection I of 19.15.17.11 NMAC may continue to use the below-grade tank so long as it demonstrates integrity during the monthly inspection required by Subsection D of 19.15.17.12 NMAC. If the existing below-grade tank does not demonstrate integrity, the operator must install a below-grade tank that complies with Paragraphs (1) through (4) of Subsection I of 19.15.17.11 NMAC. The operator is not required to equip or retrofit the below-grade tank to comply with Paragraphs (1) through (4) of Subsection I of 19.15.17 NMAC so long as it demonstrates integrity during the monthly inspections required by Subsection D of 19.15.17.12 NMAC. This provision allows tanks such as those used by Dugan Production Company, which are similar to those used by ConocoPhillips but are not elevated above the ground, to continue to be used.

134. The operator of a below-grade tank constructed and installed prior to the effective date of 19.15.17 NMAC, that does not comply with Paragraphs (1) through (4) of Subsection I of 19.15.17.11 NMAC and does not have the side walls open for inspection must equip or retrofit the below-grade tank to comply with Paragraphs (1) through (4) of Subsection I of 19.15.17.11 NMAC or close it within five years of the effective date of 19.15.17 NMAC. This provides sufficient time for operators to comply with the required design and installation requirements.

135. Subsection J of 19.15.17.11 NMAC provides the requirements for designing and constructing trenches for burial of waste on-site. CRI and OGAP proposed that this subsection be deleted because they proposed that no on-site burial be allowed. The Commission does not adopt these proposals because it finds there are circumstances where waste can be safely buried on-site. See Paragraph 72.

136. The trench must meet the siting criteria in Subsection C of 19.15.17.10 and Subparagraph (d) of Paragraph (3) of Subsection F of 19.15.17.13 NMAC and be excavated to a depth that allows for the installation of the geomembrane bottom liner, geomembrane liner cover, and the soil cover required pursuant to Subsection H of 19.15.17.13 NMAC in order for an operator to use an on-site trench for closure. This requirement prevents the siting of on-site trenches in areas prohibited by Subsection C of 19.15.17.10 NMAC. Tr. 980.

137. An on-site trench must have a properly constructed foundation and side walls consisting of a firm, unyielding base, smooth and free of rocks, debris, sharp edges, or irregularities to prevent the liner's rupture or tear. One of the primary causes of liner integrity failure is due to improperly prepared foundations. Tr. 981.

138. The operator shall place geotextile under the liner where needed to reduce localized stress-strain or protuberances that might otherwise compromise the liner's integrity. This addresses situations where the existing subgrade consists of rocks. Tr. 981.

139. An operator must construct an on-site trench with a geomembrane liner. The liner must consist of a 20-mil string reinforced LLDPE liner or equivalent that the appropriate district office approves. The geomembrane liner must be composed of an impervious, synthetic material that is resistant to petroleum hydrocarbons, salts, and acidic and alkaline solutions and be resistant to ultraviolet light. This reduces the potential for the liner to fail and release leachate.

140. The Industry Committee has proposed that a 12-mil liner be required instead of a 20-mil liner. However, in rocky or caliche areas a 20-mil liner has a lower chance of being punctured. Tr. 2049. A 20-mil LLDPE liner provides a higher level of protection. See Paragraph 95.

141. The operator shall minimize liner seams and orient them up and down, not across the slope. The operator shall use factory welded seams where possible. If factory

seams are not possible the operator must field seam in accordance with the following. The operator must overlap liners four to six inches before seaming, and orient the liner seams parallel to the line of maximum slope. The operator shall minimize the number of field seams in corners and irregularly shaped areas. Personnel trained to perform seaming shall perform field seaming and weld field liner seams. These requirements reduce the potential for liner failures and leaks. The Division proposed the addition of the requirement that field seams be welded. The Commission adopts this requirement because stitched field seams weaken the liner's integrity and create a pathway for fluids to escape. Tr. 947 through 950.

142. The operator shall install liner material in a quantity sufficient to reduce stress-strain on the liner. If insufficient material is used, the liner will not rest smoothly on the foundation and excessive strain will be placed on the liner when the operator adds the waste and the liner will collapse into the trench. Tr. 983.

143. The operator must ensure that the liner's outer edges are secured for the placement of excavated waste material into the trench and the operator shall fold the outer edges of the trench liner to overlap the waste material in the trench prior to installing the geomembrane cover. This prevents the collection and accumulation of water in the trench liner and the leaching of contaminants from the waste material. Tr. 984 and 985.

144. The operator shall install a geomembrane cover over the waste material in the lined trench and install the cover in a manner that prevents the collection of infiltration water in the lined trench and on the geomembrane cover after the soil cover is in place. The installation of a geomembrane cover ensures that the waste material is completely enveloped and infiltration of rain water will not come into contact with the waste. By requiring the operator to install the geomembrane cover in a manner that prevents collection, water should not accumulate and penetrate the geomembrane cover or pass through the waste material. Tr. 984.

145. The geomembrane cover must consist of a 20-mil string reinforced LLDPE liner or an equivalent cover that the appropriate district office approves. The geomembrane cover must be composed of an impervious, synthetic material that is resistant to petroleum hydrocarbons, salts, and acidic and alkaline solutions. These requirements reduce the potential for liner failures and leaks. The Industry Committee proposed that a 12-mil liner be allowed instead. The Commission does not adopt this proposal. See Paragraph 95.

19.15.17.12 NMAC: Operational Requirements

146. Subsection A of 19.15.17.12 NMAC establishes the maintenance and operational requirements for pits, closed-loop systems, below-grade tanks, and sumps.

147. The operator must operate and maintain a pit, closed-loop system, below-grade tank, or sump to contain liquids and solids and maintain the integrity of the liner,

liner system, or secondary containment system; prevent contamination of fresh water; and protect public health and the environment.

148. The operator must recycle, reuse, or reclaim or dispose of all drilling fluids in a manner approved by Division rules that prevents the contamination of fresh water and protects public health and the environment. This requirement is needed to ensure the proper management and disposal of drilling fluids.

149. The Industry Committee, IPANM, and the Division proposed that "or dispose" be added to the requirement for recycling, reusing, or reclaiming drilling fluids. The Commission adopts this proposal because it is not always possible to reclaim, recycle, or reuse drilling fluids. The Commission also adds the requirement that disposal be in a manner approved by Division rules so that it is clear that operators must dispose of the fluids properly.

150. The operator shall not discharge into or store any hazardous waste in a pit, closed-loop system, below-grade tank, or sump. Tr. 989 and 990. Since the Division does not have regulatory authority over hazardous wastes, this prevents the disposal of non-exempt, hazardous waste into a pit, closed-loop system, below-grade tank, or sump.

151. If any pit liner's integrity is compromised, or if any penetration of the liner occurs above the liquid's surface, then the operator must notify the appropriate district office within 48 hours of discovery and repair the damage or replace the liner. The 48 hour notice requirement allows the operator time to assess the damage, inform the Division of the results of the assessment, and provide the Division with a schedule for repair or replacement. Tr. 991.

152. If a pit, below-grade tank, closed-loop system, or sump develops a leak, or if any penetration of the pit liner, below-grade tank, closed-loop system, or sump occurs below the liquid's surface, then the operator shall remove all liquid above the damage or leak line within 48 hours and repair the damage or replace the pit liner, below-grade tank, closed-loop system, or sump. The operator shall notify the appropriate district office within 48 hours of the discovery. The Commission adds the 48 hour notification requirement so that it is consistent with the requirement in Paragraph 149 and the Division will have notice of the leaks or damage below the liquid's surface as well as those that occur above the liquid's surface. Tr. 991 and 992.

153. The Division's proposal contained a requirement that the operator install a level measuring device in the pit to monitor the fluid levels, so that the operator may recognize unanticipated changes in the volume. The Industry Committee proposed that the Commission remove this requirement. The Commission adopts the Industry Committee's proposal because fluid levels change with the weather through precipitation and evaporation making it difficult to determine whether a fluid change is due to a leak in the pit liner unless a tear or puncture is found or a dramatic change in fluid levels occurs.

154. The injection or withdrawal of liquids from a lined pit shall be accomplished through a header, diverter, or other hardware that prevents damage to the liner by erosion, fluid jets, or impacts from installation and removal of hoses or pipes. Tr. 993 and 994. Damage to the liner can provide a pathway for fluids, which may contaminate soils or fresh water.

155. The operator must operate and install a pit, below-grade tank, or sump to prevent the collection of surface water run-on. Tr. 993. Run-on can collect in a pit, below-grade tank, or sump and result in the pit, below-grade tank, or sump becoming full and fluid overflowing onto the surrounding ground surface causing contamination of soils and potential contamination of fresh water. Run-on can also result in erosion around and beneath a pit, which can compromise liner integrity. Tr. 953 and 954.

156. The operator shall install, or maintain on site, an oil absorbent boom or other device to contain and remove oil from a pit's surface. This is intended to ensure that the operator has a device in place to remove the oil because no oil or floating hydrocarbon shall be present in a pit. Tr. 993 and 994.

157. Subsection B of 19.15.17.12 NMAC provides additional maintenance and operational requirements for temporary pits.

158. An operator may only discharge fluids used or generated during the drilling or workover process into a temporary pit. The operator must maintain a temporary pit free of miscellaneous solid waste or debris. The operator shall use a tank made of steel or other material to contain hydrocarbon-based drilling fluids that the appropriate district office approves. This is needed to prevent the release of hydrocarbons into the environment. Immediately after cessation of a drilling or workover operation, the operator shall remove any visible or measurable layer of oil from the surface of a drilling or workover pit. Tr. 996, 997, and 998.

159. The operator must maintain at least two feet of freeboard for a temporary pit. This is needed to prevent the overtopping or overflowing of fluids. Tr. 999. If a temporary pit overflows the fluids may contaminate soils or fresh water.

160. The operator shall inspect a temporary pit containing drilling fluids at least daily while the drilling or workover rig is on-site. This inspection is to ensure that the liner is intact and that releases are not occurring. Thereafter, the operator shall inspect the temporary pit weekly so long as liquids remain in the temporary pit. The operator must maintain a log of such inspections and make the log available for the appropriate district office's review upon request. The operator shall file a copy of the log with the appropriate district office when the operator closes the temporary pit. This encourages operators to properly maintain temporary pits, and provides for the early detection of liner leaks and fluid releases. Tr. 1000.

161. The operator shall remove all free liquids from a temporary pit within 30 days from the date that the operator releases the drilling or workover rig. The operator

shall note the date of the drilling or workover rig's release on form C-105 or C-103 upon well or workover completion. The appropriate district office may grant an extension of up to three months. This requirement reduces the risk of a liquid release or overtopping of fluids caused by precipitation or run-on and reduces the hydraulic head on the pit liner. The longer fluids remain in the pit the greater the likelihood for a release. Tr. 75, 174, and 1000.

162. The Commission adds the requirement that the operator note the date of the drilling or workover rig's release so that the Division will have the date in order to determine when the 30 day time period begins.

163. The Division's proposal contained a 15 day limit for removal of fluids from a temporary pit used for a workover. The Industry Committee proposed that a 45 day limit be used for both drilling and workovers. The Commission finds that 45 days is too long to leave fluid in a pit after the rig is released but that a 30 day limit should apply to both drilling and workovers. Tr. 1000.

164. Subsection C of 19.15.17.12 NMAC provides additional maintenance and operational requirements for permanent pits.

165. The operator shall maintain at least three feet of freeboard for a permanent pit and shall permanently mark such level on the permanent pit. This is needed to prevent overtopping and overflow of fluids. Tr. 1002. If a permanent pit overflows the fluids may contaminate soils or fresh water.

166. No oil or floating hydrocarbon shall be present in a permanent pit. This recommendation is included in the Division's guidelines for pits and below-grade tanks. Tr. 1002. This requirement is needed to prevent the waste of oil and prevent an accumulation of hydrocarbons, which can result in build up of hydrocarbon vapors, create a fire hazard, and be toxic to animals.

167. Subsection D of 19.15.17.12 NMAC provides additional maintenance and operational requirements for below-grade tanks.

168. The operator shall not allow a below-grade tank to overflow or allow surface water run-on to enter the below-grade tank. Tr. 1002 and 1003. This is needed to prevent the release of wastes that can cause soil and ground water contamination.

169. The operator shall remove any visible or measurable layer of oil from the fluid surface of a below-grade tank. Tr. 1003. This is needed to prevent the waste of oil and prevent an accumulation of hydrocarbons, which can result in build up of hydrocarbon vapors, create a fire hazard, and be toxic to animals.

170. The operator shall inspect the below-grade tank at least monthly for integrity and maintain a record of each inspection for five years. Monthly inspections

allow leaks or punctures or other damage to a below-grade tank to be discovered in a timely manner.

171. The operator shall maintain adequate freeboard to prevent overtopping of the below-grade tank. The operator shall not allow a below-grade tank to overflow or allow surface water run-on to enter the below-grade tank. If a below-grade tank overflows the fluids may contaminate soils or fresh water.

172. Subsection E of 19.15.17.12 NMAC provides additional maintenance and operational requirements for sumps.

173. The operator shall visually inspect a sump's integrity annually and promptly repair or replace a sump that fails inspection because it is leaking, punctured, cracked, or otherwise compromised. The Division's proposal required annual testing of the sump but the Division acknowledged that a reliable test method for sumps does not exist. Instead, sump integrity shall be determined by visual inspection. This provision is needed to ensure that sumps have integrity and are capable of collecting and containing leaks. Tr. 1003 and 1004.

174. The operator shall maintain records of sump inspections and make the records available to the appropriate district office's review upon request. Tr. 1004. This advises operators that they must maintain inspection records and provides the Division information needed to verify that sump operations do not result in soil or ground water contamination.

19.15.17.13 NMAC: Closure Requirements

175. Subsection A of 19.15.17.13 NMAC establishes the deadlines for closure of a pit, closed-loop system, or below-grade tank.

176. An operator shall cease discharging into an existing unlined permanent pit that is permitted by or registered with the Division within two years after the effective date of 19.15.17 NMAC. An operator shall close an existing unlined permanent pit that is permitted by or registered with the Division within three years after the effective date.

177. The Division's proposal required that all existing unlined permanent pits that are permitted by or registered with the Division be closed within two years after the effective date of 19.15.17 NMAC. The Industry Committee proposed that they be closed within two years after the Division approves the closure plan. The primary concern is that discharges cease into unlined pits due to the potential for these pits to cause contamination of soils and ground water. Therefore, the Commission adopts the requirement that discharges cease within two years and the pit itself must be closed within three years. This allows the operator sufficient time to obtain approval of a closure plan. Tr. 1006.

178. An operator shall cease discharging into an existing, lined or unlined, permanent pit that is not permitted by or registered with the Division on or by the effective date of 19.15.17 NMAC. An operator shall close an existing, lined or unlined, permanent pit that is not permitted by or registered with the Division within six months after the effective date.

179. The Division's proposal required that an existing, lined or unlined, permanent pit that is not permitted by or registered with the Division be closed within 60 days. The Industry Committee proposed that they be closed within 120 days of the Division's approval of the closure plan. The primary concern is that discharges cease into permanent pits that are not registered or permitted. Under existing rule, 19.15.2.50 NMAC, operators were supposed to close permanent pits that were not registered or permitted by October 30, 2004. Tr. 1006. Therefore, because operators who have such pits are already in violation of an existing Division rule they should not be allowed to continue to discharge into an unregistered or unpermitted permanent pit.

180. An operator shall close an existing unlined temporary pit within three months after the effective date of 19.15.17 NMAC. Tr. 1006. The Industry Committee proposed that this be modified to require closure within three months after approval of a closure plan. The Commission does not adopt this proposal because given the short-term nature of temporary pits they should be closed promptly.

181. An operator shall close an existing, below-grade tank that does not meet the requirements of Paragraphs (1) through (4) of Subsection I of 19.15.17.11 NMAC or is not included in Paragraph (5) of Subsection I of 19.15.17.11 NMAC within five years after the effective date of 19.15.17 NMAC if the operator does not retrofit the below-grade tank to comply with Paragraph (1) through (4) of Subsection I of 19.15.17.11 NMAC. Tr. 1006 and 1007. The Commission makes modifications to reflect the changes it made to Subsection I of 19.15.17.11 NMAC. See Paragraph 134.

182. An operator shall close any other permitted permanent pit within 60 days of cessation of operation of the permanent pit in accordance with a closure plan that the Division's Environmental Bureau approves. Tr. 1007 and 1008. Sixty days provides sufficient time for such closure.

183. An operator shall close any other permitted temporary pit within six months from the date that the operator releases the drilling or workover rig. The appropriate district office may grant an extension not to exceed three months. The six month period allows ample time for the operator to remove free liquids, for evaporation of fluids remaining in the pit, and for the operator to make arrangements for closure. Tr. 1008, 1009, and 1010.

184. An operator shall close a drying pad used for a closed-loop system permitted under 19.15.17 NMAC or in operation on the effective date of 19.15.17 NMAC within six months from the date that the operator releases the drilling or workover rig. The operator shall note the date of the drilling or workover rig's release on form C-105 or

C-103, filed with the division, upon the well's or workover's completion. The appropriate district office may grant an extension not to exceed six months. The six month period allows ample time for the operator to remove free liquids, if necessary, for drying of solids on the drying pad, and for the operator to make arrangements for closure. Tr. 1010.

185. An operator shall close a permitted below-grade tank within 60 days of cessation of the below-grade tank's operation or as required by the transitional provisions of Subsection B of 19.15.17.17 NMAC in accordance with a closure plan that the appropriate district office approves. Tr. 1010 and 1011.

186. Subsection B of 19.15.17.13 NMAC requires the operator of a temporary pit to remove all liquids from the temporary pit prior to closure and dispose of the liquids in a Division-approved facility or recycle, reuse, or reclaim the liquids in a manner that the appropriate district office approves. This ensures proper management and disposal of the liquids. Subsection B of 19.15.17.13 NMAC also provides that the operator must close the temporary pit by one of the specified methods in Paragraphs (1) through (3) of Subsection B of 19.15.17.13 NMAC. Tr. 1011, 1012, and 1013. The current rule, 19.15.2.50 NMAC, does not contain specific requirements for closure. These are needed to ensure that temporary pits are closed in a manner that protects fresh water, public health, and the environment. IPANM asked that evaporation be added to list of methods for disposal of liquids. An operator has six months from the date of the drilling or workover rig's release to close a temporary pit, so evaporation is already allowed during that time period. Tr. 1012 and 1013.

187. The first closure method provided for is waste excavation and removal. The operator must close the temporary pit by excavating all contents and, if applicable, synthetic pit liners and transferring those materials to a Division-approved facility. This closure method is required unless the operator meets the siting requirements in Subsection C of 19.15.17.10 NMAC and the closure requirements and standards of Subsection F of 19.15.17.13 NMAC or obtains Division approval of an alternative closure method pursuant to Subsection B of 19.15.17.15 NMAC. See Paragraph 74.

188. The operator must sample the soils beneath the temporary pit upon closure to determine whether a release has occurred. Testing beneath the pit provides notice if a release has occurred so that abatement actions can be taken to protect or remediate fresh water and soils if needed. Different standards are established for temporary pits where ground water is between 50 and 100 feet below the bottom of the temporary pit or a pit used for cavitation and where ground water is more than 100 feet below the bottom of the temporary pit. The current rule, 19.15.2.50 NMAC, does not require testing underneath temporary pits once the contents are removed. Therefore, if a release has occurred the Division is not informed. Tr. 1016.

189. The Division's proposal did not include different standards for temporary pits where ground water is between 50 and 100 feet or more than 100 feet below the bottom of the temporary pit. It also contained a lower TPH (total petroleum

hydrocarbon) criteria. The Commission has revised this section to reflect the landfarm criteria from 19.15.36 NMAC used for siting in 19.15.17.10 NMAC. This ensures consistency between 19.15.36 NMAC and 19.15.17 NMAC. See Paragraphs 74 through 76.

190. If the operator determines, based on the sampling, that a release has occurred that causes an exceedance of the standards then the operator must comply with 19.15.3.116 NMAC and 19.15.1.19 NMAC as appropriate. Tr. 1034.

191. If the sampling program demonstrates that a release has not occurred or that a release does not exceed the concentrations specified in the standards then the operator must backfill the temporary pit excavation with compacted, non-waste containing, earthen material, construct a Division-prescribed soil cover, and recontour and re-vegetate the site. Tr. 1036.

192. The second closure method is on-site burial. In order to bury the waste on site the operator must demonstrate and comply with the siting requirements in Subsection C of 19.15.17.10 NMAC and the closure requirements and standards of Subsection F of 19.15.17.13 NMAC. Tr. 1039. The Division's proposal only addressed trench burial. The Commission has modified this subsection to reflect that it is allowing in-place burial in a temporary pit under certain circumstances. See Paragraph 69.

193. CRI and OGAP proposed that this subsection be deleted because they proposed that no on-site burial be allowed. The Commission does not adopt the proposals because it finds there are circumstances where waste can be safely buried on-site. See Paragraph 72.

194. An operator may also propose alternatives to the waste excavation and removal or on-site burial. If the Division's Environmental Bureau grants an exception approving the proposed alternative the operator may close the temporary pit by the alternative method. Tr. 1040 and 1041.

195. Subsection C of 19.15.17.13 NMAC provides the closure requirements for permanent pits. The operator must remove all liquids and basic sediments and water from the permanent pit prior to closure and dispose of them in a Division-approved facility. The operator must also remove the pit liner system and remove any on-site equipment that is not needed for another purpose. The removal of liquids and basic sediment and waste from the permanent pit prior to closure reduces the risk of a release and potential contamination of soils and ground water. Tr. 1079 and 1080.

196. The operator must test the soils under the permanent pit to determine whether a release has occurred. If a release has occurred, then the operator must comply with 19.15.3.116 NMAC and 19.15.1.19 NMAC as applicable. If a release has not occurred then the operator must backfill the excavation with compacted, non-waste containing, earthen material; construct a Division-prescribed soil cover; and recontour

and re-vegetate the site. Testing is needed to determine that a release has not occurred in order to prevent ground water contamination. Tr. 1080.

197. Subsection D of 19.15.17.13 NMAC provides the closure methods for closed-loop systems. If the closed-loop system uses a temporary pit instead of drying pad, the operator must comply with the closure requirements for temporary pits. Tr. 1081.

198. The operator shall close a closed-loop system that uses a drying pad either by waste removal, by on-site burial, or by an alternative method if the Division's Environmental Bureau approves the request for an exception. To use on-site burial the operator must demonstrate and comply with the siting requirements of Subsection C of 19.15.17.10 NMAC and the closure requirements and standards of Subsection F of 19.15.17.13 NMAC. Tr. 1081 and 1082.

199. CRI proposed that the option for on-site burial be deleted because CRI proposed that no on-site burial be allowed. The Commission does not adopt this proposal because it finds there are circumstances where waste can be safely buried on-site. See Paragraph 72.

200. Subsection E of 19.15.17.13 NMAC provides the closure methods for below-grade tanks. The operator must remove liquids and sludge from a below-grade tank prior to closure and dispose of the liquids and sludge in a Division-approved facility. The removal of liquids and sludge from a below-grade tank prior to closure reduces the risk of a release and contamination of ground water. Tr. 1082 and 1083.

201. The operator shall remove and dispose of the below-grade tank in a Division-approved facility or recycle, re-use, or reclaim it in a manner that the appropriate district office approves. If there is any on-site equipment that is not needed for some other purpose the operator must remove the equipment. Tr. 1083. This is needed to ensure equipment is not abandoned on site, which can create safety and health hazards.

202. The operator must test the soils beneath the below-grade tank to determine whether a release has occurred. Testing beneath the below-grade tank provides notice if a release has occurred so that abatement actions can be taken to protect or remediate fresh water and soils if needed. If a release has occurred then the operator must comply with 19.15.3.116 NMAC and 19.15.1.9 NMAC as appropriate. If a release has not occurred, then the operator must backfill the excavation with compacted, non-waste containing earthen material; construct a Division-prescribed soil cover; and recontour and re-vegetate the site. Testing is needed to ensure that a release has not occurred in order to prevent ground water contamination. Tr. 1083.

203. Subsection F of 19.15.17.13 NMAC provides the requirements and methods for on-site closure. Any on-site closure method must comply with the siting criteria specified in Subsection C of 19.15.17.10 NMAC. See Paragraphs 68 through 71.

The operator must provide the surface owner notice of the operator's proposed use of an on-site closure method.

204. The Division's proposal provided that a surface waste disposal facility not be available within a 100 mile radius and that the operator have surface owner approval in order for an operator to bury waste on-site. The Industry Committee and IPANM proposed that the 100 mile radius requirement be removed and that only surface owner notification be required. The Commission does not adopt the 100-mile radius requirement because on-site closure should be based on the level of various constituents in the waste rather than on the distance to a disposal facility. See Paragraph 71.

