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

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APPLICATION OF THE NEW MEXICO OIL CONSERVATION DIVISION FOR REPEAL OF EXISTING RULES 709, 710 AND 711 CONCERNING SURFACE WASTE MANAGEMENT AND ADOPTION OF NEW RULES GOVERNING SURFACE WASTE MANAGEMENT

CASE NO. 13586

THE OIL CONSERVATION DIVISION'S PROPOSED FINDINGS

A. The Oil Conservation Division, pursuant to the direction of the Commission, files the Division's requested findings and conclusions, which it requests that the Commission include in its final order in this case.

B. The Oil Conservation Division hereby adopts the recommendations of the Task Force appointed by the Secretary of Energy, Minerals and Natural Resources. These recommendations are included in the Task Force report filed September 1, 2006. The proposed findings and conclusions below assume the adoption of the Task Force recommendations.

Proposed Findings and Conclusions

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

Background of this Proceeding and the Division's Proposal

2. The Oil Conservation Division (the Division) has applied to the Commission to adopt proposed changes to the Division's rules concerning surface waste management [presently codified as 19.15.9.709 through 19.15.9.711 NMAC] and has proposed that the revised rules be re-codified as 19.15.2.51 through 19.15.2.53 NMAC. The division's proposed rules are hereinafter called proposed Rules 51, 52 and 53. The Division has also proposed revisions to certain definitions set forth in Oil Conservation Division Rule 7 [19.15.1.7 NMAC].

3. The Division filed its original proposal in September of 2005. Since that time, the Division has received extensive comments, conducted a series of stakeholder and outreach meetings, and has published several revisions of its proposals. On February 27, 2006, the Division filed its Notice of Filing of Fourth Amended Proposal and published the complete draft proposal presented to the Commission at the hearing. On March 30, 2006, the Division filed its Notice of Filing of Fifth Amended Proposal and published some revisions and corrections to the

February 27, 2006 draft. The Division's draft published on February 27, 2006, with the revisions published separately on March 30, 2006, (the original proposal) was the proposal before the Commission at the start of the hearing in this case.

4. The hearing of this case comprised six days of testimony and argument, on April 20 and 31, May 4, 5 and 6 and May 18, 2006. 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 Division to file a red-line draft indicating all changes to its proposal that it accepted and sponsored. The Division filed a red-line draft on May 13, 2006 (the May 13 draft). Subsequently, on June 5, 2006, the Division filed another red-line draft (the June 5 draft) indicating additional changes from the May 13 draft. Certain changes proposed in the May 13 draft and the June 5 draft are discussed separately in connection with the discussion of each proposed rule and subsection.

Participants in the Hearing

5. At the hearing, the Division appeared through counsel and presented testimony in support of its proposals. The Industry Committee (a group of oil and gas producers who operate wells in New Mexico) [the Industry Committee], John Hendrix Corporation, and the New Mexico Oil and Gas Association (NMOGA) appeared through counsel and offered evidence in opposition to portions of the proposals and in support of their respective alternative proposals. The New Mexico Citizens for Clean Air & Water, Inc. (NMCCAW) appeared through counsel and an accredited representative, and offered evidence in support of portions of the Division's proposals and in support of certain alternative proposals. During the hearing, The Industry Committee and NMCCAW presented a memorandum incorporating certain joint recommendations of those parties. Controlled Recovery, Inc. (CRI), an operator of an existing permitted facility, appeared through its President and through counsel and presented evidence in support of some of the Division's proposals and in opposition to others.

6. The Independent Petroleum Association of New Mexico (IPANM), The Williams Companies, Inc., Yates Petroleum Company (Yates), the Oil & Gas Accountability Project and Rebecca G. Perry-Piper filed written comments. IPANM and the Citizens Alliance for Responsible Energy also appeared through accredited representatives and presented oral comments at the hearing.

7. References to "the parties" include those who participated in the hearing and those who filed written comments.

The Evidence

8. The Division presented the testimony of environmental engineers Wayne Price, Edwin E. Martin, and Carl J. Chavez, and of hydro geologist, Glenn von Gonten. Mr. Price is employed by the Division as Chief of the Environmental Bureau. He testified as an expert environmental engineer and as the Division's chief environmental officer. He gave the Commission a general overview of the Division's proposals and also gave a technical presentation explaining the reasons for the Division's proposal limiting chlorides in landfarms.