205. A majority of the Commission adopts the Industry Committee and IPANM's proposal for surface owner notification because the Commission and Division's responsibility with regard to waste disposal is to protect fresh water, public health, and the environment. As long as the waste constituents are below levels that would result in contamination, as required by the siting and waste criteria the Commission adopted in 19.15.17.10 NMAC and Subsection F of 19.15.17.13 NMAC, protection of fresh water, public health, and the environment is provided and surface owner approval is not needed to provide such protection. Whether permanent burial of waste on-site is included in the mineral estate's right to reasonable use of the surface in order to develop the minerals or comply with the Surface Owners Protection Act's (NMSA 1978, Section 70-12-1 *et seq.*) requirement to substantially restore the surface are issues for the courts, not the Commission, to determine. Commissioner Olson dissented from this position because he believes that on-site burial of oil and gas wastes is not necessary for development of the mineral estate and therefore surface owner permission should be required to permanently bury these wastes on-site.

206. CRI, OGAP, and NMCCAW proposed that the option for on-site burial be deleted because they had proposed that no on-site burial be allowed. The Commission does not adopt this proposal because it finds there are circumstances where waste can be safely buried on-site. See Paragraph 72.

207. The operator must comply with the closure requirements and standards of Paragraphs (2) and (3), as applicable, of Subsection F of 19.15.17.13 NMAC in order to use on-site burial or an alternative closure method.

208. The operator must place a steel marker at the center of an on-site burial. A person may not build permanent structures over an on-site burial without the appropriate district office's approval and may not remove an on-site burial marker without the Division's written permission. This requirement ensures that future surface owners know where on-site burial has occurred and prevents the waste contents from being disturbed and released where they may pose a threat to fresh water, public health, and the environment. Tr. 1308, 2526, and 2527.

209. The operator must report the exact location of the on-site burial on form C-105 filed with the Division and file a notice identifying the on-site burial's exact

location with the county clerk in the county where the on-site burial occurs. This requirement ensures that future surface owners may know where on-site burials have occurred. Tr. 1309, 2526, and 2527.

210. Where the operator meets the siting criteria specified in Paragraphs (2) or (3) of Subsection C of 19.15.17.10 NMAC and the applicable waste criteria specified in Subparagraphs (c) or (d) of Paragraph (2) of Subsection F of 19.15.17.13 NMAC, an operator may use in-place burial (burial in the existing temporary pit for closure of a temporary pit or bury the contents of a drying pad associated with a closed-loop system in a temporary pit that the operator constructs for the purpose of burial).

211. Prior to closing an existing temporary pit or to placing the contents from a drying pad into a temporary pit that the operator constructs for disposal, the operator must stabilize or solidify the contents to a bearing capacity sufficient to support the temporary pit's final cover. The operator shall not mix the contents with soil or other material at a mixing ratio of greater than 3:1 soil or other material to contents.

212. The 3:1 ratio is needed to ensure that in order to meet the standards for on-site closure that operators do not bring in large volumes of additional uncontaminated soil or other material to dilute the waste or dig or scrape up additional soil from the existing location, which would result in greater surface disturbance. In other words, the mixing ratio limit is needed to ensure that "the solution to pollution is not dilution".

213. The rule provides two separate standards for sampling the contents of the temporary pit or the drying pad to determine if the waste can be buried in place. One standard is for where ground water would be 50 and 100 feet below the bottom of the buried waste. The other is for where ground water would be more than 100 feet below the bottom of the buried waste. If the waste meets those standards the operator may bury the waste in place. See Paragraphs 74 through 76. These standards provide for consistency with the landfarm closure requirements of 19.15.36 NMAC.

214. The Division's proposal did not allow in-place burial. Because the Commission has determined that in-place burial is appropriate in certain circumstances, sampling standards are needed. The Commission adopts the sampling standards for landfarm closure from 19.15.36 NMAC. This ensures consistency between 19.15.36 NMAC and 19.15.17 NMAC and between the siting and sampling requirements. See Paragraphs 74 through 76.

215. Upon closure of the temporary pit the operator shall cover the geomembrane-lined, filled, temporary pit with compacted, non-waste containing, earthen material; construct a Division-prescribed soil cover; and recontour and re-vegetate the site. The proper installation of a geomembrane liner and placement of the soil cover restricts moisture from coming into contact with the buried waste and reduces the risk of contaminants leaching out of the waste. Tr. 1103 and 1104.

216. For burial of contents from a drying pad the operator shall construct the temporary pit in accordance with Paragraphs (1) through (6) and (10) of Subsection F of 19.15.17.10 NMAC, within 100 feet of the drying pad, unless the appropriate district office approves another distance and location.

217. The location of the temporary pit within 100 feet of the drying pad limits additional surface disturbance and prevents the accumulation of multiple drying pads from other locations being buried on-site, in effect creating a mini-landfill. Tr. 1091, 1092, 1100, and 1101.

218. Where the operator meets the siting criteria of Paragraph (4) of Subsection C of 19.15.17.10 NMAC an operator may use on-site trench burial for closure of a drying pad or a temporary pit if the waste meets the criteria in Subparagraph (c) of Paragraph (3) of Subsection F of 19.15.17.13 NMAC. See Paragraphs 77 through 81.

219. Prior to placing the contents from the drying pad or temporary pit in the trench, the operator must stabilize or solidify the contents to a bearing capacity sufficient to support the final cover of the trench burial. The operator shall not mix the contents with soil or other material at a mixing ratio of greater than 3:1 soil or other material to contents.

220. The 3:1 ratio is needed to ensure that in order to meet the standards for on-site closure that operators do not bring in large volumes of additional uncontaminated soil or other material to dilute the waste or dig or scrape up additional soil from the existing location, which would result in greater surface disturbance. In other words, the mixing ratio limit is needed to ensure that "the solution to pollution is not dilution".

221. The operator shall sample the contents to determine it meets the standards established for trench burial. If the contents do not exceed the established standards the operator shall construct the trench with a geomembrane liner within 100 feet of the drying pad or temporary pit, unless the appropriate district office approves another distance and location. The location of the trench within 100 feet of the drying pad limits additional surface disturbance and prevents the accumulation of multiple drying pads from other locations being buried on-site, in effect creating a mini-landfill. Tr. 1091, 1092, 1100, and 1101.

222. The operator shall close each drying pad or temporary pit by excavating and transferring all contents and synthetic pit liners to the lined trench.

223. The operator shall test the soils beneath the temporary pit after excavation to determine whether a release occurred. Testing beneath the pit provides notice if a release has occurred so that abatement actions can be taken to protect or remediate fresh water and soils if needed. The rule provides two separate standards for sampling under the temporary pit to determine whether a release occurred. One standard is for where ground water is 50 and 100 feet below the bottom of the temporary pit. The other is for where ground water is more than 100 feet below the bottom of the temporary pit. If a

release has not occurred the operator shall backfill the excavation with compacted, non-waste containing earthen material; construct a Division-prescribed soil cover; and recontour and re-vegetate the site.

224. The Division's proposal did not include different standards for sampling under temporary pits where ground water is between 50 and 100 feet or more than 100 feet below the bottom of the temporary pit. It also contained a different chloride level. The Commission does not adopt the Division's proposed sampling criteria and revises this requirement to reflect the landfarm criteria from 19.15.36 NMAC, which the Commission used for siting in 19.15.17.10 NMAC. See Paragraphs 74 through 76. This ensures consistency between 19.15.36 NMAC and 19.15.17 NMAC and between the siting and sampling criteria. See Paragraphs 74 through 76.

225. If a release has occurred under the temporary pit, the operator shall comply with 19.15.3.116 NMAC and 19.15.1.19 NMAC as appropriate. The operator may propose to transfer the excavated, contaminated soil into the lined trench if it meets the criteria for trench burial. Tr. 1102.

226. The operator shall install a geomembrane cover over the excavated material in the lined trench. The operator shall cover the geomembrane-lined and covered, filled, trench with compacted, non-waste containing, earthen material; construct a Division-prescribed soil cover; and recontour and re-vegetate the site. The proper installation of a geomembrane liner and placement of the soil cover restricts moisture from coming into contact with the buried waste and reduces the risk of contaminants leaching out of the waste. Tr. 1103 and 1104.

227. Subsection G of 19.15.17.13 NMAC specifies the requirements for reclamation of pit locations, on-site burial locations, and drying pad locations. Once the operator has closed a pit or trench or is no longer using a drying pad, below-grade tank, or an area associated with a closed-loop system, pit, trench, or below-grade tank, the operator must reclaim the location and all associated areas to a safe and stable condition that blends with the surrounding undisturbed area. The operator must substantially restore the impacted surface area to the condition that existed prior to the oil and gas operations. NMSA 1978, Section 70-1-4(C) requires an operator to reclaim all surfaces affected by the operator's oil and gas operations. Reclaim is defined as substantially restoring the affected surface to the condition that existed prior to oil and gas operations, or as the surface owner otherwise agrees. NMSA 1978, Section 70-12-3(C). The operator must recontour the area to a contour that approximates the original contour and blends with the surrounding topography and re-vegetate according to Subsection I of 19.15.17.13 NMAC. Subsection G of 19.15.17.13 NMAC allows the operator to propose an alternative to this requirement if the surface owner agrees.

228. Subsection H of 19.15.17.13 NMAC specifies the requirements for soil cover designs. The soil cover for closures where the operator has removed the pit contents or remediated the contaminated soil to the Division's satisfaction shall consist of the background thickness of topsoil or one foot of suitable material to establish

vegetation at the site, whichever is greater. This requirement ensures that enough topsoil or suitable material is present to allow vegetation to re-establish. Tr. 1104, 3538, 3539, and 3563.

229. The soil cover for burial in-place or trench burial shall consist of a minimum of four feet of compacted, non-waste containing, earthen material. The soil cover shall include either the background thickness of topsoil or one foot of suitable material to establish vegetation at the site, whichever is greater. Compaction of the soil ensures that the soil cover does not settle and collect water. Collection of water above buried waste increases the likelihood of infiltration of water and water leaching the waste contents. Tr. 1105.

230. Subsection I of 19.15.17.13 NMAC specifies the re-vegetation requirements. The first growing season after the operator closes a pit or trench or is no longer using a drying pad, below-grade tank, or an area associated with a closed-loop system, pit, or below-grade tank, the operator shall seed or plant the disturbed areas. The Division's proposal did not specify a specific requirement for revegetation. The Commission adopts specific requirements so that adequate revegetation is achieved. Vegetation is important in maintaining the site and preventing erosion. Tr. 3625, 3626, and 3627.

231. The operator must accomplish seeding by drilling on the contour whenever practical or by other Division-approved methods. The operator must obtain vegetative cover that equals 70% of the native perennial vegetative cover. Tr. 3647 and 3648. Plants have specific genetic material that is adapted to certain areas so native plants do better in those areas. Tr. 3564. The operator shall repeat seeding or planting until it successfully achieves the required vegetative cover. The requirement for 70% of the native perennial vegetative cover is the same requirement the Commission adopted for revegetation of landfarms in 19.15.36 NMAC. Revegetation requirements should be consistent among Division rules wherever possible.

232. Subsection J of 19.15.17.13 NMAC specifies the requirements for closure notice. The operator shall notify the surface owner and the Division that the operator plans to close a temporary pit, permanent pit, below-grade tank, or where the operator has Division approval for on-site closure. This subsection instructs operators on the methods for providing notice, which closures require notice, and what the operator must do to demonstrate compliance. Tr. 1114, 1115, and 1116.

233. Subsection K of 19.15.17.13 NMAC provides the requirements for closure reports. Within 60 days of closure completion, the operator must submit a closure report on form C-144. The use of form C-144 standardizes the format that operators use in submitting closure reports. Tr. 1116.

19.15.17.14 NMAC: Emergency Actions

234. Subsection A of 19.15.17.14 NMAC provides that in an emergency an operator may construct a pit without a permit to contain fluids, solids, or wastes, if an immediate danger to fresh water, public health, or the environment exists.

235. Subsection A of 19.15.17.14 NMAC is based upon existing provisions in 19.15.2.50 NMAC. The emergency action provision has been modified from the existing rule, 19.15.2.50 NMAC, to provide 48 hours rather than 24 hours for notification and removal of fluids, solids, or wastes. Tr. 1116, 1117, and 1118.

236. Subsection B of 19.15.17.14 NMAC provides that in an emergency the operator shall construct a pit, to the extent possible given the emergency, in a manner that is consistent with the requirements for temporary pits provided in 19.15.17 NMAC and that prevents the contamination of fresh water and protects public health and the environment.

237. Subsection C of 19.15.17.14 NMAC requires the operator to notify the appropriate district office as soon as possible of the need for the construction of a pit in an emergency.

238. Subsection D of 19.15.17.14 NMAC provides that a pit constructed in an emergency may be used only for the emergency's duration. If the emergency lasts more than 48 hours then the operator must seek the appropriate district office's approval to continue to use the pit. The operator must remove all fluids, solids, or wastes within 48 hours after it is no longer using the pit unless it obtains the appropriate district office's approval for a longer period of time.

239. Subsection E of 19.15.17.14 NMAC provides that 19.15.17.14 NMAC does not authorize the construction or use of an emergency pit as defined in Subsection D of 19.15.17.7 NMAC. Construction or use of such a pit requires a permit issued pursuant to 19.15.17 NMAC, unless the pit is described in a spill prevention, control and countermeasure plan the United States Environmental Protection Agency requires; the operator removes all fluids from the pit within 48 hours and the operator has filed a notice of the pit's location with the appropriate district office.

240. The Commission clarified that Subsection E of 19.15.17.14 NMAC was in reference to emergency pits, not a pit constructed in an emergency, by adding "as defined in Subsection D of 19.15.17.7 NMAC".

241. At the conclusion of the hearing, none of parties proposed changes to 19.15.17.14 NMAC.

19.15.17.15 NMAC: Exceptions

242. Subsection A of 19.15.17.15 NMAC addresses general exceptions.

243. The operator may apply to the Division's Environmental Bureau for an exception to a requirement or provision of 19.15.17 NMAC other than the permit requirements of 19.15.17.8 NMAC; the exception requirements of 19.15.17.15 NMAC; or the permit approval, condition, denial, revocation, suspension, modification, or transfer requirements of 19.15.17.16 NMAC. Tr. 1120. In order for the Environmental Bureau to grant an exception the operator must demonstrate to its satisfaction that the exception provides equivalent or better protection of fresh water, public health, and the environment. Tr. 1122. Subsection A establishes who must receive notice of the exception request and the methods by which notice must be provided.

244. CRI proposed that Subsection A of 19.15.17.15 NMAC be modified to require notice to surface owners of record with one-half mile of the location for which the operator has requested an exception, the county commission, the appropriate city officials if the location is within one-half mile of the city or its zoning and planning jurisdiction and to affected federal, tribal, or pueblo governments. CRI also proposed that the subsection include a time period of 30 days for persons to comment or to request a hearing. The Commission adopts the proposed changes. The changes make the notice requirements consistent with those the Commission adopted for the surface waste management rule, 19.15.36 NMAC, and meet the Commission's requirement to comply with existing Executive Order 2005-056 that directs state agencies to provide for public notice and involvement.

245. Subsection B of 19.15.17.15 NMAC addresses alternative closure methods. The operator of a temporary pit or a closed-loop system may apply to the Division's Environmental Bureau for an exception to the closure methods specified in Paragraphs (1) and (2) of Subsection B of 19.15.17.13 NMAC or Paragraphs (1) and (2) of Subsection D of 19.15.17.13 NMAC. The Environmental Bureau may grant the proposed exception if the operator meets the requirements in Paragraphs (1) through (3) of Subsection B of 19.15.17.15 NMAC.

246. The intent of the exception provisions is to allow industry to develop and apply new methods or practices that protect fresh water, public health, and the environment, but that may not be addressed by the existing sections on design and construction, operations, and closure. Tr. 1139 and 1142.

19.15.17.16 NMAC: Permit Approvals, Conditions, Denials, Revocations, Suspensions, Modifications, or Transfers

247. Subsection A of 19.15.17.16 NMAC requires the Division to review all applications to permit facilities subject to 19.15.17 NMAC and provides that the Division may approve, deny, or approve applications with conditions. Tr. 1147 and 1148. This subsection is needed so that the Division can determine whether the proposed facilities will be sited, designed, constructed, operated, and closed in a manner that protects fresh water, public health, and the environment.

248. The Industry Committee proposed that a requirement be added to require the Division to act upon an application within 60 days and if it did not that the matter be set for hearing before the Commission. Given the Division's current staffing limits a 60 day timeline for acting upon an application would likely result in the Division having to reject incomplete applications rather than working with an operator to resolve deficiencies in the application. Therefore, the Commission does not adopt this proposal.

249. Subsection B of 19.15.17.16 NMAC provides that the Division shall issue a permit if it finds that the operator has filed an acceptable application and that the proposed construction, operation, and closure of a pit, closed-loop system, below-grade tank, or proposed alternative will comply with applicable statutes and rules and will not endanger fresh water, public health, safety, or the environment. Tr. 1147. This subsection is needed so that the Division and operators know under what circumstances the Division shall grant a permit.

250. Subsection C of 19.15.17.16 NMAC provides that the Division may impose conditions or requirements that it determines are necessary and proper for the protection of fresh water, public health, safety, or the environment on a permit. This allows the Division to add conditions that will protect fresh water, public health, safety, or the environment instead of denying the permit.

251. Subsection D of 19.15.17.16 NMAC provides that the Division may deny an application for a permit if it finds that the application and materials that the operator submitted do not sufficiently demonstrate that the operator can construct, operate, and close the proposed pit, closed-loop system, below-grade tank, or proposed alternative without detriment to fresh water, public health, safety, or the environment. Tr. 1148. This subsection is needed so that the Division and operators know under what circumstances the Division may deny a permit.

252. Subsection E of 19.15.17.16 NMAC addresses revocation, suspension, or modification of a permit. Tr. 1148. NMCCAW proposed that the Commission add the requirement that "any modification that is equivalent to an exception of any paragraph of 19.15.17 NMAC shall be subject to the notice and approval procedures for an exception". The Commission adopts this proposal because a modification may be equivalent to an exception.

253. Subsection F of 19.15.17.16 NMAC provides that an operator cannot transfer a permit without the Division's prior written approval. Tr. 1148 and 1149. The Division's approval of an application to transfer a well or other facility with which a permitted pit, below-grade tank, or closed-loop system is associated shall constitute approval of the transfer of the permit for the pit, below-grade tank, or closed-loop system so a separate request for approval to transfer a permit will usually not be necessary. In all other cases, the operator and the transferee shall apply for approval to transfer the permit to the division office to which permit applications for the type of facility involved are directed.

254. Subsection G of 19.15.17.16 NMAC provides that the Division shall grant or confirm any approval it grants by written statement. Tr. 1149. Written statements include e-mail. This ensures that approvals are documented.

255. The Industry Committee asked that Subsection H of 19.15.17.16 NMAC be added to specify that any hearings on applications be conducted according to the Division's rule on adjudicatory hearings, 19.15.14.1206 through 19.15.14.1215 NMAC. The Commission adds this subsection to clarify that such hearings will be held pursuant to that rule.

19.15.17.17 NMAC: Transitional Provisions

256. 19.15.17.17 NMAC addresses transitional provisions for existing pits, below-grade tanks, and closed-loop systems. Transitional provisions are needed because there are ongoing activities that will continue after the effective date of 19.15.17 NMAC.

257. Subsection A of 19.15.17.17 NMAC provides that after the effective date of 19.15.17 NMAC, the Division shall not accept applications for permits for unlined temporary pits. The Industry Committee requested that "applications for permits" for unlined temporary pits be added because phasing out of unlined temporary pits is addressed in 19.15.17.13 NMAC and this avoids a conflict between the provisions and the need for approved closure plans.

258. Subsection B of 19.15.17.17 NMAC provides that an operator of an existing operation that is required to close pursuant to Paragraphs (2) or (3) of Subsection A of 19.15.17.13 NMAC must submit a closure plan pursuant to Subsection C of 19.15.17.9 NMAC to the Division not later than 30 days after the effective date of 19.15.17 NMAC. An operator of an existing operation that is required to close pursuant to Paragraphs (1) or (4) of Subsection A of 19.15.17.13 NMAC must submit a closure plan not later than six months after the effective date.

259. The Division's proposal would have required that all existing operations required to be closed pursuant to Paragraphs (1) through (4) of Subsection A of 19.15.17.13 NMAC submit a closure plan within 30 days after the effective date. However, because operators have three years to close unlined, permitted or registered, permanent pits and five years to close a below-grade tank that does not comply with the requirements of Subsection I of 19.15.17.11 NMAC, 30 days is unnecessarily restrictive.

260. Subsection C of 19.15.17.17 NMAC provides that within 180 days after the effective date, an operator of an existing lined permitted permanent pit must request a modification pursuant to Subsection E of 19.15.17.16 NMAC. Within 180 days after the effective date an operator of an existing lined registered permanent pit must apply for a permit. An operator of an existing lined, permitted or registered, permanent pit must comply with the construction requirements of 19.15.17.11 NMAC within 18 months after permit modification or issuance.

261. The Division's proposal required that an operator comply with the construction requirements within two years after the effective date. The Commission adopts the Industry Committee's proposal because it establishes a two step process for bringing pits into compliance with the requirements of 19.15.17 NMAC. It establishes a definitive deadline for submitting the permit application or modification application. In addition, it bases the deadline for complying with the construction requirements on the date the Division issues the permit or permit modification.

262. Subsection D of 19.15.17.17 NMAC provides that an operator of an existing below-grade tank must apply for a permit or permit modification pursuant to 19.15.17 NMAC within 90 days after the effective date. An operator of an existing below-grade tank shall comply with the construction requirements of 19.15.17.11 NMAC within one year of permit issuance.

263. The Division's proposal required that the operator of an existing below-grade tank comply with the permitting requirements within 90 days after the effective date. The Commission adopts the Industry Committee's proposal because it provides a schedule for the operator of a below-grade tank to submit a permit application or modification and bases the deadline for complying with the construction requirements upon the date the Division issues the permit.

264. Subsection E of 19.15.17.17 NMAC provides that an operator of an existing below-grade tank or pit permitted prior to the effective date may continue to operate in accordance with such permits or orders, subject to the provisions in Paragraphs (1) through (4) of Subsection E of 19.15.17.17 NMAC.

265. Subsection F of 19.15.17.17 NMAC provides that an operator may continue to operate an existing closed-loop system without applying for a permit, but the operator shall close the system in accordance with the closure requirements in 19.15.17.13 NMAC.

266. Subsection G of 19.15.17.17 NMAC provides that an operator of an existing sump shall comply with the operational requirements of 19.15.17.12 NMAC.

19.15.1.7 NMAC: Definitions

267. Paragraph (9) of Subsection A of 19.15.1.7 NMAC defines "ASTM" as the ASTM-International, an international standards developing organization that develops and publishes voluntary technical standards for a wide range of materials, products, systems, and services. This acronym is used in Division rules and should be defined.

268. Paragraph (5) of Subsection B of 19.15.1.7 NMAC amends the definition of "below-grade tank" to remove that portion of the definition that referred to the tank's sidewalls not being visible. The current definition has resulted in tanks that are below the ground's surface but which have their side walls visible not being permitted by the Division. Below-grade tank does not include an above ground storage tank that is located

above or at the surrounding ground surface's elevation and is surrounded by berms. This was added to clarify that above ground storage tanks that have berms around them are not below-grade tanks and are not subject to the requirements of 19.15.17 NMAC.

269. Paragraph (10) of Subsection B of 19.15.1.7 NMAC defines "BS&W" as basic sediments and water. This abbreviation is used in 19.15.17 NMAC as well as other Division rules and should be defined.

270. Paragraph (11) of Subsection B of 19.15.1.7 NMAC defines "BTEX" as benzene, toluene, ethylbenzene, and xylene. This acronym is currently defined in 19.15.36 NMAC, but now that it is also used in 19.15.17 NMAC it needs to be included in the general definitions.

271. Paragraph (3) of Subsection C of 19.15.1.7 NMAC defines "cm/sec" as centimeters per second. This abbreviation is used in 19.15.17 NMAC as well as other Division rules and should be defined.

272. Paragraph (6) of Subsection D of 19.15.1.7 NMAC defines "downstream facility" as a facility associated with transportation (including gathering) or processing of gas or oil (including a refinery, gas plant, compressor station, or crude oil pump station); brine production; or the oil field service industry. An upstream facility is defined as not including a downstream facility; therefore, downstream facility needs to be defined.

273. Paragraph (7) of Subsection D of 19.15.1.7 NMAC defines "DRO" as diesel range organics. This acronym is currently defined in 19.15.36 NMAC, but now that it is also used in 19.15.17 NMAC it needs to be included in the general definitions.

274. Paragraph (1) of Subsection E of 19.15.1.7 NMAC defines "EPA" as the United States Environmental Protection Agency. This acronym is used in 19.15.17 NMAC as well as other Division rules and should be defined.