Mr. Martin is employed by the Division as an environmental engineer and permit writer for waste management facilities. He testified as a fact witness concerning the permitting process and as an expert environmental engineer. He explained the permitting process at it now exists, the changes the Division proposes and the reasons for the changes. He also explained the Division's proposals regarding general operating rules for all surface waste management facilities. Mr. Chavez testified as an expert environmental engineer with specialized expertise in landfills. He explained the Division's proposed rules for the construction, operation and closure of oil field waste landfills, and the reasons for the proposals. Mr. von Gonten testified as a geologist and hydrologist. He explained the Division's proposed rules for construction, operation and management of landfarms. The Division also presented Theresa Duran-Saenz as a fact witness concerning notices.

9. The Industry Committee presented the testimony of Dr. Daniel B. Stephens, a geologist and hydro geologist, Dr. Kerry L. Sublette, an environmental chemist and engineer, and Dr. Ben Thomas, III, a toxicologist, who testified as experts in their respective fields. Dr. Stephens testified concerning management of chlorides in landfarms and the environmental implications of chlorides in landfarms. Dr. Sublette testified concerning management of landfarms and the bioremediation process. Dr. Thomas explained principals of risk-based regulation and discussed management of risks incident to contaminants in landfarms.

10. Controlled Recovery, Inc. presented the testimony of I. Keith Gordon, an engineer with specialized expertise in landfills. Mr. Gordon testified concerning the management of gasses in landfills.

11. The NMCCAW presented the testimony of Dr. Donald Neeper who, *inter alia,* described extensive research he had done regarding chloride and hydrocarbon contamination issues.

12. NMOGA presented the testimony of Yolanda Perez, senior regulatory specialist for ConocoPhillips and chair of NMOGA's Regulatory Affairs Committee, who testified as an expert in oil and gas industry regulatory matters.

13. 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.

The Task Force Process

14. Following the conclusion of the hearing, the Secretary of Energy, Minerals and Natural Resources appointed a task force (the Task Force) to review the proposals and evidence and make recommendations to the Commission regarding the provisions that it should adopt. The Task Force consisted of the following persons:

Alan Alexander – Burlington Resources/ConocoPhillips
John Byrom – D.J. Simmons, Inc.
Carl Chavez – Division Staff

Bill Marley – Gandy Marley, Inc.
Raye Miller – Marbob Energy Corp.
Donald Neeper (John Bartlit) – New Mexico Citizens for Clean Air & Water
Dennis Newman – Occidental Permian Ltd.
Terry Riley – Theodore Roosevelt Conservation Partnership
Glenn von Gonten – Division Staff

15. On September 1, 2006 the Task Force published its report, including recommended changes to the Division's June 5 draft.

16. The Division adopted the Task Force Report as a Division proposal and urged the Commission to adopt the changes recommended by the Task Force.

17. The particular recommendations of the Task Force are discussed separately in connection with the discussion of each proposed rule section and subsection.

General Findings and Conclusions

18. 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) and (22), to regulate the disposition of nondomestic wastes resulting from oil and gas industry operations, to protect fresh water, public health and the environment. Rules 709, 710 and 711 were adopted pursuant to this authority, and the Commission has authority to amend these rules in such manner as it determines to be necessary and appropriate for the protection of fresh water, public health and the environment.

19. 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.

20. Pursuant to NMSA 1978 Section 74-6-12.G, as amended, The New Mexico Water Quality Act (NMSA 1978 Sections 74-6-1 through 74-6-17, as amended) "does not apply to any activity or condition subject to the authority of the oil conservation commission pursuant to provisions of the Oil and Gas Act . . ."

21. Although the Commission and the Division have authority pursuant to NMSA 1978 Section 70-2-12.B (22), as amended, to apply the Water Quality Act to certain oil and gas industry operations, that authority is included within, and does not limit, the general authority of the Commission and the Division to regulate the disposition of oil and gas industry wastes under the Oil and Gas Act, without reference to the Water Quality Act.