275. Paragraph (6) of Subsection G of 19.15.1.7 NMAC defines "geomembrane" as an impermeable polymeric sheet material that is impervious to liquid and gas as long as it maintains its integrity, and is used as an integral part of an engineered structure designed to limit the movement of liquid or gas in a system. This definition is currently included in 19.15.36 NMAC, but now that the term is also used in 19.15.17 NMAC it needs to be included in the general definitions.

276. Paragraph (7) of Subsection G of 19.15.1.7 NMAC defines "geotextile" as a sheet material that is less impervious to liquid than a geomembrane but more resistant to penetration damage, and is used as part of an engineered structure or system to serve as a filter to prevent the movement of soil fines into a drainage system, to provide planar flow for drainage, to serve as a cushion to protect geomembranes, or to provide structural support. This definition is currently included in 19.15.36 NMAC, but now that the term is also used in 19.15.17 NMAC it needs to be included in the general definitions.

277. Paragraph (8) of Subsection G of 19.15.1.7 NMAC defines "GRO" as gasoline range organics. This acronym is currently defined in 19.15.36 NMAC, but now that it is also used in 19.15.17 NMAC it needs to be included in the general definitions.

278. Paragraph (2) of Subsection H of 19.15.1.7 NMAC defines "HDPE" as high-density polyethylene. This acronym is currently defined in 19.15.36 NMAC, but now that it is also used in 19.15.17 NMAC it needs to be included in the general definitions.

279. Paragraph (3) of Subsection H of 19.15.1.7 NMAC defines "H₂S" as hydrogen sulfide. This chemical symbol is used in 19.15.17 NMAC as well as other Division rules and should be defined.

280. Paragraph (2) of Subsection L of 19.15.1.7 NMAC defines "liner" as a continuous, low-permeability layer constructed of natural or human-made materials that restricts the migration of liquid oil field wastes, gases, or leachate. This definition is currently included in 19.15.36 NMAC, but now that the term is also used in 19.15.17 NMAC it needs to be included in the general definitions.

281. Paragraph (3) of Subsection L of 19.15.1.7 NMAC defines "LLDPE" as linear low-density polyethylene. This acronym is used in 19.15.17 NMAC and should be defined.

282. Paragraph (3) of Subsection M of 19.15.1.7 NMAC defines "Mg/l" as milligrams per liter. This abbreviation is used in 19.15.17 NMAC as well as other Division rules and should be defined.

283. Paragraph (4) of Subsection M of 19.15.1.7 NMAC defines "Mg/kg" as milligrams per kilogram. This abbreviation is used in 19.15.17 NMAC as well as other Division rules and should be defined.

284. Paragraph (3) of Subsection P of 19.15.1.7 NMAC defines "pit". The Industry Committee proposed that the definition be amended to clarify that berms or ponds constructed for storm water or run-on control are not included in the definition of pit. The Commission adopts this proposal because it is not the Commission's intent that a permit be required for a storm water control pond or basin.

285. Paragraph (17) of Subsection P of 19.15.1.7 NMAC defines "PVC" as poly vinyl chloride. This acronym is currently defined in 19.15.36 NMAC, but now that it is also used in 19.15.17 NMAC it needs to be included in the general definitions.

286. Paragraph (18) of Subsection P of 19.15.1.7 NMAC defines "Psi" as pounds per square inch. This abbreviation is used in 19.15.17 NMAC as well as other Division rules and should be defined.

287. Paragraph (7) of Subsection R of 19.15.1.7 NMAC defines “run-on” to mean rainwater, leachate, or other liquid that drains from other land on to any part of a Division-approved facility. This definition is currently included in 19.15.36 NMAC, but now that the term is also used in 19.15.17 NMAC it needs to be included in the general definitions.

288. Paragraph (10) of Subsection S of 19.15.1.7 NMAC amends the definition of “surface waste management facility” to refer to temporary pit rather than a drilling or workover pit and to refer to below-grade tank rather than a tank. Current rule 19.15.2.50 NMAC, which the new rule 19.15.17 NMAC replaces, used the terms drilling and workover pit. 19.15.17 NMAC uses temporary pit to include both drilling and workover pits.

289. Paragraph (5) of Subsection T of 19.15.1.7 NMAC defines “TPH” as total petroleum hydrocarbons. This acronym is currently defined in 19.15.36 NMAC, but now that it is also used in 19.15.17 NMAC it needs to be included in the general definitions.

290. Paragraph (5) of Subsection U of 19.15.1.7 NMAC defines “unstable area”. This definition is currently included in 19.15.36 NMAC, but now that the term also used in 19.15.17 NMAC it needs to be included in the general definitions.

291. Paragraph (6) of Subsection U of 19.15.1.7 NMAC defines “upstream facility” as a facility or operation associated with the exploration, development, production, or storage of oil or gas that is not a downstream facility. This term is used in 19.15.17 NMAC and should be defined.

292. Paragraph (14) of Subsection W of 19.15.1.7 NMAC defines “WQCC” as the Water Quality Control Commission. This acronym is used in 19.15.17 NMAC as well as other Division rules and should be defined.

19.15.1.21 NMAC: Special Provisions for Selected Areas of Sierra and Otero Counties

293. Subsection B of 19.15.1.21 NMAC is amended so that the cross reference reflects that pits are now addressed by 19.15.17 NMAC not 19.15.2.50 NMAC and 19.15.9.711 NMAC.

19.15.2.52 NMAC: Disposition of Produced Water and Other Oil Field Waste

294. Subsection A of 19.15.2.52 NMAC is amended to reflect that 19.15.2.50 NMAC is replaced by 19.15.17 NMAC and 19.15.2.53 NMAC has been replaced by 19.15.36 NMAC.

295. Subsection B of 19.15.2.52 NMAC is amended to reflect that disposal pits are now referred to as permanent pits and 19.15.2.50 NMAC is replaced by 19.15.17 NMAC.

19.15.3.114 NMAC: Safety Procedures for Drilling and Production

296. 19.15.3.114 NMAC is amended to reflect that oil wells must be cleaned into a pit or tank permitted pursuant to 19.15.17 NMAC.

19.15.4.202 NMAC: Plugging and Permanent Abandonment

297. 19.15.4.202 NMAC is amended to reflect that the operator must close all pits and below-grade tanks in accordance with 19.15.17 NMAC.

19.15.13.1103 NMAC: Sundry Notices and Reports on Wells (Form C-103)

298. 19.15.13.1103 NMAC is amended to reflect that the Division shall not approve a plugging report until the operator demonstrates that it has complied with 19.15.4.202 NMAC, which requires the operator to close all pits and below-grade tanks in accordance with 19.15.17 NMAC. This replaces the reference to the operator closing pits and leveling and clearing the location of junk.

Final Conclusions

299. For the reasons explained in connection with each of the proposed rule sections and subsections, and in order to provide a regimen for regulating the use of pits, below-grade tanks, closed-loop systems, and sumps in a manner that will protect fresh water, human health, and the environment, the Commission concludes that the proposed rules as revised by the Commission should be adopted.

300. The Commission has considered the potential effects of these rule changes on small businesses as required by the Small Business Regulatory Relief Act, and finds that the rule changes as adopted are necessary to protect fresh water, human health, and the environment. The Commission has made those changes it found possible to the Division's proposal to lessen any potential effects while still meeting its statutory duty to protect fresh water, human health, and the environment. These include allowing operators to use temporary pits for cavitation of coal bed methane wells in areas where ground water is less than 50 feet below the pit, allowing operators to bury waste on-site when the location and waste meet the siting criteria and waste criteria requirements in Subsection C of 19.15.17.10 NMAC and Subsection F of 19.15.17.13 NMAC, and not requiring operators to replace or retrofit below-grade tanks that meet the requirements in Paragraph (5) of Subsection F of 19.15.17.10 NMAC so long as the tanks demonstrate integrity.

301. The final rules, incorporating all changes proposed during the proceedings, that the Commission has determined to adopt are set forth in Exhibit A to this order.

302. For the reasons stated above and in the transcript, the Commission concludes that it should adopt the new rule 19.15.17 NMAC and the proposed amendments to Subsections A, B, C, D, E, G, H, L, M, P, R, S, T, U, and W of 19.15.1.7 NMAC, Subsection B of 19.15.1.21 NMAC, 19.15.2.52 NMAC, 19.15.3.114 NMAC, 19.15.4.202 NMAC, and 19.15.13.1103 NMAC in the form attached to this Order as Exhibit A and that existing rule 19.15.2.50 NMAC should be repealed.

IT IS THEREFORE ORDERED THAT:

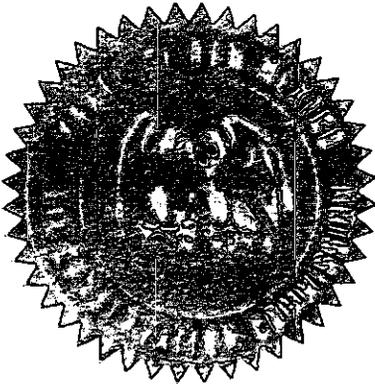
1. The Commission hereby repeals existing rule, 19.15.2.50 NMAC; and adopts new rule, 19.15.17 NMAC and the amendments to Subsections A, B, C, D, E, G, H, L, M, P, R, S, T, U and W of 19.15.1.7 NMAC, Subsection B of 19.15.1.21 NMAC, 19.15.2.52 NMAC, 19.15.3.114 NMAC, 19.15.4.202 NMAC and 19.15.13.1103 NMAC of the Division rules shown in Exhibit A to this Order, effective as of the date of publication thereof in the New Mexico Register.

2. Division staff is instructed to secure prompt publication of the referenced rule changes in the New Mexico Register.

3. The Commission retains jurisdiction of this matter for entry of such further orders as may be necessary.

DONE at Santa Fe, New Mexico, on the day and year hereinabove designated.

**STATE OF NEW MEXICO
OIL CONSERVATION COMMISSION**



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JAMI BAILEY, CPG, MEMBER

Handwritten signature of William Olson in cursive.

WILLIAM OLSON, MEMBER

Handwritten signature of Mark E. Fesmire in cursive.

MARK E. FESMIRE, CHAIR

S E A L

Exhibit A

TITLE 19 NATURAL RESOURCES AND WILDLIFE
CHAPTER 15 OIL AND GAS
PART 17 PITS, CLOSED-LOOP SYSTEMS, BELOW-GRADE TANKS AND SUMPS

19.15.17.1 ISSUING AGENCY: Energy, Minerals and Natural Resources Department, Oil Conservation Division.
[19.15.17.1 NMAC - N, //08]

19.15.17.2 SCOPE: 19.15.17 NMAC applies to persons engaged in oil and gas development and production within New Mexico.
[19.15.17.2 NMAC - N, //08]

19.15.17.3 STATUTORY AUTHORITY: 19.15.17 NMAC is adopted pursuant to the Oil and Gas Act, NMSA 1978, Section 70-2-6, Section 70-2-11 and Section 70-2-12.
[19.15.17.3 NMAC - N, //08]

19.15.17.4 DURATION: Permanent.
[19.15.17.4 NMAC - N, //08]

19.15.17.5 EFFECTIVE DATE: _____, 2008, unless a later date is cited at the end of a section.
[19.15.17.5 NMAC - N, //08]

19.15.17.6 OBJECTIVE: To regulate pits, closed-loop systems, below-grade tanks and sumps used in connection with oil and gas operations for the protection of public health, welfare and the environment.
[19.15.17.6 NMAC - N, //08]

19.15.17.7 DEFINITIONS:

A. "Alluvium" means detrital material that water or other erosional forces have transported and deposited at points along a watercourse's flood plain. It typically is composed of sands, silts and gravels; exhibits high porosity and permeability; and generally carries fresh water.

B. "Closed-loop system" means a system that uses above ground steel tanks for the management of drilling or workover fluids without using below-grade tanks or pits.

C. "Division-approved facility" means a division-permitted surface waste management or injection facility, a facility permitted pursuant to 20.6.2 NMAC, a facility approved pursuant to 19.15.9.712 NMAC or other facility that the division specifically approves for the particular purpose. The division shall not approve any facility not otherwise permitted unless it finds that the facility's use for the specified purpose will protect fresh water, public health and the environment and comply with other applicable federal or state statutes, federal regulations, state rules and local ordinances.

D. "Emergency pit" means a pit that is constructed as a precautionary matter to contain a spill in the event of a release.

E. "Permanent pit" means a pit, including a pit used for collection, retention or storage of produced water or brine that is constructed with the conditions and for the duration provided in its permit, and is not a temporary pit.

F. "Restore" means to return a site to its former condition, in the manner and to the extent required by applicable provisions of 19.15.17 NMAC.

G. "Significant watercourse" means a watercourse with a defined bed and bank either named on a USGS 7.5 minute quadrangle map or a first order tributary of such watercourse.

H. "Sump" means an impermeable vessel, or a collection device incorporated within a secondary containment system, with a capacity less than 500 gallons, which remains predominantly empty, serves as a drain or receptacle for de minimis releases on an intermittent basis and is not used to store, treat, dispose of or evaporate products or wastes.

I. "Temporary pit" means a pit, including a drilling or workover pit, which is constructed with the intent that the pit will hold liquids for less than six months and will be closed in less than one year. [19.15.17.7 NMAC - Rp, 19.15.2.7 NMAC, //08]

19.15.17.8 PERMIT REQUIRED:

A. A person shall not construct or use a pit or below-grade tank except in accordance with a division-issued permit. Only an operator may apply for a division-issued permit. Facilities permitted pursuant to 19.15.36 NMAC or WQCC rules are exempt from 19.15.17 NMAC. After _____, 2008 [effective date], an unlined permanent pit is prohibited and the division shall not issue a permit for an unlined permanent pit.

B. In lieu of using a pit or below-grade tank in accordance with 19.15.17 NMAC, an operator may use a closed-loop system or other division-approved alternative method. However, an operator may not conduct operations using a closed-loop system or proposed alternative method except in accordance with a division-issued permit. An operator requesting a permit for a closed-loop system that uses a temporary pit shall comply with the requirements for temporary pits specified in 19.15.17 NMAC.

C. The division may issue a single permit for all pits, below-grade tanks, closed-loop systems or division-approved alternative methods associated with a single application for permit to drill. [19.15.17.8 NMAC - Rp, 19.15.2.50 NMAC, //08]

19.15.17.9 PERMIT APPLICATION:

A. An operator shall use form C-144 to apply to the division for a permit to construct or use a pit, closed-loop system, below-grade tank or proposed alternative method to which 19.15.17 NMAC applies. The operator shall submit the form C-144 either separately or as an attachment to a permit application for a facility with which the pit, closed-loop system, below-grade tank or proposed alternative method will be associated. For upstream facilities, the operator may submit form C-144 separately or as an attachment to an application for a well permit (form C-101 or C-103).

B. The permit application shall include a detailed plan as follows.

(1) Permanent pits. A registered professional engineer shall certify engineering, design and construction specifications as contained in the plan for permanent pits. The plan shall include:

- (a) a quality control/quality assurance construction and installation plan;
- (b) operating and maintenance procedures;
- (c) a closure plan;
- (d) a hydrogeologic report that provides sufficient information and detail on the site's topography, soils, geology, surface hydrology and ground water hydrology to enable the environmental bureau in the division's Santa Fe office to evaluate the actual and potential effects on soils, surface water and ground water;
- (e) detailed information on dike protection and structural integrity; and leak detection, including an adequate fluid collection and removal system;
- (f) liner specifications and compatibility;
- (g) freeboard and overtopping prevention;
- (h) prevention of nuisance or hazardous odors, including H₂S;
- (i) an emergency response plan, unless the permanent pit is part of a facility that has an integrated contingency plan;
- (j) type of oil field waste stream;
- (k) climatological factors, including freeze-thaw cycles;
- (l) a monitoring and inspection plan;
- (m) erosion control; and
- (n) other pertinent information the environmental bureau in the division's Santa Fe office requests.

(2) Temporary pits. The plan for a temporary pit shall use appropriate engineering principles and practices and follow applicable liner manufacturers' requirements. The plan shall include operating and maintenance procedures, a closure plan and hydrogeologic data that provides sufficient information and detail on the site's topography, soils, geology, surface hydrology and ground water hydrology to enable the appropriate division district office to evaluate the actual and potential effects on soils, surface water and ground water and compliance with the siting criteria of 19.15.17.10 NMAC. The

plan for a temporary pit may incorporate by reference a standard design for multiple temporary pits that the operator files with the application or has previously filed with the appropriate division district office.

(3) Closed-loop systems. The plan for a closed-loop system shall use appropriate engineering principles and practices and follow applicable manufacturers' requirements. The plan shall include operating and maintenance procedures and a closure plan. The plan for a closed-loop system may incorporate by reference a standard design for multiple projects that the operator files with the application or has previously filed with the appropriate division district office. If the operator proposes to bury the contents of a drying pad associated with a closed-loop system in an on-site trench, the operator shall provide sufficient information and detail on the site's topography, soils, geology, surface hydrology and ground water hydrology to enable the appropriate division district office to evaluate the actual and potential effects on soils, surface water and ground water and compliance with the siting criteria of 19.15.17.10 NMAC.

(4) Below-grade tanks. The plan for a below-grade tank shall use appropriate engineering principles and practices and follow applicable manufacturers' requirements. The plan shall include operating and maintenance procedures, a closure plan and a hydrogeologic report that provides sufficient information and detail on the site's topography, soils, geology, surface hydrology and ground water hydrology to enable the appropriate division district office to evaluate the actual and potential effects on soils, surface water and ground water and compliance with the siting criteria of 19.15.17.10 NMAC. The plan for a below-grade tank may incorporate by reference a standard design for multiple below-grade tanks that the operator files with the application or has previously filed with the appropriate division district office.

C. Closure plans. A closure plan that an operator submits in a plan required in Subsection B of 19.15.17.9 NMAC, or any other closure plan required pursuant to 19.15.17 NMAC, shall describe the proposed closure method and the proposed procedures and protocols to implement and complete the closure.

(1) If the operator proposes an on-site closure method, the operator shall also propose other methods to be used if the initial method does not satisfy the on-site closure standards specified in Subsection F of 19.15.17.13 NMAC or, if applicable, other on-site closure standards that the environmental bureau in the division's Santa Fe office approves.

(2) An operator of an existing unlined permanent pit that is permitted by or registered with the division, or an existing, lined or unlined, permanent pit not permitted by or registered with the division, identified under Paragraphs (1) or (2) of Subsection A of 19.15.17.13 NMAC, shall submit the respective closure plan required under the transitional provisions of Subsection B of 19.15.17.17 NMAC to the environmental bureau in the division's Santa Fe office.

(3) An operator of an existing unlined, temporary pit or an existing below-grade tank, identified under Paragraphs (3) or (4) of Subsection A of 19.15.17.13 NMAC, shall submit the respective closure plan required under the transitional provisions of Subsection B of 19.15.17.17 NMAC to the appropriate division district office.

D. Filing of permit application.

(1) Permanent pits and exceptions requested pursuant to 19.15.17.15 NMAC. An operator shall file an application, form C-144, and all required attachments with the environmental bureau in the division's Santa Fe office to request approval to use or construct a permanent pit or request an exception pursuant to 19.15.17.15 NMAC and shall provide a copy to the appropriate division district office.

(2) Temporary pits, closed-loop systems and below-grade tanks. To request approval to use or construct a temporary pit, closed-loop system or below-grade tank, an operator shall file an application, form C-144, and all required attachments with the appropriate division district office. If the operator plans to use a temporary pit, the operator shall provide the proposed pit location on form C-102.

[19.15.17.9 NMAC - Rp, 19.15.2.50 NMAC, //08]

19.15.17.10 SITING REQUIREMENTS:

A. Except as otherwise provided in 19.15.17 NMAC.

(1) An operator shall not locate a temporary pit or below-grade tank:

(a) where ground water is less than 50 feet below the bottom of the temporary pit or below-grade tank, unless the operator is using a pit solely to cavitate a coal bed methane well and the appropriate division district office finds based upon the operator's demonstration that the operator's proposed operation will protect ground water during the temporary pit's use;

(b) within 300 feet of a continuously flowing watercourse, or 200 feet of any other significant watercourse or lakebed, sinkhole or playa lake (measured from the ordinary high-water mark), unless the appropriate division district office approves an alternative distance based upon the operator's demonstration that surface and ground water will be protected;

(c) within 300 feet from a permanent residence, school, hospital, institution or church in existence at the time of initial application;

(d) within 500 feet of a private, domestic fresh water well or spring used by less than five households for domestic or stock watering purposes, or within 1000 feet of any other fresh water well or spring, in existence at the time of initial application;

(e) within incorporated municipal boundaries or within a defined municipal fresh water well field covered under a municipal ordinance adopted pursuant to NMSA 1978, Section 3-27-3, as amended, unless the municipality specifically approves;

(f) within 500 feet of a wetland;

(g) within the area overlying a subsurface mine, unless the appropriate division district office specifically approves the proposed location based upon the operator's demonstration that the temporary pit's or below-grade tank's construction and use will not compromise the subsurface integrity;

(h) within an unstable area, unless the operator demonstrates that it has incorporated engineering measures into the design to ensure that the temporary pit's or below-grade tank's integrity is not compromised; or

(i) within a 100-year floodplain.

(2) An operator shall not locate a permanent pit:

(a) where ground water is less than 50 feet below the bottom of the permanent pit;

(b) within 300 feet of a continuously flowing watercourse, or 200 feet of any other significant watercourse or lakebed, sinkhole or playa lake (measured from the ordinary high-water mark), unless the environmental bureau in the division's Santa Fe office approves an alternative distance based upon the operator's demonstration that surface and ground water will be protected;

(c) within 1000 feet from a permanent residence, school, hospital, institution or church in existence at the time of initial application;

(d) within 500 feet of a private, domestic fresh water well or spring used by less than five households for domestic or stock watering purposes, or within 1000 feet of any other fresh water well or spring, in existence at the time of initial application;

(e) within incorporated municipal boundaries or within a defined municipal fresh water well field covered under a municipal ordinance adopted pursuant to NMSA 1978, Section 3-27-3, as amended, unless the municipality specifically approves;

(f) within 500 feet of a wetland;

(g) within the area overlying a subsurface mine, unless the environmental bureau in the division's Santa Fe office specifically approves the proposed location based upon the operator's demonstration that the permanent pit's construction and use will not compromise subsurface integrity;

(h) within an unstable area, unless the operator demonstrates that it has incorporated engineering measures into the design to ensure that the permanent pit's integrity is not compromised; or

(i) within a 100-year floodplain.

(3) An operator shall not locate material excavated from the pit's construction:

(a) within 300 feet of a continuously flowing watercourse, or 200 feet of any other significant watercourse or lakebed, sinkhole or playa lake (measured from the ordinary high-water mark), unless the division approves an alternative distance based upon the operator's demonstration that surface and ground water will be protected;

(b) within 500 feet of a wetland; or

(c) within a 100-year floodplain.

B. An emergency pit is exempt from the siting criteria of 19.15.17 NMAC.

C. An operator shall not implement an on-site closure method:

(1) where ground water is less than 50 feet below the bottom of the buried waste;

(2) where ground water is between 50 and 100 feet below the bottom of the buried waste, unless the operator buries the waste in-place and the treated or stabilized waste, which shall not be combined with soil or other material at a mixing ratio of more than 3:1 soil or other material to waste, does not exceed the criteria in Subparagraph (c) of Paragraph (2) of Subsection F of 19.15.17.13 NMAC;

(3) where ground water is more than 100 feet below the bottom of the buried waste, unless the operator buries the waste in-place and the treated or stabilized waste, which shall not be combined with soil or other material at a mixing ratio of more than 3:1 soil or other material to waste, does not exceed the criteria in Subparagraph (d) of Paragraph (2) of Subsection F of 19.15.17.13 NMAC;

(4) where ground water is more than 100 feet below the bottom of the buried waste, unless the operator buries the waste in a trench and the treated or stabilized waste, which shall not be combined with soil or other material at a mixing ratio of more than 3:1 soil or other material to waste, does not exceed the criteria listed in Subparagraph (c) of Paragraph (3) of Subsection F of 19.15.17.13 NMAC.

(5) within 300 feet of a continuously flowing watercourse, or 200 feet of any other significant watercourse or lakebed, sinkhole or playa lake (measured from the ordinary high-water mark), unless the division approves an alternative distance based upon the operator's demonstration that surface and ground water will be protected;

(6) within 300 feet from a permanent residence, school, hospital, institution or church in existence at the time of initial application;

(7) within 500 feet of a private, domestic fresh water well or spring used by less than five households for domestic or stock watering purposes or within 1000 feet of any other fresh water well or spring, existing at the time the operator files the application for exception;

(8) within incorporated municipal boundaries or within a defined municipal fresh water well field covered under a municipal ordinance adopted pursuant to NMSA 1978, Section 3-27-3, as amended, unless the municipality specifically approves;

(9) within 500 feet of a wetland;

(10) within the area overlying a subsurface mine, unless the division specifically approves the proposed location based upon the operator's demonstration that subsurface integrity will not be compromised;

(11) within an unstable area, unless the operator demonstrates that it has incorporated engineering measures into the design to ensure that the on-site closure method will prevent contamination of fresh water and protect public health and the environment; or

(12) within a 100-year floodplain.

[19.15.17.10 NMAC - Rp, 19.15.2.50 NMAC, //08]

19.15.17.11 DESIGN AND CONSTRUCTION SPECIFICATIONS:

A. General specifications. An operator shall design and construct a pit, closed-loop system, below-grade tank or sump to contain liquids and solids and prevent contamination of fresh water and protect public health and the environment.

B. Stockpiling of topsoil. Prior to constructing a pit or closed-looped system, except a pit constructed in an emergency, the operator shall strip and stockpile the topsoil for use as the final cover or fill at the time of closure.

C. Signs. The operator shall post an upright sign not less than 12 inches by 24 inches with lettering not less than two inches in height in a conspicuous place on the fence surrounding the pit, closed-loop system or below-grade tank, unless the pit, closed-loop system or below-grade tank is located on a site where there is an existing well, signed in compliance with 19.15.3.103 NMAC, that is operated by the same operator. The operator shall post the sign in a manner and location such that a person can easily read the legend. The sign shall provide the following information: the operator's name; the location of the site by quarter-quarter or unit letter, section, township and range; and emergency telephone numbers.

D. Fencing.

(1) The operator shall fence or enclose a pit or below-grade tank in a manner that prevents unauthorized access and shall maintain the fences in good repair. Fences are not required if there is an adequate surrounding perimeter fence that prevents unauthorized access to the well site or facility, including the pit or below-grade tank. During drilling or workover operations, the operator is not required to fence the edge of the pit adjacent to the drilling or workover rig.

(2) The operator shall fence or enclose a pit or below-grade tank located within 1000 feet of a permanent residence, school, hospital, institution or church with a chain link security fence, at least six feet in height with at least two strands of barbed wire at the top. The operator shall ensure that all gates associated with the fence are closed and locked when responsible personnel are not on-site. During drilling or workover operations, the operator is not required to fence the edge of the temporary pit adjacent to the drilling or workover rig.

(3) The operator shall fence any other pit or below-grade tank to exclude livestock with a four foot fence that has at least four strands of barbed wire evenly spaced in the interval between one foot and four feet above ground level. The appropriate division district office may approve an alternative to this requirement if the operator demonstrates that an alternative provides equivalent or better protection. The appropriate division district office may impose additional fencing requirements for protection of wildlife in particular areas.

E. Netting. The operator shall ensure that a permanent pit or a permanent open top tank is screened, netted or otherwise rendered non-hazardous to wildlife, including migratory birds. Where netting or screening is not feasible, the operator shall on a monthly basis inspect for, and within 30 days of discovery, report discovery of dead migratory birds or other wildlife to the appropriate wildlife agency and to the appropriate division district office in order to facilitate assessment and implementation of measures to prevent incidents from reoccurring.

F. Temporary pits. The operator shall design and construct a temporary pit in accordance with the following requirements.

(1) The operator shall design and construct a temporary pit to ensure the confinement of liquids to prevent unauthorized releases.

(2) A temporary pit shall have a properly constructed foundation and interior slopes consisting of a firm, unyielding base, smooth and free of rocks, debris, sharp edges or irregularities to prevent the liner's rupture or tear. The operator shall construct a temporary pit so that the slopes are no steeper than two horizontal feet to one vertical foot (2H:1V). The appropriate division district office may approve an alternative to the slope requirement if the operator demonstrates that it can construct and operate the temporary pit in a safe manner to prevent contamination of fresh water and protect public health and the environment.

(3) The operator shall design and construct a temporary pit with a geomembrane liner. The geomembrane liner shall consist of 20-mil string reinforced LLDPE or equivalent liner material that the appropriate division district office approves. The geomembrane liner shall be composed of an impervious, synthetic material that is resistant to petroleum hydrocarbons, salts and acidic and alkaline solutions. The liner material shall be resistant to ultraviolet light. Liner compatibility shall comply with EPA SW-846 method 9090A.

(4) The operator shall minimize liner seams and orient them up and down, not across a slope. The operator shall use factory welded seams where possible. Prior to field seaming, the operator shall overlap liners four to six inches and orient seams parallel to the line of maximum slope, *i.e.*, oriented along, not across, the slope. The operator shall minimize the number of field seams in corners and irregularly shaped areas. Qualified personnel shall perform field seaming. The operator shall weld field liner seams.

(5) Construction shall avoid excessive stress-strain on the liner.

(6) Geotextile is required under the liner where needed to reduce localized stress-strain or protuberances that may otherwise compromise the liner's integrity.

(7) The operator shall anchor the edges of all liners in the bottom of a compacted earth-filled trench. The anchor trench shall be at least 18 inches deep.

(8) The operator shall ensure that the liner is protected from any fluid force or mechanical damage at any point of discharge into or suction from the lined temporary pit.

(9) The operator shall design and construct a temporary pit to prevent run-on of surface water. A berm, ditch, proper sloping or other diversion shall surround a temporary pit to prevent run-on of surface water. During drilling operations, the edge of the temporary pit adjacent to the drilling or workover rig is not required to have run-on protection if the operator is using the temporary pit to collect liquids escaping from the drilling or workover rig and run-on will not result in a breach of the temporary pit.

(10) The volume of a temporary pit shall not exceed 10 acre-feet, including freeboard.

(11) The part of a temporary pit used to vent or flare gas during a drilling or workover operation that is designed to allow liquids to drain to a separate temporary pit does not require a liner, unless the appropriate division district office requires an alternative design in order to protect surface water, ground water and the environment. The operator shall not allow freestanding liquids to remain on the unlined portion of a temporary pit used to vent or flare gas.

G. Permanent pits. The operator shall design and construct a permanent pit in accordance with the following requirements.

(1) Each permanent pit shall have a properly constructed foundation consisting of a firm, unyielding base, smooth and free of rocks, debris, sharp edges or irregularities to prevent the liner's rupture or tear. The operator shall construct a permanent pit so that the inside grade of the levee is no steeper than two horizontal feet to one vertical foot (2H:1V). The levee shall have an outside grade no steeper than three horizontal feet to one vertical foot (3H:1V). The levee's top shall be wide enough to install an anchor trench and provide adequate room for inspection and maintenance.

(2) Each permanent pit shall contain, at a minimum, a primary (upper) liner and a secondary (lower) liner with a leak detection system appropriate to the site's conditions. The edges of all liners shall be anchored in the bottom of a compacted earth-filled trench. The anchor trench shall be at least 18 inches deep.

(3) The primary (upper) liner and secondary (lower) liner shall be geomembrane liners. The geomembrane liner shall consist of 30-mil flexible PVC or 60-mil HDPE liner, or an equivalent liner material the environmental bureau in the division's Santa Fe office approves. The geomembrane liner shall have a hydraulic conductivity no greater than 1×10^{-9} cm/sec. The geomembrane liner shall be composed of an impervious, synthetic material that is resistant to petroleum hydrocarbons, salts and acidic and alkaline solutions. The liner material shall be resistant to ultraviolet light. Liner compatibility shall comply with EPA SW-846 method 9090A.

(4) The environmental bureau in the division's Santa Fe office may approve other liner media if the operator demonstrates to the satisfaction of the environmental bureau in the division's Santa Fe office that the alternative liner protects fresh water, public health, safety and the environment as effectively as the specified media.

(5) The operator shall minimize liner seams and orient them up and down, not across a slope. The operator shall use factory welded seams where possible. The operator shall ensure field seams in geosynthetic material are thermally seamed (hot wedge) with a double track weld to create an air pocket for non-destructive air channel testing. The operator shall test a seam by establishing an air pressure between 33 and 37 psi in the pocket and monitoring that the pressure does not change by more than one percent during five minutes after the pressure source is shut off from the pocket. Prior to field seaming, the operator shall overlap liners four to six inches and orient seams parallel to the line of maximum slope, *i.e.*, oriented along, not across, the slope. The operator shall minimize the number of field seams in corners and irregularly shaped areas. There shall be no horizontal seams within five feet of the slope's toe. Qualified personnel shall perform field seaming.

(6) At a point of discharge into or suction from the lined permanent pit, the operator shall ensure that the liner is protected from excessive hydrostatic force or mechanical damage. External discharge or suction lines shall not penetrate the liner.

(7) The operator shall place a leak detection system between the upper and lower geomembrane liners that consists of two feet of compacted soil with a saturated hydraulic conductivity of 1×10^{-5} cm/sec or greater to facilitate drainage. The leak detection system shall consist of a properly designed drainage and collection and removal system placed above the lower geomembrane liner in depressions and sloped to facilitate the earliest possible leak detection. Piping used shall be designed to withstand chemical attack from oil field waste or leachate; structural loading from stresses and disturbances from overlying oil field waste, cover materials, equipment operation or expansion or contraction; and to facilitate clean-out maintenance. The material the operator places between the pipes and laterals shall be sufficiently permeable to allow the transport of fluids to the drainage pipe. The slope of the interior sub-grade and of drainage lines and laterals shall be at least a two percent grade, *i.e.*, two feet vertical drop per 100 horizontal feet. The piping collection system shall be comprised of solid and perforated pipe having a minimum diameter of four inches and a minimum wall thickness of schedule 80. The operator shall seal a solid sidewall riser pipe to convey collected fluids to a collection, observation and disposal system located outside the permanent pit's perimeter. The operator may install alternative methods that the environmental bureau in the division's Santa Fe office approves.

(8) The operator shall notify the environmental bureau in the division's Santa Fe office at least 72 hours prior to the primary liner's installation so that a representative of the environmental bureau in the division's Santa Fe office may inspect the leak detection system before it is covered.

(9) The operator shall construct a permanent pit in a manner that prevents overtopping due to wave action or rainfall and maintain a three foot freeboard at all times.

(10) The volume of a permanent pit shall not exceed 10 acre-feet, including freeboard.

(11) The operator shall maintain a permanent pit to prevent run-on of surface water. A permanent pit shall be surrounded by a berm, ditch or other diversion to prevent run-on of surface water.

H. Closed-loop systems.

(1) The operator shall design and construct a closed-loop system to ensure the confinement of oil, gas or water to prevent uncontrolled releases.

(2) An operator of a closed-loop system that uses temporary pits for solids management shall comply with the requirements for temporary pits specified in 19.15.17 NMAC.

(3) An operator of a closed-loop system with drying pads shall design and construct the drying pads to include the following:

(a) appropriate liners that prevent the contamination of fresh water and protect public health and the environment;

(b) sumps to facilitate the collection of liquids derived from drill cuttings; and

(c) berms that prevent run-on of surface water or fluids.

I. Below-grade tanks. The operator shall design and construct a below-grade tank in accordance with the following requirements, as applicable.

(1) The operator shall ensure that a below-grade tank is constructed of materials resistant to the below-grade tank's particular contents and resistant to damage from sunlight.

(2) A below-grade tank system shall have a properly constructed foundation consisting of a level base free of rocks, debris, sharp edges or irregularities to prevent punctures, cracks or indentations of the liner or tank bottom.

(3) The operator shall construct a below-grade tank to prevent overflow and the collection of surface water run-on.

(4) An operator shall construct a below-grade tank in accordance with one of the following designs.

(a) An operator may construct and use a below-grade tank that does not have double walls provided that the below-grade tank's side walls are open for visual inspection for leaks, the below-grade tank's bottom is elevated a minimum of six inches above the underlying ground surface and the below-grade tank is underlain with a geomembrane liner, which may be covered with gravel, to divert leaked liquid to a location that can be visually inspected. The operator shall equip below-grade tanks designed in this manner with a properly operating automatic high-level shut-off control device and manual controls to prevent overflows. The geomembrane liner shall consist of 30-mil flexible PVC or 60-mil HDPE liner, or an equivalent liner material that the appropriate division district office approves. The geomembrane liner shall have a hydraulic conductivity no greater than 1×10^{-9} cm/sec. The geomembrane liner shall be composed of an impervious, synthetic material that is resistant to petroleum hydrocarbons, salts and acidic and alkaline solutions. The liner material shall be resistant to ultraviolet light. Liner compatibility shall comply with EPA SW-846 method 9090A.

(b) All other below-grade tanks, in which the side walls are not open for visible inspection for leaks shall be double walled with leak detection capability.

(c) An operator may construct a below-grade tank according to an alternative system that the appropriate district office approves based upon the operator's demonstration that the alternative provides equivalent or better protection.

(5) The operator of a below-grade tank constructed and installed prior to _____, 2008 [effective date] that has the side walls open for visual inspection and is placed upon a geomembrane liner but does not meet all the requirements in Paragraphs (1) through (4) of Subsection I of 19.15.17.11 NMAC is not required to equip or retrofit the below-grade tank to comply with Paragraphs (1) through (4) of Subsection I of 19.15.17.11 NMAC so long as it demonstrates integrity. If the existing below-grade tank does not demonstrate integrity, the operator shall promptly remove that below-grade tank and install a below-grade tank that complies with Paragraphs (1) through (4) of Subsection I of 19.15.17.11 NMAC.

(6) The operator of a below-grade tank constructed and installed prior to _____, 2008 [effective date] that does not comply with Paragraph (1) through (4) of Subsection I of 19.15.17.11 NMAC or that does not comply with Paragraph (5) of Subsection I of 19.15.17.11 NMAC shall equip or retrofit the below-grade tank to comply with Paragraphs (1) through (4) of Subsection I of 19.15.17.11 NMAC, or close it, within five years after _____, 2008 [effective date]. If the existing below-grade tank does not demonstrate integrity, the operator shall promptly remove that below-grade tank and install a below-grade tank that complies with Paragraphs (1) through (4) of Subsection I of 19.15.17.11 NMAC.

J. On-site trenches for closure. The operator shall design and construct an on-site trench for closure, specified in Paragraph (2) of Subsection B of 19.15.17.13 NMAC or Paragraph (2) of Subsection D of 19.15.17.13 NMAC, in accordance with the following requirements.

(1) The operator shall locate the trench to satisfy the siting criteria specified in Subsection C of 19.15.17.10 NMAC and Subparagraph (d) of Paragraph (3) of Subsection F of 19.15.17.13 NMAC and excavate to an appropriate depth that allows for the installation of the geomembrane bottom liner, geomembrane liner cover and the division-prescribed soil cover required pursuant to Subsection H of 19.15.17.13 NMAC.

(2) An on-site trench shall have a properly constructed foundation and side walls consisting of a firm, unyielding base, smooth and free of rocks, debris, sharp edges or irregularities to prevent the liner's rupture or tear.

(3) Geotextile is required under the liner where needed to reduce localized stress-strain or protuberances that may otherwise compromise the liner's integrity.

(4) An on-site trench shall be constructed with a geomembrane liner. The geomembrane shall consist of a 20-mil string reinforced LLDPE liner or equivalent liner that the appropriate division district office approves. The geomembrane liner shall be composed of an impervious, synthetic material that is resistant to petroleum hydrocarbons, salts and acidic and alkaline solutions. The liner material shall be resistant to ultraviolet light. Liner compatibility shall comply with EPA SW-846 method 9090A.

(5) The operator shall minimize liner seams and orient them up and down, not across a slope. The operator shall use factory welded seams where possible. Prior to field seaming, the operator shall overlap liners four to six inches and orient liner seams parallel to the line of maximum slope, *i.e.*, oriented along, not across, the slope. The operator shall minimize the number of field seams in corners and irregularly shaped areas. Qualified personnel shall perform field seaming. The operator shall weld field liner seams.

(6) The operator shall install sufficient liner material to reduce stress-strain on the liner.

(7) The operator shall ensure that the outer edges of all liners are secured for the placement of the excavated waste material into the trench.

(8) The operator shall fold the outer edges of the trench liner to overlap the waste material in the trench prior to the installation of the geomembrane cover.

(9) The operator shall install a geomembrane cover over the waste material in the lined trench. The operator shall install the geomembrane cover in a manner that prevents the collection of infiltration water in the lined trench and on the geomembrane cover after the soil cover is in place.

(10) The geomembrane cover shall consist of a 20-mil string reinforced LLDPE liner or equivalent cover that the appropriate division district office approves. The geomembrane cover shall be composed of an impervious, synthetic material that is resistant to petroleum hydrocarbons, salts and acidic and alkaline solutions. Cover compatibility shall comply with EPA SW-846 method 9090A.

[19.15.17.11 NMAC - Rp, 19.15.2.50 NMAC, //08]

19.15.17.12 OPERATIONAL REQUIREMENTS:

A. General specifications. An operator shall maintain and operate a pit, closed-loop system, below-grade tank or sump in accordance with the following requirements.

(1) The operator shall operate and maintain a pit, closed-loop system, below-grade tank or sump to contain liquids and solids and maintain the integrity of the liner, liner system or secondary containment system, prevent contamination of fresh water and protect public health and the environment.

(2) The operator shall recycle, reuse or reclaim or dispose of all drilling fluids in a manner, approved by division rules, that prevents the contamination of fresh water and protects public health and the environment.

(3) The operator shall not discharge into or store any hazardous waste in a pit, closed-loop system, below-grade tank or sump.

(4) If any pit liner's integrity is compromised, or if any penetration of the liner occurs above the liquid's surface, then the operator shall notify the appropriate division district office within 48 hours of the discovery and repair the damage or replace the liner.

(5) If a pit, below-grade tank, closed-loop system or sump develops a leak, or if any penetration of the pit liner, below-grade tank, closed-loop system or sump occurs below the liquid's surface, then the operator shall remove all liquid above the damage or leak line within 48 hours, notify the

appropriate division district office within 48 hours of the discovery and repair the damage or replace the pit liner, below-grade tank, closed-loop system or sump.

(6) The injection or withdrawal of liquids from a pit shall be accomplished through a header, diverter or other hardware that prevents damage to the liner by erosion, fluid jets or impact from installation and removal of hoses or pipes.

(7) The operator shall operate and install a pit, below-grade tank or sump to prevent the collection of surface water run-on.

(8) The operator shall install, or maintain on site, an oil absorbent boom or other device to contain and remove oil from a pit's surface.

B. Temporary pits. An operator shall maintain and operate a temporary pit in accordance with the following additional requirements.

(1) Only fluids used or generated during the drilling or workover process may be discharged into a temporary pit. The operator shall maintain a temporary pit free of miscellaneous solid waste or debris. The operator shall use a tank made of steel or other material, which the appropriate division district office approves, to contain hydrocarbon-based drilling fluids. Immediately after cessation of a drilling or workover operation, the operator shall remove any visible or measurable layer of oil from the surface of a drilling or workover pit.

(2) The operator shall maintain at least two feet of freeboard for a temporary pit.

(3) The operator shall inspect a temporary pit containing drilling fluids at least daily while the drilling or workover rig is on-site. Thereafter, the operator shall inspect the temporary pit weekly so long as liquids remain in the temporary pit. The operator shall maintain a log of such inspections and make the log available for the appropriate division district office's review upon request. The operator shall file a copy of the log with the appropriate division district office when the operator closes the temporary pit.

(4) The operator shall remove all free liquids from a temporary pit within 30 days from the date that the operator releases the drilling or workover rig. The operator shall note the date of the drilling or workover rig's release on form C-105 or C-103 upon well or workover completion. The appropriate division district office may grant an extension of up to three months.

(5) The operator shall remove any liquids from the temporary pit used for cavitation within 48 hours after completing cavitation. The operator may request and receive additional time to remove the liquids from the temporary pit used for cavitation if the operator demonstrates to the appropriate division district office's satisfaction that it is not feasible to access the location within 48 hours.

C. Permanent pits. An operator shall maintain and operate a permanent pit in accordance with the following additional requirements.

(1) The operator shall maintain at least three feet of freeboard for a permanent pit; the operator shall permanently mark such level on the permanent pit.

(2) No oil or floating hydrocarbon shall be present in a permanent pit.

D. Below-grade tanks. An operator shall maintain and operate a below-grade tank in accordance with the following additional requirements.

(1) The operator shall not allow a below-grade tank to overflow or allow surface water run-on to enter the below-grade tank.

(2) The operator shall remove any visible or measurable layer of oil from the fluid surface of a below-grade tank.

(3) The operator shall inspect the below-grade tank at least monthly and maintain a written record of each inspection for five years.

(4) The operator shall maintain adequate freeboard to prevent overtopping of the below-grade tank.

E. Sumps. The operator shall maintain and operate a sump in accordance with the following additional requirements.

(1) The operator shall visually inspect a sump's integrity annually and promptly repair or replace a sump that fails the inspection.

(2) The operator shall maintain records of sump inspection and make the records available for the appropriate division district office's review upon request.

[19.15.17.12 NMAC - Rp, 19.15.2.50 NMAC, //08]

19.15.17.13 CLOSURE REQUIREMENTS:

A. Time requirements for closure. An operator shall close a pit, closed-loop system or below-grade tank within the time periods provided in 19.15.17.13 NMAC, or by an earlier date that the division requires because of imminent danger to fresh water, public health or the environment.

(1) An operator shall cease discharging into an existing unlined permanent pit that is permitted by or registered with the division within two years after _____, 2008 [the effective date]. An operator shall close an existing unlined permanent pit that is permitted by or registered with the division within three years after _____, 2008 [the effective date].

(2) An operator shall cease discharging into an existing, lined or unlined, permanent pit that is not permitted by or registered with the division on or by _____, 2008 [effective date]. An operator shall close an existing, lined or unlined, permanent pit that is not permitted by or registered with the division within six months after _____, 2008 [effective date].

(3) An operator shall close an existing unlined temporary pit within three months after _____, 2008 [effective date].

(4) An operator shall close an existing below-grade tank that does not meet the requirements of Paragraphs (1) through (4) of Subsection I of 19.15.17.11 NMAC or is not included in Paragraph (5) of Subsection I of 19.15.17.11 NMAC within five years after _____, 2008 [effective date], if not retrofitted to comply with Paragraphs (1) through (4) of Subsection I of 19.15.17.11 NMAC.

(5) An operator shall close any other permitted permanent pit within 60 days of cessation of operation of the permanent pit in accordance with a closure plan that the environmental bureau in the division's Santa Fe office approves.

(6) An operator shall close any other permitted temporary pit within six months from the date that the operator releases the drilling or workover rig. The appropriate division district office may grant an extension not to exceed three months.

(7) An operator shall close a drying pad used for a closed-loop system permitted under 19.15.17 NMAC or in operation on _____, 2008 [effective date], within six months from the date that the operator releases the drilling or workover rig. The operator shall note the date of the drilling or workover rig's release on form C-105 or C-103, filed with the division, upon the well's or workover's completion. The appropriate division district office may grant an extension not to exceed six months.

(8) An operator shall close a permitted below-grade tank within 60 days of cessation of the below-grade tank's operation or as required by the transitional provisions of Subsection B of 19.15.17.17 NMAC in accordance with a closure plan that the appropriate division district office approves.

B. Closure methods for temporary pits. The operator of a temporary pit shall remove all liquids from the temporary pit prior to closure and dispose of the liquids in a division-approved facility or recycle, reuse or reclaim the liquids in a manner that the appropriate division district office approves. The operator shall close the temporary pit by one of the following methods.

(1) Waste excavation and removal.

(a) The operator shall close the temporary pit by excavating all contents and, if applicable, synthetic pit liners and transferring those materials to a division-approved facility.

(b) The operator shall test the soils beneath the temporary pit to determine whether a release has occurred.

(i) For temporary pits where ground water is between 50 and 100 feet below the bottom of the temporary pit or for cavitation pits allowed pursuant to Subparagraph (a) of Paragraph (1) of Subsection A of 19.15.17.10 NMAC, the operator shall collect, at a minimum, a five point, composite sample; collect individual grab samples from any area that is wet, discolored or showing other evidence of a release; and analyze for benzene, total BTEX, TPH, the GRO and DRO combined fraction and chlorides to demonstrate that benzene, as determined by EPA SW-846 method 8021B or 8260B or other EPA method that the division approves, does not exceed 0.2 mg/kg; total BTEX, as determined by EPA SW-846 method 8021B or 8260B or other EPA method that the division approves, does not exceed 50 mg/kg; TPH, as determined by EPA SW-846 method 418.1 or other EPA method that the division approves, does not exceed 2500 mg/kg; the GRO and DRO combined fraction, as determined by EPA SW-846 method 8015M, does not exceed 500 mg/kg; and chlorides, as determined by EPA method 300.1, do not exceed 500 mg/kg or the background concentration, whichever is greater. The operator shall notify the division of its results on form C-141. The division may require additional delineation upon review of the results.

(ii) For temporary pits where ground water is more than 100 feet below the bottom of the temporary pit, the operator shall collect, at a minimum, a five point, composite sample; collect individual grab samples from any area that is wet, discolored or showing other evidence of a release; and

analyze for benzene, total BTEX, TPH, the GRO and DRO combined fraction and chlorides to demonstrate that benzene, as determined by EPA SW-846 method 8021B or 8260B or other EPA method that the division approves, does not exceed 0.2 mg/kg; total BTEX, as determined by EPA SW-846 method 8021B or 8260B or other method that the division approves, does not exceed 50 mg/kg; the GRO and DRO combined fraction, as determined by EPA SW-846 method 8015M, does not exceed 500 mg/kg and TPH, as determined by EPA method 418.1 or other EPA method that the division approves, does not exceed 2500 mg/kg; and chlorides, as determined by EPA method 300.1, do not exceed 1000 mg/kg or the background concentration, whichever is greater. The operator shall notify the division of its results on form C-141. The division may require additional delineation upon review of the results.