22. 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]

Consistently 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.

23. Rule 1205.E(3) sates, 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. . .

24. 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 clerical mistakes in a proposal. Thus, the Commission concludes that it can, consistently 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.

25. All of the proposals in the Divisions May 13 and June 5 drafts and in the Task Force recommendations are logical outgrowths of the Division's Original Proposal.

26. Existing Rules 709, 710 and 711 and accompanying regulatory definitions should be revised to close gaps in the regulatory framework, resolve ambiguities, provide additional specificity and otherwise improve the regulation of disposition of oil field waste in New Mexico.

Proposed Definitions

27. The Division's proposed definition of "oil field waste" is not intended as a substantive change. However, the proposed definition is clearer and more accurate than the present definition and should be adopted.

28. IPANM commented that the definition should make clear that drill cuttings and pit liners are "oil field waste." The Commission concludes that these materials are clearly within the scope of the proposed definition, and no change is necessary to include them.

29. The Division's proposed definition of "soil" is derived from a geologic dictionary, and should be adopted.

30. The Division's proposed definition of "surface waste management facility" categorically excludes those facilities that are excluded from the definition in existing Rule 711. The definition also categorically excludes those facilities, except for small landfarms, that are

exempt from permitting requirements of existing Rule 711. The definition incorporates two significant substantive changes. First, small landfarms that are exempt from permitting under present Rule 711 are included in the proposed definition of surface waste management facility. This type of facility will be exempt from permitting, but subject to registration and other special provisions set forth in proposed Rule 53.H. Second, the proposed definition clarifies that abatements conducted pursuant to Rule 19 and remediations conducted pursuant to or allowed by Rule 116, and are not "surface waste management facilities" and are not subject to proposed Rule 53.

31. The Commission concludes that the proposed definition of "surface waste management facility" resolves uncertainties in the present rule and should be adopted. It is not necessary or appropriate that abatements or remediations be regulated as surface waste management facilities since such activities are controlled by other Division rules.

32. Yates has objected to the proposed definition as over-inclusive, contending that it includes pits regulated separately by Rule 50. Actually that is not the case, however. Rule 50 excludes from its operation pits regulated under existing Rule 711. Rule 50 applies to pits that are excluded from the definition of surface waste management facilities.

33. The Division's proposed definition of "watercourse" is the definition found in the New Mexico Water Code (NMSA 1978 Section 72-1-1) and in the rules of the Water Quality Control Commission.

34. Yates and others objected to the definition of "watercourse," contending that it would include so many small and ephemeral streams as to render location of permitted facilities away from watercourses impracticable.

35. The Commission concludes, however, that this definition ought to be adopted to co-ordinate the State's various regulatory programs. The Division has ample discretion, under the variance procedures in proposed subsection 53.K, to deal with issues of *de minimis* watercourses on a case-by-case basis.

36. No party has objected to any of the other changes in definitions that the Division has proposed as amendments to existing Rule 7, and those definitions should accordingly be adopted.

37. The Division's May 13 draft proposed the following changes:

a. the addition of the words "drilling for" to the definition of oil field waste;

b. deletion of the word "onsite" in a clause excluding environmental remediations conducted pursuant to other rules from the definition of "surface waste management facility", and

c. revision of the clause excluding environmental remediations conducted pursuant to other rules from the definition of "surface waste management facility" to also exclude from that definition corrective action relating to a non-reportable release.

38. These changes conformed the proposed language to the general intent of the definitions to which they relate. No party objected to these proposed changes, and the should be adopted.

Proposed Rule 51: Transportation of Wastes

39. Proposed Rule 51 regulates the transportation of liquid oil field wastes. Subsections A, B and C of this proposed rule are derived from existing Rule 709, which requires that a transporter of produced water obtain a permit from the Division. The proposed rule extends this requirement to all liquid oil field wastes. Since transportation of other liquid contaminants presents environmental hazards similar to those associated with transportation of produced water, this proposal should be adopted.

40. Proposed Rule 51.D requires that a transporter be licensed to do business in the State and possess other required permits. It also allows denial of transportation permits to persons who have violated other laws or rules or to entities in which such persons own 25 percent or greater interests. These provisions appropriately require transporters to comply with other legal requirements, and should be adopted.