(c) If the operator or the division determines that a release has occurred, then the operator shall comply with 19.15.3.116 NMAC and 19.15.1.19 NMAC, as appropriate.

(d) If the sampling program demonstrates that a release has not occurred or that any release does not exceed the concentrations specified in Subparagraph (b) of Paragraph (1) of Subsection B of 19.15.17.13 NMAC, then the operator shall backfill the temporary pit excavation with compacted, non-waste containing, earthen material; construct a division-prescribed soil cover; recontour and re-vegetate the site. The division-prescribed soil cover, recontouring and re-vegetation requirements shall comply with Subsections G, H and I of 19.15.17.13 NMAC.

(2) On-site burial. The operator shall demonstrate and comply with the siting requirements in Subsection C of 19.15.17.10 NMAC and the closure requirements and standards of Subsection F of 19.15.17.13 NMAC if the proposed closure method of a temporary pit involves on-site burial.

(3) Alternative closure methods. If the environmental bureau in the division's Santa Fe office grants an exception approving a closure method for a specific temporary pit other than as specified in Paragraphs (1) or (2) of Subsection B of 19.15.17.13 NMAC, then the operator shall close that temporary pit by the method that the environmental bureau in the division's Santa Fe office approves.

C. Closure method for permanent pits.

(1) The operator shall remove all liquids and BS&W from the permanent pit prior to implementing a closure method and shall dispose of the liquids and BS&W in a division-approved facility.

(2) The operator shall remove the pit liner system, if applicable, and dispose of it in a division-approved facility. If there is on-site equipment associated with permanent pit, the operator shall remove the equipment, unless the equipment is required for some other purpose.

(3) The operator shall test the soils beneath the permanent pit to determine whether a release has occurred. The operator shall collect, at a minimum, a five point, composite sample; collect individual grab samples from any area that is wet, discolored or showing other evidence of a release; and analyze for BTEX, TPH and chlorides to demonstrate that the benzene concentration, as determined by EPA SW-846 methods 8021B or 8260B or other EPA method that the division approves, does not exceed 0.2 mg/kg; total BTEX concentration, as determined by EPA SW-846 methods 8021B or 8260B or other EPA method that the division approves, does not exceed 50 mg/kg; the TPH concentration, as determined by EPA method 418.1 or other EPA method that the division approves, does not exceed 100 mg/kg; and the chloride concentration, as determined by EPA method 300.1 or other EPA method that the division approves, does not exceed 250 mg/kg, or the background concentration, whichever is greater. The operator shall notify the division of its results on form C-141. The division may require additional delineation upon review of the results.

(4) If the operator or the division determines that a release has occurred, then the operator shall comply with 19.15.3.116 NMAC and 19.15.1.19 NMAC, as appropriate.

(5) If the sampling program demonstrates that a release has not occurred or that any release does not exceed the concentrations specified in Paragraph (3) of Subsection C of 19.15.17.13 NMAC, then the operator shall backfill the excavation with compacted, non-waste containing, earthen material; construct a division-prescribed soil cover; recontour and re-vegetate the site. The division-prescribed soil cover, recontouring and re-vegetation requirements shall comply with Subsections G, H and I of 19.15.17.13 NMAC.

D. Closure methods for closed-loop systems. An operator of a closed-loop system that uses a temporary pit, in lieu of a drying pad, shall comply with the closure requirements for temporary pits specified in Subsection B of 19.15.17.13 NMAC. The operator of a closed-loop system that uses a drying pad shall close the system by one of the following methods.

(1) Waste removal.

(a) The operator shall transfer the waste and the drying pad liner to a division-approved facility.

(b) The operator shall substantially restore and re-vegetate the impacted area's surface in accordance with Subsections G, H and I of 19.15.17.13 NMAC.

(2) On-site burial. The operator shall demonstrate and comply with the siting requirements of Subsection C of 19.15.17.10 NMAC and the closure requirements and standards of Subsection F of 19.15.17.13 NMAC if the proposed closure method of a drying pad associated with a closed-loop system involves on-site burial.

(3) Alternative closure methods. If the environmental bureau in the division's Santa Fe office grants an exception approving a closure method for a specific closed-loop system other than as specified in Paragraphs (1) or (2) of Subsection D of 19.15.17.13 NMAC, then the operator shall close that drying pad associated with a closed-loop system by the method the environmental bureau in the division's Santa Fe office approves.

E. Closure method for below-grade tanks.

(1) The operator shall remove liquids and sludge from a below-grade tank prior to implementing a closure method and shall dispose of the liquids and sludge in a division-approved facility.

(2) The operator shall remove the below-grade tank and dispose of it in a division-approved facility or recycle, reuse, or reclaim it in a manner that the appropriate division district office approves.

(3) If there is any on-site equipment associated with a below-grade tank, then the operator shall remove the equipment, unless the equipment is required for some other purpose.

(4) The operator shall test the soils beneath the below-grade tank to determine whether a release has occurred. The operator shall collect, at a minimum, a five point, composite sample; collect individual grab samples from any area that is wet, discolored or showing other evidence of a release; and analyze for BTEX, TPH and chlorides to demonstrate that the benzene concentration, as determined by EPA SW-846 methods 8021B or 8260B or other EPA method that the division approves, does not exceed 0.2 mg/kg; total BTEX concentration, as determined by EPA SW-846 methods 8021B or 8260B or other EPA method that the division approves, does not exceed 50 mg/kg; the TPH concentration, as determined by EPA method 418.1 or other EPA method that the division approves, does not exceed 100 mg/kg; and the chloride concentration, as determined by EPA method 300.1 or other EPA method that the division approves, does not exceed 250 mg/kg, or the background concentration, whichever is greater. The operator shall notify the division of its results on form C-141. The division may require additional delineation upon review of the results.

(5) If the operator or the division determines that a release has occurred, then the operator shall comply with 19.15.3.116 NMAC and 19.15.1.19 NMAC, as appropriate.

(6) If the sampling program demonstrates that a release has not occurred or that any release does not exceed the concentrations specified in Paragraph (4) of Subsection E of 19.15.17.13 NMAC, then the operator shall backfill the excavation with compacted, non-waste containing, earthen material; construct a division-prescribed soil cover; recontour and re-vegetate the site. The division-prescribed soil cover, recontouring and re-vegetation requirements shall comply with Subsections G, H and I of 19.15.17.13 NMAC.

F. On-site closure methods. The following closure requirements and standards apply if the operator proposes a closure method for a drying pad associated with a closed-loop system or a temporary pit pursuant to Paragraph (2) of Subsection D of 19.15.17.13 NMAC or Paragraph (2) of Subsection B of 19.15.17.13 NMAC that involves on-site burial, or an alternative closure method pursuant to Paragraph (3) of Subsection D of 19.15.17.13 NMAC or Paragraph (3) of Subsection B of 19.15.17.13 NMAC and Subsection B of 19.15.17.15 NMAC.

(1) General requirements.

(a) Any proposed on-site closure method shall comply with the siting criteria specified in Subsection C of 19.15.17.10 NMAC.

(b) The operator shall provide the surface owner notice of the operator's proposal of an on-site closure method. The operator shall attach the proof of notice to the permit application.

(c) The operator shall comply with the closure requirements and standards of Paragraphs (2) and (3), as applicable, of Subsection F of 19.15.17.13 NMAC if the proposed closure method for a drying pad associated with a closed-loop system or for a temporary pit involves on-site burial pursuant to Paragraph (2) of Subsection D of 19.15.17.13 NMAC or Paragraph (2) of Subsection B of 19.15.17.13 NMAC, or involves an alternative closure method pursuant to Paragraph (3) of Subsection D

of 19.15.17.13 NMAC or Paragraph (3) of Subsection B of 19.15.17.13 NMAC and Subsection B of 19.15.17.15 NMAC.

(d) The operator shall place a steel marker at the center of an on-site burial. The steel marker shall be not less than four inches in diameter and shall be cemented in a three-foot deep hole at a minimum. The steel marker shall extend at least four feet above mean ground level and at least three feet below ground level. The operator name, lease name and well number and location, including unit letter, section, township and range, and that the marker designates an on-site burial location shall be welded, stamped or otherwise permanently engraved into the metal of the steel marker. A person shall not build permanent structures over an on-site burial without the appropriate division district office's written approval. A person shall not remove an on-site burial marker without the division's written permission.

(e) The operator shall report the exact location of the on-site burial on form C-105 filed with the division.

(f) The operator shall file a deed notice identifying the exact location of the on-site burial with the county clerk in the county where the on-site burial occurs.

(2) In-place burial.

(a) Where the operator meets the siting criteria specified in Paragraphs (2) or (3) of Subsection C of 19.15.17.10 NMAC and the applicable waste criteria specified in Subparagraphs (c) or (d) of Paragraph (2) of Subsection F of 19.15.17.13 NMAC, an operator may use in-place burial (burial in the existing temporary pit) for closure of a temporary pit or bury the contents of a drying pad associated with a closed-loop system in a temporary pit that the operator constructs in accordance with Paragraphs (1) through (6) and (10) of Subsection F of 19.15.17.11 NMAC for closure of a drying pad associated with a closed loop system.

(b) Prior to closing an existing temporary pit or to placing the contents from a drying pad associated with a closed-loop system into a temporary pit that the operator constructs for disposal, the operator shall stabilize or solidify the contents to a bearing capacity sufficient to support the temporary pit's final cover. The operator shall not mix the contents with soil or other material at a mixing ratio of greater than 3:1, soil or other material to contents.

(c) Where ground water will be between 50 and 100 feet below the bottom of the buried waste, the operator shall collect at a minimum, a five point, composite sample of the contents of the drying pad associated with a closed-loop system or the contents of a temporary pit after treatment or stabilization, if treatment or stabilization is required, to demonstrate that benzene, as determined by EPA SW-846 method 8021 B or 8260B, does not exceed 0.2 mg/kg; total BTEX, as determined by EPA SW-846 method 8021 B or 8260B, does not exceed 50 mg/kg; TPH, as determined by EPA SW-846 method 418.1 or other EPA method approved that the division approves, does not exceed 2500 mg/kg; the GRO and DRO combined fraction, as determined by EPA SW-846 method 8015M, does not exceed 500 mg/kg; and chlorides, as determined by EPA method 300.1, do not exceed 500 mg/kg or the background concentration, whichever is greater. The operator may collect the composite sample prior to treatment or stabilization to demonstrate that the contents do not exceed these concentrations. However, if the contents collected prior to treatment or stabilization exceed the specified concentrations the operator shall collect a second five point, composite sample of the contents after treatment or stabilization to demonstrate that the contents do not exceed these concentrations.

(d) Where the ground water will be more than 100 feet below the bottom of the buried waste, the operator shall collect at a minimum, a five point, composite sample of the contents of the drying pad associated with a closed-loop system or the contents of a temporary pit after treatment or stabilization, if treatment or stabilization is required, to demonstrate that benzene, as determined by EPA SW-846 method 8021B or 8260B, does not exceed 0.2 mg/kg; total BTEX, as determined by EPA SW-846 method 8021B or 8260B, does not exceed 50 mg/kg; the GRO and DRO combined fraction, as determined by EPA SW-846 method 8015M, does not exceed 500 mg/kg and TPH, as determined by EPA method 418.1 or other EPA method that the division approves, does not exceed 2500 mg/kg; and chlorides, as determined by EPA method 300.1, do not exceed 1000 mg/kg or the background concentration, whichever is greater. The operator may collect the composite sample prior to treatment or stabilization to demonstrate that the contents do not exceed these concentrations. However, if the contents collected prior to treatment or stabilization exceed the specified concentrations the operator shall collect a second five point, composite sample of the contents after treatment or stabilization to demonstrate that the contents do not exceed these concentrations.

(e) Upon closure of a temporary pit, or closure of a temporary pit that the operator constructs for burial of the contents of a drying pad associated with a closed-loop system, the operator shall cover the geomembrane lined, filled, temporary pit with compacted, non-waste containing, earthen material; construct a division-prescribed soil cover; recontour and re-vegetate the site. The division-prescribed soil cover, recontouring and re-vegetation shall comply with Subsections G, H and I of 19.15.17.13 NMAC.

(f) For burial of the contents from a drying pad associated with a closed-loop system, the operator shall construct a temporary pit, in accordance with Paragraphs (1) through (6) and (10) of Subsection F of 19.15.17.10 NMAC, within 100 feet of the drying pad associated with a closed-loop system, unless the appropriate division district office approves an alternative distance and location. The operator shall use a separate temporary pit for closure of each drying pad associated with a closed-loop system.

(3) On-site trench burial.

(a) Where the operator meets the siting criteria in Paragraph (4) of Subsection C of 19.15.17.10 NMAC, an operator may use on-site trench burial for closure of a drying pad associated with a closed loop system or for closure of a temporary pit when the waste meets the criteria in Subparagraph (c) of Paragraph (3) of Subsection F of 19.15.17.13 NMAC. The operator shall use a separate on-site trench for closure of each drying pad associated with a closed-loop system or each temporary pit.

(b) Prior to placing the contents from a drying pad associated with a closed-loop system or from a temporary pit into the trench, the operator shall stabilize or solidify the contents to a bearing capacity sufficient to support the final cover of the trench burial. The operator shall not mix the contents with soil or other material at a mixing ratio of greater than 3:1, soil or other material to contents.

(c) The operator shall collect at a minimum, a five point, composite sample of the contents of the drying pad associated with a closed-loop system or temporary pit to demonstrate that the TPH concentration, as determined by EPA method 418.1 or other EPA method that the division approves, does not exceed 2500 mg/kg. Using EPA SW-846 method 1312 or other EPA leaching procedure that the division approves, the operator shall demonstrate that the chloride concentration, as determined by EPA method 300.1 or other EPA method that the division approves, does not exceed 250 mg/l and that the concentrations of the water contaminants specified in Subsection A of 20.6.2.3103 NMAC as determined by appropriate EPA methods do not exceed the standards specified in Subsection A of 20.6.2.3103 NMAC, unless otherwise specified above. The operator may collect the composite sample prior to treatment or stabilization to demonstrate that the contents do not exceed these concentrations. However, if the contents collected prior to treatment or stabilization exceed the specified concentrations the operator shall collect a second five point, composite sample of the contents after treatment or stabilization to demonstrate that the contents do not exceed these concentrations.

(d) If the contents from a drying pad associated with a closed-loop system or from a temporary pit do not exceed the criteria in Subparagraph (c) of Paragraph (3) of Subsection F of 19.15.17.13 NMAC, the operator shall construct a trench lined with a geomembrane liner located within 100 feet of the drying pad associated with a closed-loop system or temporary pit, unless the appropriate division district office approves an alternative distance and location. The operator shall design and construct the lined trench in accordance with the design and construction requirements specified in Paragraphs (1) through (8) of Subsection J of 19.15.17.11 NMAC.

(e) The operator shall close each drying pad associated with a closed-loop system or temporary pit by excavating and transferring all contents and synthetic pit liners or liner material associated with a closed-loop system or temporary pit to a lined trench. The excavated materials shall pass the paint filter liquids test (EPA SW-846, method 9095) and the closure standards specified in Subparagraph (c) of Paragraph (3) of Subsection F of 19.15.17.13 NMAC.

(f) The operator shall test the soils beneath the temporary pit after excavation to determine whether a release has occurred.

(i) Where ground water is between 50 and 100 feet below the bottom of the temporary pit, the operator shall collect, at a minimum, a five point, composite sample; collect individual grab samples from any area that is wet, discolored or showing other evidence of a release; and analyze for BTEX, TPH, benzene, GRO and DRO combined fraction and chlorides to demonstrate that benzene, as determined by EPA SW-846 method 8021B or 8260B, does not exceed 0.2 mg/kg; total BTEX, as determined by EPA SW-846 method 8021B or 8260B, does not exceed 50 mg/kg; TPH, as determined by EPA SW-846 method 418.1 or other EPA method approved that the division approves, does not exceed

2500 mg/kg; the GRO and DRO combined fraction, as determined by EPA SW-846 method 8015M, does not exceed 500 mg/kg; and chlorides, as determined by EPA method 300.1, do not exceed 500 mg/kg or the background concentration, whichever is greater. The operator shall notify the division of its results on form C-141. The division may require additional delineation upon review of the results. The operator shall notify the division of its results on form C-141.

(ii) Where ground water is more than 100 feet below the bottom of the temporary pit, the operator shall collect at a minimum, a five point, composite sample; collect individual grab samples from any area that is wet, discolored or showing other evidence of a release; and analyze for BTEX, TPH, benzene, GRO and DRO combined fraction and chlorides to demonstrate that benzene, as determined by EPA SW-846 method 8021B or 8260B, does not exceed 0.2 mg/kg; total BTEX, as determined by EPA SW-846 method 8021B or 8260B, does not exceed 50 mg/kg; the GRO and DRO combined fraction, as determined by EPA SW-846 method 8015M, does not exceed 500 mg/kg and TPH, as determined by EPA method 418.1 or other EPA method that the division approves, does not exceed 2500 mg/kg; and chlorides, as determined by EPA method 300.1, do not exceed 1000 mg/kg or the background concentration, whichever is greater. The operator shall notify the division of its results on form C-141. The division may require additional delineation upon review of the results.

(g) If the sampling program demonstrates that a release has not occurred or that any release does not exceed the concentrations specified in Subparagraph (c) of Paragraph (3) of Subsection F of 19.15.17.13 NMAC, then the operator shall backfill the excavation with compacted, non-waste containing earthen material; construct a division-prescribed soil cover; recontour and re-vegetate the site. The division-prescribed soil cover, recontouring and re-vegetation shall comply with Subsections G, H and I of 19.15.17.13 NMAC.

(h) If the operator or the division determines that a release has occurred, then the operator shall comply with 19.15.3.116 NMAC and 19.15.1.19 NMAC, as appropriate. The operator may propose to transfer the excavated, contaminated soil into the lined trench.

(i) The operator shall install a geomembrane cover over the excavated material in the lined trench. The operator shall design and construct the geomembrane cover in accordance with the requirements specified in Paragraphs (9) and (10) of Subsection J of 19.15.17.11 NMAC.

(j) The operator shall cover the geomembrane lined and covered, filled, trench with compacted, non-waste containing, earthen material; construct a division-prescribed soil cover; recontour and re-vegetate the site. The division-prescribed soil cover, recontouring and re-vegetation shall comply with Subsections G, H and I of 19.15.17.13 NMAC.

G. Reclamation of pit locations, on-site burial locations and drying pad locations.

(1) Once the operator has closed a pit or trench or is no longer using a drying pad, below-grade tank or an area associated with a closed-loop system, pit, trench or below-grade tank, the operator shall reclaim the pit location, drying pad location, below-grade tank location or trench location and all areas associated with the closed-loop system, pit, trench or below-grade tank including associated access roads to a safe and stable condition that blends with the surrounding undisturbed area. The operator shall substantially restore the impacted surface area to the condition that existed prior to oil and gas operations by placement of the soil cover as provided in Subsection H of 19.15.17.13 NMAC, recontour the location and associated areas to a contour that approximates the original contour and blends with the surrounding topography and re-vegetate according to Subsection I of 19.15.17.13 NMAC.

(2) The operator may propose an alternative to the re-vegetation requirement if the operator demonstrates that the proposed alternative effectively prevents erosion, and protects fresh water, human health and the environment. The proposed alternative shall be agreed upon by the surface owner. The operator shall submit the proposed alternative, with written documentation that the surface owner agrees to the alternative, to the division for approval.

H. Soil cover designs.

(1) The soil cover for closures where the operator has removed the pit contents or remediated the contaminated soil to the division's satisfaction shall consist of the background thickness of topsoil or one foot of suitable material to establish vegetation at the site, whichever is greater.

(2) The soil cover for burial-in-place or trench burial shall consist of a minimum of four feet of compacted, non-waste containing, earthen material. The soil cover shall include either the background thickness of topsoil or one foot of suitable material to establish vegetation at the site, whichever is greater.

(3) The operator shall construct the soil cover to the site's existing grade and prevent ponding of water and erosion of the cover material.

I. Re-vegetation.

(1) The first growing season after the operator closes a pit or trench or is no longer using a drying pad, below-grade tank or an area associated with a closed-loop system, pit or below-grade tank including access roads, the operator shall seed or plant the disturbed areas.

(2) The operator shall accomplish seeding by drilling on the contour whenever practical or by other division-approved methods. The operator shall obtain vegetative cover that equals 70% of the native perennial vegetative cover (un-impacted by overgrazing, fire or other intrusion damaging to native vegetation) consisting of at least three native plant species, including at least one grass, but not including noxious weeds, and maintain that cover through two successive growing seasons. During the two growing seasons that prove viability, there shall be no artificial irrigation of the vegetation.

(3) The operator shall repeat seeding or planting until it successfully achieves the required vegetative cover.

(4) When conditions are not favorable for the establishment of vegetation, such as periods of drought, the division may allow the operator to delay seeding or planting until soil moisture conditions become favorable or may require the operator to use additional cultural techniques such as mulching, fertilizing, irrigating, fencing or other practices.

(5) The operator shall notify the division when it has seeded or planted and when it successfully achieves re-vegetation.

J. Closure notice.

(1) The operator shall notify the surface owner by certified mail, return receipt requested, that the operator plans to close a temporary pit, a permanent pit, a below-grade tank or where the operator has approval for on-site closure. Evidence of mailing of the notice to the address of the surface owner shown in the county tax records is sufficient to demonstrate compliance with this requirement.

(2) The operator of a temporary pit or below-grade tank or an operator who is approved for on-site closure shall notify the appropriate division district office verbally or by other means at least 72 hours, but not more than one week, prior to any closure operation. The notice shall include the operator's name and the location to be closed by unit letter, section, township and range. If the closure is associated with a particular well, then the notice shall also include the well's name, number and API number.

(3) An operator of a permanent pit shall notify the environmental bureau in the division's Santa Fe office at least 60 days prior to cessation of operations and provide a proposed schedule for closure. If there is no closure plan on file with the environmental bureau in the division's Santa Fe office applicable to the permanent pit, the operator shall provide a closure plan with this notice. Upon receipt of the notice and proposed schedule, the environmental bureau in the division's Santa Fe office shall review the current closure plan for adequacy and inspect the site.

K. Closure report. Within 60 days of closure completion, the operator shall submit a closure report on form C-144, with necessary attachments to document all closure activities including sampling results; information required by 19.15.17 NMAC; a plot plan; and details on back-filling, capping and covering, where applicable. In the closure report, the operator shall certify that all information in the report and attachments is correct and that the operator has complied with all applicable closure requirements and conditions specified in the approved closure plan. If the operator used a temporary pit, the operator shall provide a plat of the pit location on form C-105 within 60 days of closing the temporary pit. [19.15.17.13 NMAC - Rp, 19.15.2.50 NMAC, //08]

19.15.17.14 EMERGENCY ACTIONS:

A. Permit not required. In an emergency an operator may construct a pit without a permit to contain fluids, solids or wastes, if an immediate danger to fresh water, public health or the environment exists.

B. Construction standards. The operator shall construct a pit during an emergency, to the extent possible given the emergency, in a manner that is consistent with the requirements for a temporary pit specified in 19.15.17 NMAC and that prevents the contamination of fresh water and protect public health and the environment.

C. Notice. The operator shall notify the appropriate division district office as soon as possible (if possible before construction begins) of the need for such pit's construction.

D. Use and duration. A pit constructed in an emergency may be used only for the emergency's duration. If the emergency lasts more than 48 hours, then the operator shall seek the appropriate division district office's approval for the pit's continued use. The operator shall remove all

fluids, solids or wastes within 48 hours after cessation of use unless the appropriate division district office extends that time period.

E. Emergency pits. 19.15.17.14 NMAC does not authorize construction or use of an emergency pit as defined in Subsection D of 19.15.17.7 NMAC. Construction or use of any such pit requires a permit issued pursuant to 19.15.17 NMAC, unless the pit is described in a spill prevention, control and countermeasure plan the EPA requires, the operator removes all fluids from the pit within 48 hours and the operator has filed a notice of the pit's location with the appropriate division district office. [19.15.17.14 NMAC - Rp, 19.15.2.50 NMAC, //08]

19.15.17.15 EXCEPTIONS:

A. General exceptions.

(1) The operator may apply to the environmental bureau in the division's Santa Fe office for an exception to a requirement or provision of 19.15.17 NMAC other than the permit requirements of 19.15.17.8 NMAC; the exception requirements of 19.15.17.15 NMAC; or the permit approval, condition, denial, revocation, suspension, modification or transfer requirements of 19.15.17.16 NMAC. The environmental bureau in the division's Santa Fe office may grant an exception from a requirement or provision of 19.15.17 NMAC, if the operator demonstrates to the satisfaction of the environmental bureau in the division's Santa Fe office that the granting of the exception provides equivalent or better protection of fresh water, public health and the environment. The environmental bureau in the division's Santa Fe office may revoke an exception after notice to the operator of the pit, closed-loop system, below-grade tank or proposed alternative and to the surface owner, and opportunity for a hearing, or without notice and hearing in event of an emergency involving imminent danger to fresh water, public health or the environment, subject to the provisions of NMSA 1978, Section 70-2-23, if the environmental bureau in the division's Santa Fe office determines that such action is necessary to prevent the contamination of fresh water, or to protect public health or the environment.

(2) The operator shall give written notice by certified mail, return receipt requested, to the surface owner of record where the pit, closed-loop system, below-grade tank or proposed alternative is, or will be, located; to surface owners of record within one-half mile of such location; to the county commission of the county where the pit, closed-loop system, below-grade tank or proposed alternative is, or will be, located; to the appropriate city officials if the pit, closed-loop system, below-grade tank or proposed alternative is, or will be, located within city limits, within one-half mile of the city limits or within the city's zoning and planning jurisdiction; to affected federal or tribal or pueblo governmental agencies; and to such other persons as the environmental bureau in the division's Santa Fe office may direct. Additionally, the operator shall issue public notice by publication one time in a newspaper of general circulation in the county where the pit, closed-loop system, below-grade tank or proposed alternative, is, or will be located. Required written and public notices require the environmental bureau in the division's Santa Fe office's approval. The division shall distribute notice of the application to persons who have requested notification and shall post notice of the application on the division's website.

(3) Any person wishing to comment on an application for an exception may file comments or request a hearing within 30 days after the later of the date when the applicant mails the notice required by Paragraph (2) of Subsection A of 19.15.17.15 NMAC or when the division distributes or posts the notice provided in Paragraph (2) of Subsection A of 19.15.17.15 NMAC. In a request for hearing, the person shall set forth the reasons why the division should hold a hearing.

(4) The environmental bureau in the division's Santa Fe office may grant the exception administratively if the environmental bureau in the division's Santa Fe office receives no comments or requests for hearing within the time for commenting established in Paragraph (3) of Subsection A of 19.15.17.15 NMAC. If the environmental bureau in the division's Santa Fe office receives a request for hearing and the director determines that the request presents issues that have technical merit or that there is significant public interest, then the director may set the application for hearing. The director, however, may set any application for hearing. If the environmental bureau in the division's Santa Fe office schedules a hearing on an application, the hearing shall be conducted according to the procedures in 19.15.14.1206 through 19.15.14.1215 NMAC.

(5) If the director does not determine that a hearing is necessary due to technical merit, significant public interest or otherwise, then the environmental bureau in the division's Santa Fe office may grant the exception without a hearing notwithstanding the filing of a request for hearing. If, however, the environmental bureau in the division's Santa Fe office determines to deny the exception, then it shall notify

the operator of its determination by certified mail, return receipt requested, and if the operator requests a hearing within 10 days after receipt of such notice shall set the matter for hearing, with notice to the operator and to any party who has filed a comment or requested a hearing.

B. Alternative closure methods. The operator of a temporary pit or a closed-loop system may apply to the environmental bureau in the division's Santa Fe office for an exception to the closure methods specified in Paragraphs (1) and (2) of Subsection B of 19.15.17.13 NMAC or Paragraphs (1) and (2) of Subsection D of 19.15.17.13 NMAC. The environmental bureau in the division's Santa Fe office may grant the proposed exception if all of the following requirements are met.

(1) The operator demonstrates that the proposed alternative method protects fresh water, public health and the environment.

(2) The operator shall remove liquids prior to implementing a closure method and dispose of the liquids in a division-approved facility or recycle or reuse the liquids in a manner that the environmental bureau in the division's Santa Fe office approves.

(3) The operator demonstrates to the satisfaction of the environmental bureau in the division's Santa Fe office that any proposed alternative closure method will implement one or more of the following practices: waste minimization; treatment using best demonstrated available technology; reclamation; reuse; recycling; or reduction in available contaminant concentration; and subject to such conditions as the environmental bureau in the division's Santa Fe office deems necessary in order to protect fresh water, public health and the environment.

(4) The provisions of Subsection A of 19.15.17.15 NMAC shall apply to applications for exceptions pursuant to Subsection B of 19.15.17.15 NMAC.
[19.15.17.15 NMAC - Rp, 19.15.2.50 NMAC, //08]

19.15.17.16 PERMIT APPROVALS, CONDITIONS, DENIALS, REVOCATIONS, SUSPENSIONS, MODIFICATIONS OR TRANSFERS:

A. The division shall review all applications to permit facilities subject to 19.15.17 NMAC, and may approve, deny or approve an application with conditions. If the division denies an application or approves the application subject to conditions not expressly provided by the Oil and Gas Act or in 19.15 NMAC, then the division shall notify the applicant by certified mail, return receipt requested, and shall set the matter for hearing if the applicant so requests within 10 days after receipt of such notification.

B. Granting of permit. The division shall issue a permit upon finding that an operator has filed an acceptable application and that the proposed construction, operation and closure of a pit, closed-loop system, below-grade tank or proposed alternative will comply with applicable statutes and rules and will not endanger fresh water, public health, safety or the environment.

C. Conditions. The division may impose conditions or requirements that it determines are necessary and proper for the protection of fresh water, public health, safety or the environment. The division shall incorporate such additional conditions or requirements into the permit.

D. Denial of application. The division may deny an application for a permit if it finds that the application and materials that the operator submitted for consideration with the application do not sufficiently demonstrate that the operator can construct, operate and close the proposed pit, closed-loop system, below-grade tank or proposed alternative without detriment to fresh water, public health, safety or the environment.

E. Revocation, suspension or modification of a permit. The operator may apply to the division for a modification of the permit pursuant 19.15.17 NMAC. The operator shall demonstrate that the proposed modification complies with the applicable provisions of 19.15.17 NMAC. Any modification that is equivalent to an exception of any paragraph of 19.15.17 NMAC shall be subject to the notice and approval procedures required for an exception. The division may revoke, suspend or impose additional operating conditions or limitations on a permit at any time, after notice and opportunity for a hearing, if the division determines that the operator or the permitted facility is in material breach of any applicable statutes or rules, or that such action is necessary for the protection of fresh water, public health or the environment. The division shall notify the operator by certified mail, return receipt requested, of any intended revocation, suspension or imposition of addition conditions, and the operator shall have 10 days after receipt of notification to request a hearing. The division may suspend a permit or impose additional conditions or limitations without hearing in an emergency to forestall an imminent threat to fresh water, public health, safety or the environment, subject to the provisions of NMSA 1978, Section 70-2-23, as amended.

F. Transfer of a permit. The operator shall not transfer a permit without the division's prior written approval. The division's approval of an application to transfer a well or other facility with which a permitted pit, below-grade tank or closed-loop system is associated shall constitute approval of the transfer of the permit for the pit, below-grade tank or closed-loop system. In all other cases, the operator and the transferee shall apply for approval to transfer the permit to the division office to which permit applications for the type of facility involved are directed.

G. Division approvals. The division shall grant or confirm any division approval authorized by a provision of 19.15.17 NMAC by written statement. Written statements include e-mail.

H. If the division schedules a hearing on an application, the hearing shall be conducted according to 19.15.14.1206 through 19.15.14.1215 NMAC.
[19.15.17.16 NMAC - Rp, 19.15.2.50 NMAC, //08]

19.15.17.17 TRANSITIONAL PROVISIONS:

A. After _____, 2008 [effective date], the division shall not accept applications for permits for unlined temporary pits.

B. An operator of an existing operation that is required to close pursuant to Paragraphs (2) or (3) of Subsection A of 19.15.17.13 NMAC shall submit a closure plan pursuant to Subsection C of 19.15.17.9 NMAC to the division not later than 30 days after _____, 2008 [effective date]. An operator of an existing operation that is required to close pursuant to Paragraphs (1) or (4) of Subsection A of 19.15.17.13 NMAC shall submit a closure plan pursuant to Subsection C of 19.15.17.9 NMAC to the division not later than six months after _____, 2008 [effective date].

C. Within 180 days after _____ 2008 [effective date], an operator of an existing lined permitted permanent pit shall request a modification pursuant to Subsection E of 19.15.17.16 NMAC. Within 180 days after _____, 2008 [effective date] an operator of an existing lined registered permanent pit shall apply to the division for a permit pursuant to 19.15.17 NMAC. An operator of an existing lined, permitted or registered, permanent pit shall comply with the construction requirements of 19.15.17.11 NMAC within 18 months after permit modification or issuance.

D. An operator of an existing below-grade tank shall apply for a permit or permit modification pursuant to 19.15.17 NMAC within 90 days after _____, 2008 [effective date]. An operator of an existing below-grade tank shall comply with the construction requirements of 19.15.17.11 NMAC within one year of permit issuance.

E. An operator of an existing pit or below-grade tank permitted prior to _____, 2008, [effective date] may continue to operate in accordance with such permits or orders, subject to the following provisions.

(1) An operator of an existing lined, permitted or registered, permanent pit shall comply with the operational and closure requirements of 19.15.17.12 NMAC and 19.15.17.13 NMAC.

(2) An operator of an existing, permitted or registered, temporary pit shall comply with the operational and closure requirements of 19.15.17.12 NMAC and 19.15.17.13 NMAC.

(3) An operator of an existing below-grade tank shall comply with the operational and closure requirements of 19.15.17.12 NMAC and 19.15.17.13 NMAC.

(4) The operator shall bring an existing below-grade tank that does not comply with the design and construction requirements of 19.15.17.11 NMAC into compliance with those requirements or close it within five years after _____, 2008 [effective date].

F. The operator may continue to operate an existing closed-loop system without applying for a permit, but the operator shall close such system in accordance with the closure requirements of 19.15.17.13 NMAC.

G. An operator of an existing sump shall comply with the operational requirements of 19.15.17.12 NMAC.
[19.15.17.17 NMAC - Rp, 19.15.2.50 NMAC, //08]

19.15.1.7 DEFINITIONS:

A. Definitions beginning with the letter "A".

(1) Abate or abatement shall mean the investigation, containment, removal or other mitigation of water pollution.

(2) Abatement plan shall mean a description of any operational, monitoring, contingency and closure requirements and conditions for the prevention, investigation and abatement of water pollution.

(3) Adjoining spacing units are those existing or prospective spacing units in the same pool that are touching at a point or line on the spacing unit that is the subject of the application.

(4) Adjusted allowable shall mean the allowable production a well or proration unit receives after all adjustments are made.

(5) Allocated pool is one in which the total oil or natural gas production is restricted and allocated to various wells therein in accordance with proration schedules.

(6) Allowable production shall mean that number of barrels of oil or standard cubic feet of natural gas authorized by the division to be produced from an allocated pool.

(7) Approved temporary abandonment shall be the status of a well that is inactive, has been approved in accordance with 19.15.4.203 NMAC and is in compliance with 19.15.4.203 NMAC.

(8) Aquifer shall mean a geological formation, group of formations or a part of a formation that is capable of yielding a significant amount of water to a well or spring.

(9) ASTM means ASTM International - an international standards developing organization that develops and publishes voluntary technical standards for a wide range of materials, products, systems, and services.

B. Definitions beginning with the letter "B".

(1) Back allowable shall mean the authorization for production of a shortage or underproduction resulting from pipeline proration.

(2) Background shall mean, for purposes of ground water abatement plans only, the amount of ground water contaminants naturally occurring from undisturbed geologic sources or water contaminants occurring from a source other than the responsible person's facility. This definition shall not prevent the director from requiring abatement of commingled plumes of pollution, shall not prevent responsible persons from seeking contribution or other legal or equitable relief from other persons and shall not preclude the director from exercising enforcement authority under any applicable statute, regulation or common law.

(3) Barrel shall mean 42 United States gallons measured at 60 degrees Fahrenheit and atmospheric pressure at the sea level.

(4) Barrel of oil shall mean 42 United States gallons of oil, after deductions for the full amount of basic sediment, water and other impurities present, ascertained by centrifugal or other recognized and customary test.

(5) Below-grade tank ~~[shall mean]~~ means a vessel, excluding sumps and pressurized pipeline drip traps, where a portion of the tank's sidewalls is below the ~~[ground surface and not visible]~~ surrounding ground surface's elevation. Below-grade tank does not include an above ground storage tank that is located above or at the surrounding ground surface's elevation and is surrounded by berms.

(6) Berm shall mean an embankment or ridge constructed to prevent the movement of liquids, sludge, solids or other materials.

(7) Biopile, also known as biocell, bioheap, biomound or compost pile, shall mean a pile of contaminated soils used to reduce concentrations of petroleum constituents in excavated soils through the use of biodegradation. This technology involves heaping contaminated soils into piles or "cells" and stimulating aerobic microbial activity within the soils through the aeration or addition of minerals, nutrients and moisture.

(8) Bottom hole or subsurface pressure shall mean the gauge pressure in pounds per square inch under conditions existing at or near the producing horizon.

(9) Bradenhead gas well shall mean a well producing gas through wellhead connections from a gas reservoir that has been successfully cased off from an underlying oil or gas reservoir.

(10) BS&W means basic sediments and water.

(11) BTEX means benzene, toluene, ethylbenzene and xylene.

C. Definitions beginning with the letter "C".

(1) Carbon dioxide gas shall mean noncombustible gas composed chiefly of carbon dioxide occurring naturally in underground rocks.

(2) Casinghead gas shall mean any gas or vapor or both gas and vapor indigenous to and produced from a pool classified as an oil pool by the division. This also includes gas-cap gas produced from such an oil pool.

(3) Cm/sec means centimeters per second.

~~(3)~~(4) Commission shall mean the oil conservation commission.

~~(4)~~(5) Commission clerk means the oil conservation division employee the division director designates to provide staff support to the commission, and accept filings in rulemaking or adjudicatory cases before the commission.

~~(5)~~(6) Common purchaser for natural gas shall mean any person now or hereafter engaged in purchasing from one or more producers gas produced from gas wells within each common source of supply from which it purchases.

~~(6)~~(7) Common purchaser for oil shall mean every person now engaged or hereafter engaging in the business of purchasing oil to be transported through pipelines.

~~(7)~~(8) Common source of supply. See pool.

~~(8)~~(9) Condensate shall mean the liquid recovered at the surface that results from condensation due to reduced pressure or temperature of petroleum hydrocarbons existing in a gaseous phase in the reservoir.

~~(9)~~(10) Contiguous shall mean acreage joined by more than one common point, that is, the common boundary must be at least one side of a governmental quarter-quarter section.

~~(10)~~(11) Conventional completion shall mean a well completion in which the production string of casing has an outside diameter in excess of 2.875 inches.

~~(11)~~(12) Correlative rights shall mean the opportunity afforded, as far as it is practicable to do so, to the owner of each property in a pool to produce without waste his just and equitable share of the oil or gas, or both, in the pool, being an amount, so far as can be practically determined, and so far as can be practicably obtained without waste, substantially in the proportion that the quantity of recoverable oil or gas, or both, under such property bears to the total recoverable oil or gas, or both, in the pool, and for such purpose to use his just and equitable share of the reservoir energy.

~~(12)~~(13) Cubic feet of gas or standard cubic foot of gas, for the purpose of these rules, shall mean that volume of gas contained in one cubic foot of space and computed at a base pressure of 10 ounces per square inch above the average barometric pressure of 14.4 pounds per square inch (15.025 psia), at a standard base temperature of 60 degrees Fahrenheit.

D. Definitions beginning with the letter "D".

(1) Deep pool shall mean a common source of supply which is situated 5000 feet or more below the surface.

(2) Depth bracket allowable shall mean the basic oil allowable assigned to a pool and based on its depth, unit size or special pool rules, which, when multiplied by the market demand percentage factor in effect, will determine the top unit allowable for the pool.

(3) Director shall mean the director of the oil conservation division of the New Mexico energy, minerals and natural resources department.

(4) Division shall mean the oil conservation division of the New Mexico energy, minerals and natural resources department.

(5) Division clerk means the oil conservation division employee the division director designates to accept filings in adjudicatory cases before the division.

(6) Downstream facility means a facility associated with the transportation (including gathering) or processing of gas or oil (including a refinery, gas plant, compressor station or crude oil pump station); brine production; or the oil field service industry.

(7) DRO means diesel range organics.

E. Definitions beginning with the letter "E".

(1) EPA means the United States environmental protection agency.

~~(4)~~(2) Exempted aquifer shall mean an aquifer that does not currently serve as a source of drinking water, and which cannot now and will not in the foreseeable future serve as a source of drinking water because:

(a) it is hydrocarbon producing;

(b) it is situated at a depth or location which makes the recovery of water for drinking water purposes economically or technologically impractical; or,

(c) it is so contaminated that it would be economically or technologically impractical to render that water fit for human consumption.

~~(2)~~(3) Existing spacing unit is a spacing unit containing a producing well.

F. Definitions beginning with the letter "F".

(1) Facility shall mean any structure, installation, operation, storage tank, transmission line, access road, motor vehicle, rolling stock or activity of any kind, whether stationary or mobile.

(2) Field means the general area which is underlaid or appears to be underlaid by at least one pool; and field also includes the underground reservoir or reservoirs containing such crude petroleum oil or natural gas, or both. The words field and pool mean the same thing when only one underground reservoir is involved; however, field unlike pool may relate to two or more pools.

(3) Fresh water (to be protected) includes the water in lakes and playas, the surface waters of all streams regardless of the quality of the water within any given reach and all underground waters containing 10,000 milligrams per liter (mg/l) or less of total dissolved solids (TDS) except for which, after notice and hearing, it is found there is no present or reasonably foreseeable beneficial use which would be impaired by contamination of such waters. The water in lakes and playas shall be protected from contamination even though it may contain more than 10,000 mg/l of TDS unless it can be shown that hydrologically connected fresh ground water will not be adversely affected.

G. Definitions beginning with the letter "G".

(1) Gas lift shall mean any method of lifting liquid to the surface by injecting gas into a well from which oil production is obtained.

(2) Gas-oil ratio shall mean the ratio of the casinghead gas produced in standard cubic feet to the number of barrels of oil concurrently produced during any stated period.

(3) Gas-oil ratio adjustment shall mean the reduction in allowable of a high gas oil ratio unit to conform with the production permitted by the limiting gas-oil ratio for the particular pool during a particular proration period.

(4) Gas transportation facility shall mean a pipeline in operation serving gas wells for the transportation of natural gas, or some other device or equipment in like operation whereby natural gas produced from gas wells connected therewith can be transported or used for consumption.

(5) Gas well shall mean a well producing gas or natural gas from a gas pool, or a well with a gas-oil ratio in excess of 100,000 cubic feet of gas per barrel of oil producing from an oil pool.

(6) Geomembrane means an impermeable polymeric sheet material that is impervious to liquid and gas as long as it maintains its integrity, and is used as an integral part of an engineered structure designed to limit the movement of liquid or gas in a system.

(7) Geotextile means a sheet material that is less impervious to liquid than a geomembrane but more resistant to penetration damage, and is used as part of an engineered structure or system to serve as a filter to prevent the movement of soil fines into a drainage system, to provide planar flow for drainage, to serve as a cushion to protect geomembranes or to provide structural support.

(8) GRO means gasoline range organics.

~~(6)~~(9) Ground water shall mean interstitial water which occurs in saturated earth material and which is capable of entering a well in sufficient amounts to be utilized as a water supply.

~~(7)~~(10) Ground water sensitive area shall mean an area specifically so designated by the division after evaluation of technical evidence where ground water exists that would likely exceed water quality control commission standards if contaminants were introduced into the environment.

H. Definitions beginning with the letter "H".

(1) Hazard to public health exists when water which is used or is reasonably expected to be used in the future as a human drinking water supply exceeds at the time and place of such use, one or more of the numerical standards of Subsection A of 20.6.2.3103 NMAC, or the naturally occurring concentrations, whichever is higher, or if any toxic pollutant as defined at Subsection VV of 20.6.2.7 NMAC affecting human health is present in the water. In determining whether a release would cause a hazard to public health to exist, the director shall investigate and consider the purification and dilution reasonably expected to occur from the time and place of release to the time and place of withdrawal for use as human drinking water.

(2) HDPE means high-density polyethylene.

(3) H₂S means hydrogen sulfide.

~~(2)~~(4) High gas-oil ratio proration unit shall mean a unit with at least one producing oil well with a gas-oil ratio in excess of the limiting gas-oil ratio for the pool in which the unit is located.

I. Definitions beginning with the letter "I".

(1) Illegal gas shall mean natural gas produced from a gas well in excess of the allowable determined by the division.

(2) Illegal oil shall mean crude petroleum oil produced in excess of the allowable as fixed by the division.

(3) Illegal product shall mean any product of illegal gas or illegal oil.

(4) Inactive well shall be a well which is not being utilized for beneficial purposes such as production, injection or monitoring and which is not being drilled, completed, repaired or worked over.

(5) Injection or input well shall mean any well used for the injection of air, gas, water or other fluids into any underground stratum.

J. Reserved.

K. Definitions beginning with the letter "K". Knowingly and willfully, for the purpose of assessing civil penalties, shall mean the voluntary or conscious performance of an act that is prohibited or the voluntary or conscious failure to perform an act or duty that is required. It does not include performances or failures to perform that are honest mistakes or merely inadvertent. It includes, but does not require, performances or failures to perform that result from a criminal or evil intent or from a specific intent to violate the law. The conduct's knowing and willful nature may be established by plain indifference to or reckless disregard of the requirements of the law, rules, orders or permits. A consistent pattern or performance or failure to perform also may be sufficient to establish the conduct's knowing and willful nature, where such consistent pattern is neither the result of honest mistakes nor mere inadvertency. Conduct that is otherwise regarded as being knowing and willful is rendered neither accidental nor mitigated in character by the belief that the conduct is reasonable or legal.

L. Definitions beginning with the letter "L".

(1) Limiting gas-oil ratio shall mean the gas-oil ratio assigned by the division to a particular oil pool to limit the volumes of casinghead gas which may be produced from the various oil producing units within that particular pool.

~~(2) Liner means a continuous, low-permeability layer constructed of natural or human-made materials that restricts the migration of liquid oil field wastes, gases or leachate.~~

~~(3) LLDPE means linear low-density polyethylene.~~

~~(2)(4)~~ Load oil is any oil or liquid hydrocarbon which has been used in remedial operation in any oil or gas well.

~~(3)(5)~~ Log or well log shall mean a systematic detailed and correct record of formations encountered in the drilling of a well.

M. Definitions beginning with the letter "M".

(1) Marginal unit shall mean a proration unit which is incapable of producing top unit allowable for the pool in which it is located.

(2) Market demand percentage factor shall mean that percentage factor of 100 percent or less as determined by the division at an oil allowable hearing, which, when multiplied by the depth bracket allowable applicable to each pool, will determine the top unit allowable for that pool.

~~(3) Mg/l means milligrams per liter.~~

~~(4) Mg/kg means milligrams per kilogram.~~

~~(3)(5)~~ Mineral estate is the most complete ownership of oil and gas recognized in law and includes all the mineral interests and all the royalty interests.

~~(4)(6)~~ Mineral interest owners are owners of an interest in the executive rights, which are the rights to explore and develop, including oil and gas lessees (i.e., "working interest owners") and mineral interest owners who have not signed an oil and gas lease.

~~(5)(7)~~ Minimum allowable shall mean the minimum amount of production from an oil or gas well which may be advisable from time to time to the end that production will repay reasonable lifting cost and thus prevent premature abandonment and resulting waste.

~~(6)(8)~~ Multiple completion (combination) shall mean a multiple completion in which two or more common sources of supply are produced through a combination of two or more conventional diameter casing strings cemented in a common well-bore, or a combination of small diameter and conventional diameter casing strings cemented in a common well-bore, the conventional diameter strings of which might or might not be a multiple completion (conventional).

~~(7)(9)~~ Multiple completion (conventional) shall mean a completion in which two or more common sources of supply are produced through one or more strings of tubing installed within a single casing string, with the production from each common source of supply completely segregated by means of packers.

~~(8)(10)~~ Multiple completion (tubingless) shall mean completion in which two or more common sources of supply are produced through an equal number of casing strings cemented in a common well-bore, each such string of casing having an outside diameter of 2.875 inches or less, with the production from each common source of supply completely segregated by use of cement.

N. Definitions beginning with the letter "N".

(1) Natural gas or gas shall mean any combustible vapor composed chiefly of hydrocarbons occurring naturally in a pool classified by the division as a gas pool.

(2) Non-aqueous phase liquid shall mean an interstitial body of liquid oil, petroleum product, petrochemical or organic solvent, including an emulsion containing such material.

(3) Non-marginal unit shall mean a proration unit which is capable of producing top unit allowable for the pool in which it is located, and to which has been assigned a top unit allowable.

O. Definitions beginning with the letter "O".

(1) Official gas-oil ratio test shall mean the periodic gas-oil ratio test made by division order by such method and means and in such manner as the division prescribes.