41. The provision permitting denial of permits to persons who have violated other Division requirements and to entities related to such persons are analogous to provisions of Rules 40 and 100 relating to oil and gas operators. Adoption of these provisions will help to synchronize requirements for permits issued by the Division.

42. Proposed Rule 51.E, authorizing cancellation or suspension of the permit of a transporter who violates Division rules concerning transportation or disposition of wastes, is similar existing Rule 710.D, which provides for permit cancellation on this basis. The addition of the alternative remedy of suspension of a permit will give the Division greater regulatory flexibility, and should be adopted.

43. In the May 13 draft, the Division proposed revision of Rule 51.C to include a rebutable presumption that, if an oil and gas operator has checked the division's website for cancellations or suspensions of permits within 30 days prior to a shipment, the operator had no notice of any cancellation or suspension that was not then posted. The Division proposed this change in response to an Industry Committee comment. Because Rule 51, like existing Rule 710, prohibits oil and gas operators from shipping waste in unpermitted vehicles, The Industry Committee proposed that Rule 51 include a safe harbor for an oil and gas operator who delivers waste to a transporter whose permit has been revoked or suspended, without knowledge of the revocation or suspension.

44. The Commission concludes that safe harbor provision is appropriate and should be adopted. However, The Industry Committee's proposed regulatory language, which would require that the Division post actions by a certain date, would unduly burden the Division. Accordingly, the Division's proposal in its May 13 draft should be adopted.

45. In the May 13 draft, the Division further proposed revision of Rule 51.E to also authorize cancellation or suspension of a permit on any ground upon which a permit could be denied under Subsection D. This change should be adopted in the interest of consistency.

Proposed Rule 52: Disposition of Wastes

46. Proposed Rule 52 sets forth permitted and prohibited methods of disposition of oil field waste. It is similar to existing Rule 710, which applies only to produced water. Rule 710, however, is entitled "Disposition of Transported Produced Water," a title that might suggests that it would not apply to produced water that has not been "transported." Disposition of wastes involves the same environmental concerns, whether or not the waste has been "transported." As the Division has recommended, the title of Rule 52 should not include the word "transported."

47. The extension of proposed Rule 52 to all oil field waste is appropriate. Existing Division rules contain various provisions in various rules relating to the disposition of different categories of wastes. The Division's statutory authority to regulate disposition of oil field waste is comprehensive and applies to all types of oil field waste. Adoption of proposed Rule 52 will eliminate inconsistencies, fill any gaps that may exist in existing rules, and make clear to operators what is and is not a permissible disposition of waste.

48. The Industry Committee suggested addition of language to proposed Rule 52 providing that no one may dispose of waste in any pit without the permission of pit's operator. The Commission agrees that such disposition is improper, either in a pit or in any other facility. The Division proposed language incorporating a prohibition on unauthorized disposition in its May 13 draft, and the Commission concludes that this proposed change should be adopted.

Proposed Rule 53.A: Definitions.

49. Proposed Rule 53.A includes definitions of terms used only in Rule 53.

50. Among the terms defined is "small landfarm." The Commission's reasons for concluding that this definition should be adopted as proposed, with certain changes, are set forth in the section of this order that discusses Proposed Rule 53.H, dealing with this type of facility.

51. A concern, however, has arisen as to whether a remediation conducted under Rule 116 is a "small landfarm." The proposed definition does not necessarily resolve this question. Although such remediations are categorically excluded from the definition of "surface waste management facility" set forth in proposed Rule 7.S, the definitions of "landfarm" and "small landfarm" in proposed Rule 53.A(1) do not expressly provide that such facilities are a subset of the category of "surface waste management facilities," though the Division witnesses testified that such was the intent. Accordingly, title of Paragraph (1) of Rule 53.A should be changed to read "Definitions relating to types of surface waste management facilities," in order to resolve this ambiguity, in accordance with the Division's proposal in its May 13 draft.