(2) Oil, crude oil or crude petroleum oil shall mean petroleum hydrocarbon produced from a well in the liquid phase and that existed in a liquid phase in the reservoir.

(3) Oil field waste shall mean waste generated in conjunction with the exploration for, drilling for, production of, refining of, processing of, gathering of or transportation of crude oil, natural gas or carbon dioxide; waste generated from oil field service company operations; and waste generated from oil field remediation or abatement activity regardless of the date of release. Oil field waste does not include waste not generally associated with oil and gas industry operations such as tires, appliances or ordinary garbage or refuse unless generated at a division-regulated facility, and does not include sewage, regardless of the source.

(4) Oil well shall mean a well capable of producing oil and that is not a gas well as defined in Paragraph (5) of Subsection G of 19.15.1.7 NMAC.

(5) Operator shall mean a person who, duly authorized, is in charge of the development of a lease or the operation of a producing property, or who is in charge of a facility's operation or management.

(6) Overage or overproduction shall mean the amount of oil or the amount of natural gas produced during a proration period in excess of the amount authorized on the proration schedule.

(7) Owner shall mean the person who has the right to drill into and to produce from a pool, and to appropriate the production either for himself or for himself and another.

P. Definitions beginning with the letter "P".

(1) Penalized unit shall mean a proration unit to which, because of an excessive gas-oil ratio, an allowable has been assigned which is less than top unit allowable for the pool in which it is located and also less than the ability of the well(s) on the unit to produce.

(2) Person shall mean an individual or any other entity including partnerships, corporation, associations, responsible business or association agents or officers, the state or a political subdivision of the state or any agency, department or instrumentality of the United States and any of its officers, agents or employees.

(3) Pit shall mean any surface or sub-surface impoundment, man-made or natural depression or diked area on the surface. Excluded from this definition are berms constructed around tanks or other facilities solely for the purpose of safety, ~~and~~ secondary containment and storm water or run-on control.

(4) Playa lake shall mean a level or nearly level area that occupies the lowest part of a completely closed basin and that is covered with water at irregular intervals, forming a temporary lake.

(5) Pool means any underground reservoir containing a common accumulation of crude petroleum oil or natural gas or both. Each zone of a general structure, which zone is completely separated from any other zone in the structure, is covered by the word "pool" as used herein. "Pool" is synonymous with "common source of supply" and with "common reservoir".

(6) Potential shall mean the properly determined capacity of a well to produce oil, or gas, or both, under conditions prescribed by the division.

(7) Pressure maintenance shall mean the injection of gas or other fluid into a reservoir, either to maintain the existing pressure in such reservoir or to retard the natural decline in the reservoir pressure.

(8) Produced water shall mean those waters produced in conjunction with the production of crude oil and/or natural gas and commonly collected at field storage, processing or disposal facilities including but not limited to: lease tanks, commingled tank batteries, burn pits, LACT units and community or lease salt water disposal systems and which may be collected at gas processing plants, pipeline drips and other processing or transportation facilities.

(9) Producer shall mean the owner of a well or wells capable of producing oil or natural gas or both in paying quantities.

(10) Product means any commodity or thing made or manufactured from crude petroleum oil or natural gas, and all derivatives of crude petroleum oil or natural gas, including refined crude oil, crude tops, topped crude, processed crude petroleum, residue from crude petroleum, cracking stock, uncracked fuel oil, treated crude oil, fuel oil, residuum, gas oil, naphtha, distillate, gasoline, kerosene, benzene, wash oil, lubricating oil, and blends or mixtures of crude petroleum oil or natural gas or any derivative thereof.

(11) Proration day shall consist of 24 consecutive hours which shall begin at 7 a.m. and end at 7 a.m. on the following day.

(12) Proration month shall mean the calendar month which shall begin at 7 a.m. on the first day of such month and end at 7 a.m. on the first day of the next succeeding month.

(13) Proration period shall mean for oil the proration month and for gas the twelve-month period which shall begin at 7 a.m. on January 1 of each year and end at 7 a.m. on January 1 of the succeeding year or other period designated by general or special order of the division.

(14) Proration schedule shall mean the order of the division authorizing the production, purchase and transportation of oil, casinghead gas and natural gas from the various units of oil or of natural gas in allocated pools.

(15) Proration unit is the area in a pool that can be effectively and efficiently drained by one well as determined by the division or commission (See NMSA 1978 Section 70-2-17.B) as well as the area assigned to an individual well for the purposes of allocating allowable production pursuant to a prorationing order for the pool. A proration unit will be the same size and shape as a spacing unit. All proration units are spacing units but not all spacing units are proration units.

(16) Prospective spacing unit is a hypothetical spacing unit that does not yet have a producing well.

(17) PVC means poly vinyl chloride.

(18) Psi means pounds per square inch.

Q. Reserved.

R. Definitions beginning with the letter "R".

(1) Recomplete shall mean the subsequent completion of a well in a different pool from the pool in which it was originally completed.

(2) Regulated naturally occurring radioactive material (regulated NORM) shall mean naturally occurring radioactive material (NORM) contained in any oil-field soils, equipment, sludges or any other materials related to oil-field operations or processes exceeding the radiation levels specified in 20.3.14.1403 NMAC.

(3) Release shall mean all breaks, leaks, spills, releases, fires or blowouts involving crude oil, produced water, condensate, drilling fluids, completion fluids or other chemical or contaminant or mixture thereof, including oil field wastes and natural gases to the environment.

(4) Remediation plan shall mean a written description of a program to address unauthorized releases. The plan may include appropriate information, including assessment data, health risk demonstrations and corrective action(s). The plan may also include an alternative proposing no action beyond the submittal of a spill report.

(5) Responsible person shall mean the owner or operator who must complete division approved corrective action for pollution from releases.

(6) Royalty interest owners are owners of an interest in the non-executive rights including lessors, royalty interest owners and overriding royalty interest owners. Royalty interests are non-cost bearing.

(7) Run-on means rainwater, leachate or other liquid that drains from other land on to any part of a division-approved facility.

S. Definitions beginning with the letter "S".

(1) Secondary recovery shall mean a method of recovering quantities of oil or gas from a reservoir which quantities would not be recoverable by ordinary primary depletion methods.

(2) Shallow pool shall mean a pool that has a depth range from zero to 5000 feet.

(3) Shortage or underproduction shall mean the amount of oil or the amount of natural gas during a proration period by which a given proration unit failed to produce an amount equal to that authorized in the proration schedule.

(4) Shut-in shall be the status of a production well or an injection well that is temporarily closed down, whether by closing a valve or disconnection or other physical means.

(5) Shut-in pressure shall mean the gauge pressure noted at the wellhead when the well is completely shut in, not to be confused with bottom hole pressure.

(6) Significant modification of an abatement plan shall mean a change in the abatement technology used excluding design and operational parameters, or relocation of 25 percent or more of the compliance sampling stations, for a single medium, as designated pursuant to Item (iv) of Subparagraph (b) of Paragraph (4) of Subsection E of 19.15.5.19 NMAC.

(7) Soil shall mean earth, sediments or other unconsolidated accumulations of solid particles produced by the physical and chemical disintegration of rocks, and which may or may not contain organic matter.

(8) Spacing unit shall mean the area allocated to a well under a well spacing order or rule. Under the Oil and Gas Act, NMSA 1978, Section 70-2-12.B(10), the commission has the power to fix spacing units without first creating proration units. See *rutter & wilbanks corp. v. oil conservation comm'n*, 87 NM 286 (1975). This is the area designated on division form C-102.

(9) Subsurface water shall mean ground water and water in the vadose zone that may become ground water or surface water in the reasonably foreseeable future or may be utilized by vegetation.

(10) Surface waste management facility ~~shall mean~~ means a facility that receives oil field waste for collection, disposal, evaporation, remediation, reclamation, treatment or storage except:

(a) a facility that utilizes underground injection wells subject to division regulation pursuant to the federal Safe Drinking Water Act, and does not manage oil field wastes on the ground in pits, ponds, below-grade tanks or land application units;

(b) a facility permitted pursuant to environmental improvement board rules or water quality control commission rules;

(c) ~~[a drilling or workover pit as defined in 19.15.2.50 NMAC]~~ a temporary pit as defined in 19.15.17 NMAC;

(d) a ~~[tank]~~ below-grade tank or pit that receives oil field waste from a single well, permitted pursuant to 19.15.17 NMAC, regardless of the capacity or volume of oil field waste received;

(e) a facility located at an oil and gas production facility and used for temporary storage of oil field waste generated on-site from normal operations, if such facility does not pose a threat to fresh water, public health, safety or the environment;

(f) a remediation conducted in accordance with a division-approved abatement plan pursuant to 19.15.1.19 NMAC, a corrective action pursuant to 19.15.3.116 NMAC or a corrective action of a non-reportable release;

(g) a facility operating pursuant to an emergency order of the division;

(h) a site or facility where the operator is conducting emergency response operations to abate an immediate threat to fresh water, public health, safety or the environment or as the division has specifically directed or approved; or

(i) a facility that receives only exempt oil field waste, receives less than 50 barrels of liquid water per day (averaged over a 30-day period), has a capacity to hold 500 barrels of liquids or less and is permitted pursuant to ~~[19.15.2.50 NMAC]~~ 19.15.17 NMAC.

T. Definitions beginning with the letter "T".

(1) Tank bottoms shall mean that accumulation of hydrocarbon material and other substances that settles naturally below crude oil in tanks and receptacles that are used in handling and storing of crude oil, and which accumulation contains in excess of two percent of basic sediment and water; provided, however, that with respect to lease production and for lease storage tanks, a tank bottom shall be limited to that volume of the tank in which it is contained that lies below the bottom of the pipeline outlet thereto.

(2) Temporary abandonment shall be the status of a well that is inactive.

(3) Top unit allowable for gas shall mean the maximum number of cubic feet of natural gas, for the proration period, allocated to a gas producing unit in an allocated gas pool.

(4) Top unit allowable for oil shall mean the maximum number of barrels for oil daily for each calendar month allocated on a proration unit basis in a pool to non-marginal units. The top unit allowable for a pool shall be determined by multiplying the applicable depth bracket allowable by the market demand percentage factor in effect.

(5) TPH means total petroleum hydrocarbons.

~~[(5)](6)~~ Treating plant shall mean any plant constructed for the purpose of wholly or partially or being used wholly or partially for reclaiming, treating, processing or in any manner making tank bottoms or any other waste oil marketable.

~~[(6)](7)~~ Tubingless completion shall mean a well completion in which the production string of casing has an outside diameter of 2.875 inches or less.

U. Definitions beginning with the letter "U".

(1) Underground source of drinking water shall mean an aquifer which supplies water for human consumption or which contains ground water having a total dissolved solids concentration of 10,000 mg/1 or less and which is not an exempted aquifer.

(2) Unit of proration for gas shall consist of such multiples of 40 acres as may be prescribed by special pool rules issued by the division.

(3) Unit of proration for oil shall consist of one 40-acre tract or such multiples of 40-acre tracts as may be prescribed by special pool rules issued by the division.

(4) Unorthodox well location shall mean a location which does not conform to the spacing requirements established by the rules and regulations of the division.

(5) Unstable area means a location that is susceptible to natural or human-induced events or forces capable of impairing the integrity of some or all of a division-approved facility's structural components. Examples of unstable areas are areas of poor foundation conditions, areas susceptible to mass earth movements and Karst terrain areas where Karst topography is developed as a result of dissolution of limestone, dolomite or other soluble rock. Characteristic physiographic features of Karst terrain include sinkholes, sinking streams, caves, large springs and blind valleys.

(6) Upstream facility means a facility or operation associated with the exploration, development, production or storage of oil or gas that is not a downstream facility.

V. Definitions beginning with the letter "V". Vadose zone shall mean unsaturated earth material below the land surface and above ground water, or in between bodies of ground water.

W. Definitions beginning with the letter "W".

(1) Waste, in addition to its ordinary meaning, shall include:

(a) underground waste as those words are generally understood in the oil and gas business, and in any event to embrace the inefficient, excessive or improper use or dissipation of the reservoir energy, including gas energy and water drive, of a pool, and the locating, spacing, drilling, equipping, operating or producing of a well or wells in a manner to reduce or tend to reduce the total quantity of crude petroleum oil or natural gas ultimately recovered from a pool, and the use of inefficient underground storage of natural gas;

(b) surface waste as those words are generally understood in the oil and gas business, and in any event to embrace the unnecessary or excessive surface loss or destruction without beneficial use, however caused, of natural gas of any type or in any form, or crude petroleum oil, or a product thereof, but including the loss or destruction, without beneficial use, resulting from evaporation, seepage, leakage or fire, especially such loss or destruction incident to or resulting from the manner of spacing, equipping, operating or producing a well or wells, or incident to or resulting from the use of inefficient storage or from the production of crude petroleum oil or natural gas, in excess of the reasonable market demand;

(c) the production of crude petroleum oil in this state in excess of the reasonable market demand for such crude petroleum oil; such excess production causes or results in waste that the Oil and Gas Act prohibits; the words "reasonable market demand" as used herein with respect to crude petroleum oil, shall be construed to mean the demand for such crude petroleum oil, for reasonable current requirements for current consumption and use within or outside of the state, together with the demand of such amounts as are reasonably necessary for building up or maintaining reasonable storage reserves of crude petroleum oil or the products thereof, or both such crude petroleum oil and products;

(d) the non-ratable purchase or taking of crude petroleum oil in this state; such non-ratable taking and purchasing causes or results in waste, as defined in Subparagraphs (a), (b) and (c) of Paragraph (1) of Subsection W of 19.15.1.7 NMAC and causes waste by violating the Oil and Gas Act, NMSA 1978, Section 70-2-16;

(e) the production in this state of natural gas from a gas well or wells, or from a gas pool, in excess of the reasonable market demand from such source for natural gas of the type produced or in excess of the capacity of gas transportation facilities for such type of natural gas; the words "reasonable market demand", as used herein with respect to natural gas, shall be construed to mean the demand for natural gas for reasonable current requirements, for current consumption and for use within or outside the

state, together with the demand for such amounts as are necessary for building up or maintaining reasonable storage reserves of natural gas or products thereof, or both such natural gas and products.

(2) Waste (exempt). Exempt waste shall mean oil field waste exempted from regulation as hazardous waste pursuant to Subtitle C of the federal Resource Conservation and Recovery Act (RCRA) and applicable regulations.

(3) Waste (hazardous). Hazardous waste shall mean non-exempt waste that exceeds the minimum standards for waste hazardous by characteristics established in RCRA regulations, 40 CFR 261.21-261.24, or listed hazardous waste as defined in 40 CFR, part 261, subpart D, as amended.

(4) Waste (non-exempt). Non-exempt waste shall mean oil field waste not exempted from regulation as hazardous waste pursuant to Subtitle C of RCRA and applicable regulations.

(5) Waste (non-hazardous). Non-hazardous waste shall mean non-exempt oil field waste that is not hazardous waste.

(6) Water shall mean all water including water situated wholly or partly within or bordering upon the state, whether surface or subsurface, public or private, except private waters that do not combine with other surface or subsurface water.

(7) Water contaminant shall mean a substance that could alter if released or spilled the physical, chemical, biological or radiological qualities of water. "Water contaminant" does not mean source, special nuclear or by-product material as defined by the Atomic Energy Act of 1954.

(8) Watercourse shall mean a river, creek, arroyo, canyon, draw or wash or other channel having definite banks and bed with visible evidence of the occasional flow of water.

(9) Water pollution shall mean introducing or permitting the introduction into water, either directly or indirectly, of one or more water contaminants in such quantity and of such duration as may with reasonable probability injure human health, animal or plant life or property, or to unreasonably interfere with the public welfare or the use of property.

(10) Well blowout shall mean a loss of control over and subsequent eruption of a drilling or workover well or the rupture of the casing, casinghead or wellhead or an oil or gas well or injection or disposal well, whether active or inactive, accompanied by the sudden emission of fluids, gaseous or liquid, from the well.

(11) Wellhead protection area shall mean the area within 200 horizontal feet of a private, domestic fresh water well or spring used by less than five households for domestic or stock watering purposes or within 1000 horizontal feet of any other fresh water well or spring. Wellhead protection areas shall not include areas around water wells drilled after an existing oil or natural gas waste storage, treatment or disposal site was established.

(12) Wetlands shall mean those areas that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support, and under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions in New Mexico. Constructed wetlands used for wastewater treatment purposes are not included in this definition.

(13) Working interest owners are the owners of the operating interest under an oil and gas lease who have the exclusive right to exploit the oil and gas minerals. Working interests are cost bearing.

(14) WOCC means the New Mexico Water Quality Control Commission.
[1-5-50...2-1-96; A, 7-15-96; Rn, 19 NMAC 15.A.7.1 through 7.84, 3-15-97; A, 7-15-99; 19.15.1.7 NMAC - Rn, 19 NMAC 15.A.7, 5-15-001; A, 3/31/04; A, 9/15/04; A, 09/30/05; A, 12/15/05; A, 2/14/07; A, / /08]

19.15.1.21 SPECIAL PROVISIONS FOR SELECTED AREAS OF SIERRA AND OTERO COUNTIES:

A. The selected areas comprise:

(1) all of Sierra county except the area west of Range 8 West NMPM and north of Township 18 South, NMPM; and

(2) all of Otero county except the area included in the following townships and ranges:

- (a) township 11 south, range 9 1/2 east and range 10 east NMPM;
- (b) township 12 south, range 10 east and ranges 13 east through 16 east, NMPM;
- (c) township 13 south, ranges 11 east through 16 east, NMPM;
- (d) township 14 south, ranges 11 east through 16 east, NMPM;
- (e) township 15 south, ranges 11 east through 16 east, NMPM;
- (f) township 16 south, ranges 11 east through 15 east, NMPM;

NMPM;

- (g) township 17 south, range 11 east (surveyed) and ranges 12 east through 15 east,
- (h) township 18 south, ranges 11 east through 15 East, NMPM;
- (i) township 20 1/2 south, range 20 east, NMPM;
- (j) township 21 south, range 19 east and range 20 east, NMPM; and
- (k) township 22 south, range 20 east, NMPM; and also excepting also the un-surveyed area bounded as follows:

- (i) beginning at the most northerly northeast corner of Otero county, said point lying in the west line of range 13 east (surveyed);

- (ii) thence west along the north boundary line of Otero county to the point of intersection of such line with the east line of range 10 east NMPM (surveyed);

- (iii) thence south along the east line of range 10 east NMPM (surveyed) to the southeast corner of township 11 south, range 10 east NMPM (surveyed);

- (iv) thence west along the south line of township 11 south, range 10 east NMPM (surveyed) to the more southerly northeast corner of township 12 south, range 10 east NMPM (surveyed);

- (v) thence south along the east line of range 10 east NMPM (surveyed) to the inward corner of township 13 south, range 10 east NMPM (surveyed) (said inward corner formed by the east line running south from the more northerly northeast corner and the north line running west from the more southerly northeast corner of said township and range);

- (vi) thence east along the north line of township 13 south NMPM (surveyed) to the southwest corner of township 12 south, range 13 east, NMPM (surveyed);

- (vii) thence north along the west line of range 13 east, NMPM (surveyed) to the point of beginning.

B. The division shall not issue permits under [~~19.15.2.50 NMAC or 19.15.9.711 NMAC~~ 19.15.17 NMAC for pits located in the selected areas.

C. Produced water injection wells located in the selected areas are subject to the following requirements in addition to those set out in 19.15.9.701 NMAC through 19.15.9.710 NMAC.

- (1) Permits shall be issued under 19.15.9.701 NMAC only after notice and hearing.

- (2) The radius of the area of review shall be the greater of:

- (a) one-half mile; or

- (b) one and one-third times the radius of the zone of endangering influence, as calculated under environmental protection agency regulation 40 CFR Part 146.6(a) or by any other method acceptable to the division; but in no case shall the radius of the area of review exceed one and one-third miles.

- (3) Operators shall demonstrate the vertical extent of any fresh water aquifer(s) prior to using a new or existing well for injection.

- (4) All fresh water aquifers shall be isolated throughout their vertical extent with at least two cemented casing strings. In addition,

- (a) existing wells converted to injection shall have continuous, adequate cement from casing shoe to surface on the smallest diameter casing, and

- (b) wells drilled for the purpose of injection shall have cement circulated continuously to surface on all casing strings, except the smallest diameter casing shall have cement to at least 100 feet above the casing shoe of the next larger diameter casing.

- (5) Operators shall run cement bond logs acceptable to the division after each casing string is cemented, and file the logs with the appropriate district office of the division. For existing wells the casing and cementing program shall comply with 19.15.9.702 NMAC.

- (6) Produced water transportation lines shall be constructed of corrosion-resistant materials acceptable to the division, and shall be pressure tested to one and one-half times the maximum operating pressure prior to operation, and annually thereafter.

- (7) All tanks shall be placed on impermeable pads and surrounded by lined berms or other impermeable secondary containment device having a capacity at least equal to one and one-third times the capacity of the largest tank, or, if the tanks are interconnected, of all interconnected tanks.

- (8) Operators shall record injection pressures and volumes daily or in a manner acceptable to the division, and make the record available to the division upon request.

(9) Operators shall perform a mechanical integrity tests as described in Paragraph (2) of Subsection A of 19.15.9.704 NMAC annually, shall advise the appropriate district office of the division of the date and time each such test is to be commenced in order that the test may be witnessed and shall file the pressure chart with the appropriate district office of the division.
[19.15.1.21 NMAC - N, 08-13-04; A, //08]

19.15.2.50 [PITS AND BELOW-GRADE TANKS:]

~~A. Permit required. Discharge into, or construction of, any pit or below-grade tank is prohibited absent possession of a permit issued by the division, unless otherwise herein provided or unless the division grants an exemption pursuant to Subsection G of 19.15.2.50 NMAC. Facilities permitted by the division pursuant to Section 711 of 19.15.9 NMAC or water quality control commission regulations are exempt from Section 50 of 19.15.2 NMAC.~~

~~B. Application.~~

~~(1) Where filed; application form.~~

~~(a) Downstream facilities. An operator shall apply to the division's environmental bureau for a permit to construct or use a pit or below-grade tank at a downstream facility such as a refinery, gas plant, compressor station, brine facility, service company or surface waste management facility that is not permitted pursuant to Section 711 of 19.15.9 NMAC or water quality control commission regulations. The operator shall use a form C-144, application to discharge into a pit or below-grade tank. The operator may submit the form separately or as an attachment to an application for a discharge permit, best management practices permit, surface waste management facility permit or other permit.~~

~~(b) Drilling or production. An operator shall apply to the appropriate district office for a permit for use of a pit or below-grade tank in drilling, production or operations not otherwise identified in Subparagraph (a), Paragraph (1), Subsection B of 19.15.2.50 NMAC. The operator shall apply for the permit on the application for permit to drill or on the sundry notices and reports on wells, or electronically as otherwise provided in this chapter. Approval of such form constitutes a permit for all pits and below-grade tanks annotated on the form. A separate Form C-144 is not required.~~

~~(2) General permit; individual permit. An operator may apply for a permit to use an individual pit or below-grade tank, or may apply for a general permit applicable to a class of like facilities.~~

~~(3) When filed.~~

~~(a) New pits or new below-grade tanks. After April 15, 2004, operators shall obtain a permit before constructing a pit or below-grade tank.~~

~~(b) Existing pits or new below-grade tanks. For each pit or below-grade tank in existence on April 15, 2004 that has not received an exemption after hearing as allowed by OCC Order R-3221 through R-3221D inclusive, the operator shall submit a notice not later than April 15, 2004 indicating either that use of the pit or below-grade tank will continue or that such pit or below-grade tank will be closed. If use of a pit or below-grade tank is to be discontinued, discharge into the pit or use of the below-grade tank shall cease not later than June 30, 2005. If use of a pit or below-grade tank will continue, the operator shall file a permit application not later than September 30, 2004. If an operator files a timely, administratively complete application for continued use, use of the pit or below-grade tank may continue until the division acts upon the permit application.~~

~~C. Design, construction and operational standards.~~

~~(1) In general. Pits, sumps and below-grade tanks shall be designed, constructed and operated so as to contain liquids and solids to prevent contamination of fresh water and protect public health and the environment.~~

~~(2) Special requirements for pits.~~

~~(a) Location. No pit shall be located in any watercourse, lakebed, sinkhole or playa lake. Pits adjacent to any such watercourse or depression shall be located safely above the ordinary high-water mark of such watercourse or depression. No pit shall be located in any wetland. The division may require additional protective measures for pits located in groundwater-sensitive areas or wellhead protection areas.~~

~~(b) Liners.~~

~~(i) Drilling pits, workover pits. Each drilling pit or workover pit shall contain, at a minimum, a single liner appropriate for conditions at the site. The liner shall be designed, constructed and maintained so as to prevent the contamination of fresh water, and protect public health and the~~

environment. Pits used to vent or flare gas during drilling or workover operations that are designed to allow liquids to drain to a separate pit do not require a liner.