52. The proposed definition of "major modification" specifies that category of permit modifications the Division may grant only after public notice and opportunity for comment. The

Industry Committee and Yates objected to this proposal as inherently vague, and specifically objected to the last clause, which allows the Division to determine that a proposed modification is a "major modification" if it determines that public notice and participation is appropriate.

53. The Commission concludes, however, that any attempt to distinguish between those facility modifications that are major and those that are minor will necessary be somewhat vague. The proposed definition, including the clause giving the Division discretion to define a modification as major, will provide the Division flexibility in applying the public notice and comment requirements to a variety of unanticipated situations that may arise, and should accordingly be adopted. The requirement to consider the need for public notice and comment provides a standard to govern the Division's exercise of its discretion in this matter.

54. The proposed definition of "centralized facility," as distinguished from "commercial facility" is intended to be a non-substantive provision. A centralized facility is one operated by an oil and gas operator or its affiliate to manage waste resulting from its own operations. This was the intention of the definition of "centralized facility" in existing Rule 711, but the definition is complicated and confusing. The Commission concludes that the Division's proposed definition should be adopted in the interest of clarity.

55. Alternative distinctions between centralized and commercial facilities proposed by other parties would represent a substantive change, and should not be adopted.

56. No party has objected to any of the other definitions that the Division has proposed, and those definitions should be adopted.

57. The Task Force recommended addition of a definition of "landfarm cell" that would limit the size of a landfarm cell to a maximum of ten acres. The Task Force report observed that the absence of a limitation on the size of landfarm cells would lead to difficulty in regulating sampling and closure.

58. The Commission finds this reasoning persuasive and concludes that the Task Force recommendation in this respect should be adopted.

Proposed Rule 53.B: Permit Required

59. Proposed Rule 53.B maintains the requirement of existing Rule 711 that surface waste management facilities be permitted, except as otherwise specifically provided.

Proposed Rule 53.C: Permitting and Financial Assurance

60. Paragraph (1) of proposed Rule 53.C sets out the requirements for a surface waste management facility permit application. Most of these requirements are either in existing Rule 711, or in the Division's guidelines, promulgated in 1997, for implementation of Rule 711 (the guidelines). The provisions of the guidelines should be incorporated into Rule 53 in order to resolve questions regarding whether or not the guidelines must be followed. All of the

information required in Paragraph (1) of proposed Rule 53.C is relevant to the issues the Division must address in determining the propriety of issuing a permit.

61. Paragraph (1) includes a new requirement that engineering designs for components of a proposed facility be certified by a registered professional engineer. These are complex, technical plans and specifications, and a requirement for certification by a professional with specified qualifications is appropriate. Furthermore, no party has objected to this proposed requirement for new facilities.

62. Paragraph (1) also introduces new requirements for a leachate management plan and a gas safety management plan for landfills. No party has objected to the requirement for a leachate management plan. CRI objected to the proposal to require a gas safety management plan. That proposal is discussed below in the portion of this order considering proposed Rule 53.F, relating to landfills.

63. Paragraph (2) of proposed Rule 53.C provides for an abbreviated form of application for minor modifications of a permitted facility. Existing Rule 711 does not provide a procedure for approval of minor modifications. No party objected to the minor modification application procedure provided in Paragraph (2), and it should be adopted.

64. Paragraph (3) of proposed Rule 53.C requires the Division to initially review all surface waste management facility permit applications for "administrative completeness," and defines what constitutes administrative completeness. Paragraph (4) requires that the applicant give public notice of the filing of the application *after* the Division has determined that the application is administratively complete.

65. The requirement for review for administrative completeness is new as applied to surface waste management facility applications. However, Division Rule 19 regarding abatement plans and Water Quality Control Commission Rule 20.6.2.3108, regarding discharge plans, contain similar provisions. Requiring a determination regarding the completeness of the application prior to public notice will help to insure that the concerned citizens will have sufficient information about the proposed facility to comment thereon. No party opposed these provisions, and the should be adopted.

66. Paragraph (4) of proposed Rule 53.C prescribes the method and timing for public notice of surface waste management facility applications. It provides for a two-stage notice procedure. Upon determination of administrative completeness the applicant must mail notice to landowners within one mile of the proposed facility (or a greater distance if ordered by the Division) and to certain governmental entities, and the division must notify those persons on the Division's general mailing list. Following the initial notice, there is a 30-day period for public comment. When the Division makes a tentative decision on the application, the Division must notify the applicant and post the tentative decision on its website. The applicant must then give notice of the Division's tentative decision by publication in the newspaper and by mail to governmental entities and to persons who have previously submitted comments. Subparagraph (4)(f) prescribes the contents of the notice. There is then another 30-day period during which members of the public may comment or request a hearing. The Division must hold a hearing if

there is significant public interest, or if it receives comments that it deems to have technical merit.

67. The two-stage notice procedure is a new provision. It is similar to the discharge plan procedure provided by Water Quality Control Commission Rule 20.6.2.3108. Receiving public comment both prior to initial consideration, when the public can comment on the propriety of permitting the proposed facility generally, and following tentative decision, when the public can comment on the propriety and adequacy of conditions the Division has determined to require, will help the Division make more informed decisions.

68. Except for the two-stage procedure and the additional requirement to notify affected federal, tribal and pueblo officials, notice requirements track those in existing Rule 711. No party objected to the proposed notice provisions, except that Yates objected to the provision allowing the Division to require notice to landowners beyond the one-mile radius in particular cases. That provision, however, is carried forward without change from existing Rule 711.

69. The Task Force recommended a change to Paragraph (4) to require that public notices of the Division's tentative decision alert the public if the Division proposes to grant any waiver of, or exception to, any applicable requirement of Rule 53. The Commission concludes that this proposal conforms to the Commission's general intent to facilitate effective public input into the permitting process, and should be adopted.

70. Paragraphs (5) and (6) of proposed Rule 53.C set out requirements for financial assurance applicable to new surface waste management facilities. The requirements for centralized facilities are unchanged from those provided in existing Rule 711. For new commercial facilities, the required amount of financial assurance is the greater of $25,000 or the estimated cost of closing the facility. The proposed rule removes the $250,000 maximum for financial assurance for new commercial facilities provided in existing Rule 711, as well as provisions allowing deferred submission of a portion of the required amount. In addition the proposed rule establishes a procedure for Division review of an applicant's closure cost estimate that establishes the required amount of financial assurance.

71. The changes to the financial assurance requirements for new commercial facilities are designed to afford the State protection for the full probable cost of closing a facility in event of an operator's inability to perform closure. NMCCAW commented that the proposal would not provide adequate financial assurance for closure of a landfarm if the closure estimate were based on leaving remediated soils in place, because a landfarm might not be able to meet the standards for closure in this manner, and closure by removal of the treated soils would be substantially more expensive.

72. The Task Force recommended a change to Subparagraph 6(e) to provide for review of a landfarm's financial assurance when the landfarm seemed likely not to meet the closure standards of Paragraph 53.G(6). The Commission concludes that the Task Force's proposed change, as well as the corresponding change it recommended to Paragraph 53.G(7) should be adopted for the reasons noted in findings concerning Paragraph 53.G.

73. Subparagraph (6)(e) provides that the Division may review a facility's financial assurance at five-year intervals, or at the time of any major modification, and, if necessary, require additional financial assurance. The Division may not, however, increase the financial assurance requirement for an existing facility above the $250,000 maximum provided in existing Rule 711 except in case of a major modification. Although existing Rule 711 provides for review of facilities at five-year intervals, it does not expressly provide that financial assurance requirements may be increased. This change is necessary to insure continued full-cost protection. Maintenance of the $250,000 maximum for existing facilities is appropriate because operators may have relied on that provision.

Proposed Rule 53.D: Permit Approval, Denial, Suspension, Modification and Transfer

74. Subparagraph (1)(a) of Proposed Rule 53.D provides that the Division shall issue a permit if the applicant complies with the rule and the facility can be operated without endangering fresh water, public health or the environment. Existing Rule 711 provides that the Division *may* issue a permit if the applicant has complied with the rule, but does not provide a standard. The proposed rule provides a standard to control the Division's discretion, and accordingly should be adopted.