~~(ii) Disposal or storage pits. Each disposal pit (including, but not limited to, any separator pit, tank drain pit, evaporation pit, blowdown pit used in production activities, pipeline drip pit, or production pit) and each storage pit (including any brine pit, salt water pit, fluid storage pit for an LPG system, or production pit) shall contain, at a minimum, a primary and a secondary liner appropriate to the conditions at the site. Liners shall be designed, constructed and maintained so as to prevent the contamination of fresh water, and protect public health and the environment.~~

~~(iii) Alternative liner media. The division may approve liners that are not constructed in accordance with division guidelines only if the operator demonstrates to the division's satisfaction that the alternative liner protects fresh water, public health and the environment as effectively as those prescribed in division guidelines.~~

~~(e) Leak detection. A leak detection system shall be installed between the primary and secondary liner in each disposal or storage pit. The leak detection system shall be designed, installed and operated so as to prevent the contamination of fresh water, and protect public health and the environment. The operator shall notify the division at least twenty-four hours prior to installation of the primary liner so a division representative may inspect the leak detection system before it is covered.~~

~~(d) Drilling and workover pits. Each drilling or workover pit shall be of an adequate size to assure that a supply of fluid is available and sufficient to confine oil, natural gas or water within its native strata. Hydrocarbon based drilling fluids shall be contained in tanks made of steel or other division-approved material.~~

~~(c) Disposal or storage pits. No measurable or visible layer of oil may be allowed to accumulate or remain anywhere on the surface of any pit. Spray evaporation systems shall be operated such that all spray borne suspended or dissolved solids remain within the perimeter of the pond's lined portion.~~

~~(f) Fencing and netting. All pits shall be fenced or enclosed to prevent access by livestock, and fences shall be maintained in good repair. Active drilling or workover pits may have a portion of the pit unfenced to facilitate operations. In issuing a permit, the division may impose additional fencing requirements for protection of wildlife in particular areas. All tanks exceeding 16 feet in diameter, exposed pits, and ponds shall be screened, netted, covered, or otherwise rendered non-hazardous to migratory birds. Drilling and workover pits are exempt from the netting requirement. Immediately after cessation of these operations such pits shall have any visible or measurable layer of oil removed from the surface. Upon written application, the division may grant an exception to screening, netting or covering requirements upon a showing that an alternative method will adequately protect migratory birds or that the tank or pit is not hazardous to migratory birds.~~

~~(g) Unlined pits.~~

~~(i) General prohibition. After June 30, 2005 use of, or discharge into, any unlined pit that has not been previously permitted pursuant to Section 711 of 19.15.9 NMAC or water quality control commission regulations is prohibited, except as otherwise provided in Section 50 of 19.15.2 NMAC. After April 15, 2004, construction of unlined pits is prohibited unless otherwise provided in Section 50 of 19.15.2 NMAC.~~

~~(ii) Unlined pits exempted by previous order. An operator of an unlined pit existing on April 15, 2004 for which a previous exemption was received after hearing as allowed pursuant to commission Orders No. R 3221 through R 3221D inclusive, shall not be required to reapply for an exemption pursuant to Subparagraph (g), Paragraph (2), Subsection C of 19.15.2.50 NMAC provided the operator notifies the division, no later than April 15, 2004, of the existence of each unlined pit it believes is exempted by order, the location of the pit, and the nature and amount of any discharge into the pit. Such order shall constitute a permit for the purpose of Subparagraph (g), Paragraph (2), Subsection C of 19.15.2.50 NMAC. The division may terminate any such permit in accordance with Paragraph (2), Subsection C of 19.15.2.50 NMAC. Any pit constructed after April 15, 2004 shall comply with the permitting, lining and other requirements of Section 50 of 19.15.2 NMAC, notwithstanding any previous order to the contrary.~~

~~(iii) Unlined pits shall be allowed in the following areas provided that the operator has submitted, and the division has approved, an application for permit as provided in Section 50 of 19.15.2 NMAC, and provided that the pit site is not located in fresh water bearing alluvium or in a wellhead protection area:~~

TOWNSHIP 19 SOUTH, RANGE 30 EAST, NMPM Sections 8 through 36;
TOWNSHIP 20 SOUTH, RANGE 30 EAST, NMPM Sections 1 through 36;
TOWNSHIP 20 SOUTH, RANGE 31 EAST, NMPM Sections 1 through 36;
TOWNSHIP 20 SOUTH, RANGE 32 EAST, NMPM Sections 4 through 9, Sections 16 through 21; and Sections 28 through 33;
TOWNSHIP 21 SOUTH, RANGE 29 EAST, NMPM Sections 1 through 36;
TOWNSHIP 21 SOUTH, RANGE 30 EAST, NMPM Sections 1 through 36;
TOWNSHIP 21 SOUTH, RANGE 31 EAST, NMPM Sections 1 through 36;
TOWNSHIP 22 SOUTH, RANGE 29 EAST, NMPM Sections 1 through 36;
TOWNSHIP 22 SOUTH, RANGE 30 EAST, NMPM Sections 1 through 36;
TOWNSHIP 23 SOUTH, RANGE 29 EAST, NMPM Sections 1 through 3, Sections 10 through 15, Sections 22 through 27, and Sections 34 through 36;
TOWNSHIP 23 SOUTH, RANGE 30 EAST, NMPM Sections 1 through 19; and that area within San Juan, Rio Arriba, Sandoval and McKinley counties that is outside the valleys of the San Juan, Animas, Rio Grande and La Plata rivers, which are bounded by the topographic lines on either side of the rivers that are 100 vertical feet above the river channels, measured perpendicularly to the river channels, and is outside those areas that lie within 50 vertical feet, measured perpendicularly to the drainage channel, of all perennial and ephemeral creeks, canyons, washes, arroyos and draws, and is outside the areas between the above-named rivers and the Highland Park Ditch, Hillside Thomas Ditch, Cunningham Ditch, Farmers Ditch, Halford Independent Ditch, Citizens Ditch or Hammond Ditch, provided that no protectable ground water is present or if present, will not be adversely affected; or any area where the discharge into the pit meets New Mexico water quality control commission ground water standards.

~~(3) Special requirements for below grade tanks. All below grade tanks constructed after April 15, 2004 shall be constructed with secondary containment and leak detection. The operator of any below grade tank constructed prior to April 15, 2004 shall test its integrity annually and shall promptly repair or replace any below grade tank that does not demonstrate integrity. Any such below grade tank shall be equipped with leak detection at the time of any major repair.~~

~~(4) Sumps. Operators shall test the integrity of all sumps annually, and shall promptly repair or replace any sump that does not demonstrate integrity. Sumps that can be removed from their emplacements may be tested by visual inspection. Other sumps shall be tested by appropriate mechanical means.~~

~~D. Emergency actions.~~

~~(1) Permit not required. In an emergency an operator may construct a pit without a permit to contain fluids, solids or wastes if an immediate danger to fresh water, public health or the environment exists.~~

~~(2) Construction standards. A pit constructed in an emergency shall be constructed, to the extent possible given the emergency, in a manner that is consistent with the requirements of Section 50 of 19.15.2 NMAC and that prevents the contamination of fresh water, and protects public health and the environment.~~

~~(3) Notice. The operator shall notify the appropriate district office as soon as possible (if possible before construction begins) of the need for construction of such a pit.~~

~~(4) Use and duration. The pit may be used only for the duration of the emergency. If the emergency lasts more than forty-eight (48) hours, the operator must seek approval from the division for continued use of the pit. All fluids, solids or wastes must be removed within 24 hours after cessation of use unless the division extends that time period.~~

~~(5) "Emergency pits." Subsection D, of 19.15.2.50 NMAC shall not be construed to allow construction or use of so-called "emergency pits", which are pits constructed as a precautionary matter to contain a spill in the event of a release. Construction or use of any such pit shall require a permit issued pursuant to Section 50 of 19.15.2 NMAC unless the pit is described in a spill prevention, control and countermeasure (SPCC) plan required by the United States environmental protection agency, all fluids are removed from the pit within 24 hours and the operator has filed a notice of the location of the pit with the division.~~

~~E. Drilling fluids and drill cuttings. Drilling fluids and drill cuttings shall either be recycled or be disposed of as approved by the division and in a manner to prevent the contamination of fresh water and protect public health and the environment. The operator shall describe the proposed disposal method in the application for permit to drill or the sundry notices and reports on wells.~~

~~F. Closure and restoration.~~

~~(1) Closure. Except as otherwise specified in Section 50 of 19.15.2 NMAC, a pit or below-grade tank shall be properly closed within six months after cessation of use. As a condition of a permit, the division may require the operator to file a detailed closure plan before closure may commence. The division for good cause shown may grant a six-month extension of time to accomplish closure. Upon completion of closure a closure report (form C-144), or sundry notices and reports on wells shall be submitted to the division. Where the pit's contents will likely migrate and cause ground water or surface water to exceed water quality control commission standards, the pit's contents and the liner shall be removed and disposed of in a manner approved by the division.~~

~~(2) Surface restoration. Within one year of the completion of closure of a pit, the operator shall contour the surface where the pit was located to prevent erosion and ponding of rainwater.~~

~~G. Exemptions; additional conditions.~~

~~(1) The division may attach additional conditions to any permit upon a finding that such conditions are necessary to prevent the contamination of fresh water, or to protect public health or the environment.~~

~~(2) The division may grant an exemption from any requirement if the operator demonstrates that the granting of such exemption will not endanger fresh water, public health or the environment. The division may revoke any such exemption after notice to the operator of the pit and opportunity for a hearing if the division determines that such action is necessary to prevent the contamination of fresh water, or to protect public health or the environment.~~

~~(3) Exemptions may be granted administratively without hearing provided that the operator gives notice to the surface owner of record where the pit is to be located and to such other persons as the division may direct and (a) written waivers are obtained from all persons to whom notice is required, or (b) no objection is received by the division within 30 days of the time notice is given. If any objection is received and the director determines that the objection has technical merit or that there is significant public interest the director shall set the application for hearing. The director, however, may set any application for hearing.][RESERVED]~~

~~[19.15.2.50 NMAC - N, 02/13/04; Repealed, 0//08]~~

19.15.2.52 DISPOSITION OF PRODUCED WATER AND OTHER OIL FIELD WASTE:

A. Prohibited dispositions. Except as authorized by 19.15.1.19 NMAC, ~~[19.15.2.50 NMAC, 19.15.2.53 NMAC]~~ 19.15.17 NMAC, 19.15.36 NMAC, 19.15.3.116 NMAC or 19.15.9.701 NMAC, no person, including a transporter, shall dispose of produced water or other oil field waste:

(1) on or below the surface of the ground; in a pit; or in a pond, lake, depression or watercourse;

(2) in another place or in a manner that may constitute a hazard to fresh water, public health, safety or the environment; or

(3) in a permitted pit or registered or permitted surface waste management facility without the permission of the owner or operator of the pit or facility.

B. Authorized disposition of produced water. The following methods of disposition of produced water are authorized:

(1) in a manner that does not constitute a hazard to fresh water, public health, safety or the environment, delivery to a permitted salt water disposal well or facility, secondary recovery or pressure maintenance injection facility, surface waste management facility or ~~[disposal]~~ permanent pit permitted pursuant to ~~[19.15.2.50 NMAC]~~ 19.15.17 NMAC or to a drill site for use in drilling fluid; or

(2) use in accordance with a division-issued use permit or other division authorization.

C. Authorized dispositions of other oil field waste. Persons shall dispose of other oil field waste by transfer to an appropriate permitted or registered surface waste management facility or injection facility or applied to a division-authorized beneficial use. Persons may transport recovered drilling fluids to other drill sites for reuse provided that such fluids are transported and stored in a manner that does not constitute a hazard to fresh water, public health, safety or the environment.

~~[19.15.2.52 NMAC - Rp, 19.15.9.710 NMAC, 2/14/07; A, //08]~~

19.15.3.114 SAFETY [REGULATIONS] PROCEDURES FOR DRILLING AND PRODUCTION:

~~A. All oil wells shall be cleaned into a pit or a tank, not less than 40 feet from the derrick floor and 150 feet from any fire hazard. All flowing oil wells must be produced through an oil and gas separator of ample capacity and in good working order. No boiler or portable electric lighting generator shall be placed or remain nearer than 150 feet to any producing well or oil tank. Any rubbish or debris that might constitute a fire hazard shall be removed to a distance of at least 150 feet from the vicinity of wells and tanks. All waste shall be burned or disposed of in such manner as to avoid creating a fire hazard.~~

~~B. When coming out of the hole with drill pipe, drilling fluid shall be circulated until equalized and subsequently drilling fluid level shall be maintained at a height sufficient to control subsurface pressures. During course of drilling blowout preventers shall be tested at least once each 24-hour period.]~~

~~A. An operator shall~~

~~(1) clean oil wells into a pit permitted pursuant to 19.15.17 NMAC or a tank, not less than 40 feet from the derrick floor and 150 feet from a fire hazard;~~

~~(2) produce flowing oil wells through an oil and gas separator of ample capacity and in good working order;~~

~~(3) not place or leave a boiler or portable electric lighting generator nearer than 150 feet to a producing well or oil tank; and~~

~~(4) remove rubbish or debris that might constitute a fire hazard to a distance of at least 150 feet from the vicinity of wells and tanks and burn or dispose of waste in a manner as to avoid creating a fire hazard.~~

~~B. When coming out of the hole with drill pipe, the operator shall circulate drilling fluid until equalized and subsequently maintain drilling fluid level at a height sufficient to control bottom hole pressures. During course of drilling, the operator shall test blowout preventers at least once each 24-hour period.~~

[1-1-50...2-1-96; 19.15.3.114 NMAC - Rn, 19 NMAC 15.C.114, 11-15-01; A, / /08]

19.15.4.202 PLUGGING AND PERMANENT ABANDONMENT:

A. Notice of Plugging.

~~(1) [Notice of intention to plug must be filed with the division on form C-103, Sundry Notices and Reports on Wells, by the operator prior to the commencement of plugging operations, which must provide all of the information required by Rule 1103 including operator and well identification and proposed procedures for plugging said well, and in addition the operator shall provide a well-bore diagram showing the proposed plugging procedure. Twenty-four hours written notice shall be given prior to commencing any plugging operations. In the case of a newly drilled dry hole, the operator may obtain verbal approval from the appropriate district supervisor or his representative of the method of plugging and time operations are to begin. Written notice in accordance with this rule shall be filed with the division ten (10) days after such verbal approval has been given.]~~The operator shall file notice of intention to plug with the division on form C-103 prior to commencing plugging operations. The notice shall provide all the information 19.15.13.1103 NMAC requires including operator and well identification and proposed procedures for plugging the well.

~~(2) In addition, the operator shall provide a well-bore diagram showing the proposed plugging procedure.~~

~~(3) The operator shall notify the division 24 hours prior to commencing plugging operations. In the case of a newly drilled dry hole, the operator may obtain verbal approval from the appropriate district supervisor or the district supervisor's representative of the plugging method and time operations are to begin. The operator shall file written notice in accordance with Subsection C of 19.15.4.202 NMAC with the division 10 days after the district supervisor has given verbal approval.~~

B. Plugging.

~~(1) [Before any well is abandoned, it shall be plugged in a manner which will permanently confine all oil, gas and water in the separate strata in which they are originally found. This may be accomplished by using mud-laden fluid, cement and plugs singly or in combination as approved by the division on the notice of intention to plug.]~~Before an operator abandons a well, the operator shall plug the well in a manner that permanently confines all oil, gas and water in the separate strata in which they are originally found. The operator may accomplish this by using mud-laden fluid, cement and plugs singly or in combination as approved by the division on the notice of intention to plug.

(2) ~~The operator shall mark the exact location of plugged and abandoned wells with a steel marker not less than four inches in diameter set in cement and extending at least four feet (4') above mean ground level. The operator name, lease name and well number and location, including unit letter, section, township and range, shall be welded, stamped or otherwise permanently engraved into the metal of the marker. No permanent structures preventing access to the wellhead shall be built over a plugged and abandoned well without written approval of the OCD. No plugged and abandonment marker shall be removed without the written permission of the OCD.~~ The operator shall mark the exact location of plugged and abandoned wells with a steel marker not less than four inches in diameter set in cement and extending at least four feet above mean ground level. The operator name, lease name and well number and location, including unit letter, section, township and range, shall be welded, stamped or otherwise permanently engraved into the marker's metal. A person shall not build permanent structures preventing access to the wellhead over a plugged and abandoned well without the division's written approval. A person shall not remove a plugged and abandonment marker without the division's written permission.

~~(3) The operator may use below-ground plugged and abandonment markers only with the division's written permission when an above-ground marker would interfere with agricultural endeavors. The below-ground marker shall have a steel plate welded onto the abandoned well's surface or conductor pipe and shall be at least three feet below the ground surface and of sufficient size so that all the information 19.15.3.103 NMAC requires can be stenciled into the steel or welded onto the steel plate's surface. The division may require a re-survey of the well location.~~

~~(3)(4) As soon as practical but no later than one year after, the completion of plugging operations, the operator shall:~~

~~[(a) — fill all pits;]~~

~~[(b)](a) level the location;~~

~~[(e)](b) remove deadmen and all other junk; and~~

~~[(d)](c) take such other measures as are necessary or required by the division to~~

~~restore the location to a safe and clean condition.~~

~~(5) The operator shall close all pits or below-grade tanks pursuant to 19.15.17 NMAC.~~

~~(4)(6) Upon completion of plugging and clean up restoration operations as required, the operator shall contact the appropriate district office to arrange for an inspection of the well and location.~~

~~(5) Below-ground plugged and abandonment markers can be used only with written permission of the OCD when an above-ground marker would interfere with agricultural endeavors. The below-ground marker shall have a steel plate welded onto the surface or conductor pipe of the abandoned well and shall be at least 3 feet below the ground surface and of sufficient size so that all the information required by Section 103 of 19.15.3 NMAC can be stenciled into the steel or welded onto the surface of the steel plate. The OCD may require a re-survey of the well location.]~~

C. Reports.

(1) The operator shall file form C-105, well completion or recompletion report and log as provided in ~~[Rule 105]~~ 19.15.13.1105 NMAC.

(2) Within ~~[thirty (30)]~~ 30 days after completing ~~[all]the~~ required restoration work, the operator shall file with the division, in triplicate, a record of the work done on form C-103 as provided in ~~[Rule 103]~~ 19.15.13.1103 NMAC.

(3) The division shall not approve the record of plugging or release any bonds until the operator has filed all necessary reports ~~[have been file]~~ and the division has inspected and approved the location ~~[has been inspected and approved by the division].~~

[1-1-50, 7-12-90...2-1-96; A, 3-31-00; 19.15.4.202 NMAC - Rn, 19 NMAC 15.D.202, 12-14-01; A, //08]

19.15.13.1103 SUNDRY NOTICES AND REPORTS ON WELLS (Form C-103): Form C-103 is a dual purpose form the operator shall file with the ~~[appropriate district office of the division]~~ appropriate division district office to obtain division approval prior to commencing certain operations and ~~[also]~~ to report various completed operations.

A. Form C-103 as a notice of intention.

(1) The operator shall file form C-103 and obtain the division's approval prior to:

(a) effecting a change of plans from those the division previously approved on form C-101 or form C-103;

(b) altering a drilling well's casing program or pulling casing or otherwise altering an existing well's casing installation;

(c) placing a well in approved temporary abandonment;
(d) plugging and abandoning a well; or
(e) performing remedial work on a well that, when completed, will affect the well's original status; (this ~~shall include~~ includes making new perforations in existing wells or squeezing old perforations in existing wells, but ~~is not applicable~~ does not apply to new wells in the process of being completed nor to old wells being deepened or plugged back to another zone when ~~[such]~~ the division has authorized the recompletion [has been authorized] by an approved form C-101, application for permit to drill, re-enter, deepen plug back or add a zone, nor to acidizing, fracturing or cleaning out previously completed wells, nor to installing artificial lift equipment.)

(2) In the case of well plugging operations, the notice of intention shall include a detailed statement of the proposed work including plans for shooting and pulling casing; plans for mudding, including the mud's weight; plans for cementing, including number of sacks of cement and depths of plugs; restoration and remediation of the location; and the time and date of the proposed plugging operations. The operator shall file a complete log of the well on form C-105 with the notice of intention to plug the well, if the operator has not previously filed the log (see 19.15.13.1105 NMAC); the division shall not release the financial assurance until the operator complies with this requirement.

B. Form C-103 as a subsequent report.

(1) The operator shall file form C-103 as a subsequent report of operations in accordance with the provisions of 19.15.13.1103 NMAC applicable to the particular operation being reported.

(2) ~~[Form C-103 is to be used in reporting such completed operations as]~~ The operator shall use form C-103 in reporting such completed operations as:

- (a) commencement of drilling operations;
- (b) casing and cement test;
- (c) altering a well's casing installation;
- (d) work to secure approved temporary abandonment;
- (e) plugging and abandonment;
- (f) plugging back or deepening within the same pool;
- (g) remedial work;
- (h) installation of artificial lifting equipment; or
- (i) other operations that affect the well's original status but that are not specifically

covered herein.

C. Information to be entered on form C-103, subsequent report, for a particular operation is as follows: report of commencement of drilling operations. Within 10 days following the commencement of drilling operations, the ~~[well's]~~ operator shall file a report thereof on form C-103. ~~[Such]~~ The report shall indicate the hour and the date the operator spudded the well [was spudded].

D. Report of results of test of casing and cement job; report of casing alteration. The ~~[well's]~~ operator shall file a report of casing and cement test within 10 days following the setting of each string of casing or liner. ~~[Said report shall be filed on form C-103 and shall present]~~ The operator shall file the report on form C-103 and include a detailed description of the test method employed and the results obtained by [such] the test and any other pertinent information [required by 19.15.1.107 NMAC] 19.15.3.107 requires. The report shall also indicate the top of the cement and the means by which ~~[such top was determined]~~ the operator determined the top. It shall also indicate any changes from the casing program previously authorized for the well.

E. Report of temporary abandonment. The operator shall file a notice of work to secure approved temporary abandonment within 30 days following the work's completion. The report shall present a detailed account of the work done on the well, including location and type of plugs used, if any, and status of surface and downhole equipment and any other pertinent information relative to the well's overall status.

F. Report on plugging of well.

(1) The operator shall file a report of plugging operations within 30 days following completion of plugging operations on ~~[any]~~ a well. ~~[Said report shall be filed]~~ The operator shall file the report on form C-103 and shall include the date [the plugging operations were begun] the operator began the plugging operation and the date the operator completed the work [was completed], a detailed account of the manner in which [the work was performed] the operator performed the work including the depths and lengths of the various plugs set, the nature and quantities of materials employed in the plugging operations

including the weight of the mud used, the size and depth of all casing left in the hole and any other pertinent information. (See 19.15.4.201 NMAC - 19.15.4.204 NMAC regarding plugging operations.)

(2) The division shall not approve a plugging report until the ~~[pits have been closed and the location leveled and cleared of junk]~~operator demonstrates compliance with the requirements of Subsection B of 19.15.4.202 NMAC. It shall be the operator's responsibility to contact the ~~[appropriate district office of the division]~~appropriate division district office when the location has been so restored in order to arrange for an inspection of the plugged well and the location by a division representative.

G. Report of remedial work. The operator shall file a report of remedial work performed on a well within 30 days following ~~[completion of such work]~~the work's completion. ~~[Said report shall be filed]~~The operator shall file the report on form C-103 and shall present a detailed account of the work done and the manner in which ~~[such work was performed]~~the operator performed the work; the daily production of oil, gas and water both prior to and after the remedial operation; the size and depth of shots; the quantity of and, crude, chemical or other materials employed in the operation; and any other pertinent information. Among the remedial work ~~[to be reported]~~an operator shall report on form C-103 are the following:

(1) report on shooting, fluid fracturing or chemical treatment of a previously completed well;

(2) report of squeeze job;

(3) report on setting of liner or packer;

(4) report of installation of pumping equipment or gas lift facilities; or

(5) report of any other remedial operations that are not specifically covered herein.

H. Report on deepening or plugging back within the same pool. The operator shall file a report of deepening or plugging back within 30 days following completion of such operations on any well. The operator shall file said report on form C-103 and shall present a detailed account of work done and the manner in which ~~[such work was performed]~~the operator performed the work. If the ~~[well is recompleted]~~operator recompletes the well in the same pool, the operator shall also report the daily production of oil, gas and water both prior to and after recompletion. If the well is recompleted in another pool, the operator shall file forms C-101, C-102, C-104 and C-105 in accordance with 19.15.13.1101, 19.15.13.1102, 19.15.13.1104 and 19.15.13.1105 NMAC.

I. Other reports on wells. The operator shall submit reports on any other operations that affect the well's original status but that are not specifically covered ~~[herein]~~in 19.15.13.1103 NMAC to the division on form C-103 10 days following such operation's completion.
[1-1-65...2-1-96; 19.15.13.1103 NMAC - Rn, 19 NMAC 15.M.1103, 06/30/04; A, 12/15/05; A, / /08]