75. Subparagraphs (1)(b) and (c) of Proposed Rule 53.D limit permits for new facilities or major modifications to a term of 10 years, and provide procedure for renewal of expiring permits. Under existing Rule 711, all permits continue in effect indefinitely unless revoked. This would continue to be the case for existing facilities absent major modification.

76. The limitation of permits to a ten-year term, with renewal provisions, will improve the ability of the Division to assure that facilities continue to meet acceptable standards in a changing environment. A transitional provision allowing facilities that have applied for permit renewal to continue operation will prevent the renewal process from disrupting facility operation. Existing facilities whose permits have indefinite duration will continue to be subject to comprehensive review at five-year intervals, as provided in existing Rule 711. No party objected to limiting the terms of new permits, and these provisions should be adopted.

77. Paragraph (2) of Proposed Rule 53.D authorizes the Division to deny a permit if the applicant or an affiliate of the applicant has a history of violating environmental laws or is not in compliance with Division Rule 40. "Affiliate" is defined by reference to 25% or greater ownership. Existing Rule 711 authorizes revocation of a permit if the *applicant* has a history of violating environmental laws. Otherwise, this provision is new.

78. Yates and the Industry Committee objected to allowing denial of a permit based on the past actions of an owner of less than a 50% interest. This proposal, however, is consistent with Division Rule 100.B, which authorizes denial of registration as an operator of oil and gas wells on the basis of 25% ownership. The Commission concludes that this provision is necessary for effective enforcement of Division rules and orders and to make the enforcement tools of permit cancellation or suspension effective. Permit denial in these circumstances is

discretionary, not mandatory. An applicant will have an opportunity to demonstrate in the permitting process why a permit should not be denied on this basis.

79. Paragraph (3) of Proposed Rule 53.D authorizes the Division to place conditions on permits, and provides a standard. Existing Rule 711 contains a similar provision. No party objected to this provision. Yates suggested addition of a provision expressly imposing a burden of proof on the Division to support additional conditions. However, the Commission concludes that the Division, as proponent of additional conditions, would have the burden of justifying them in any event, and no such express requirement is necessary.

80. Paragraph (4) of Proposed Rule 53.D, like existing Rule 711, allows the Division to revoke a permit for good cause after notice and hearing. The proposed provision alternatively allows the Division to suspend a permit, and describes the effect of a permit suspension.

81. Permit suspension will provide the Division with an additional enforcement tool and help in securing compliances with the rule and permits. No party objected to this proposal, and it should be adopted.

82. Paragraph (5) of Proposed Rule 53.D requires Division approval for transfer of a permit and prescribes a procedure. Except for the requirement that officers, directors and owners of 25% or greater interests in the transferee be identified, there is no material change from the similar requirement of existing Rule 711.

Proposed Rule 53.E: Siting and Operational Requirements Applicable to All Permitted Facilities

83. Paragraphs (1) and (2) of Proposed Rule 53.E establish siting requirements for new surface waste management facilities. Facilities must be sited where groundwater is at least 50 feet beneath the surface, at prescribed distances from surface water features and existing wells, and may not be sited in any floodplain or geologically unstable area. Existing Rule 711 does not provide siting criteria. Existing guidelines provide only that such facilities not be located in a watercourse, lakebed, sinkhole or other depression.

84. Vertical and horizontal separation of waste facilities from surface and underground water provides a margin of safety for protection of fresh water. No party objected to the required lateral distances to surface water or wells, except that Yates objected to the definition of "watercourse" as noted above. The Commission concludes that these requirements should be adopted to protect watercourses.

85. The NMCCAW and CRI objected to the 50-foot distance to groundwater as being insufficiently protective. They pointed out that the New Mexico Environment Department (NMED) requires that solid waste landfills be located where depth to groundwater is at least 100 feet. However Division witnesses testified that a 50-foot distance was sufficient for environmental protection in light of other provisions of the proposed rule requiring multiple lining of landfills and imposing chloride waste screening requirements for landfarms. The Division's witness, Mr. Price, also testified that, in large areas of southeastern New Mexico,

depth to groundwater is greater than 50 feet but less than 100 feet; so that a 100-foot depth to ground water requirement would significantly reduce the availability of sites for new facilities. The Commission accordingly concludes that the proposed 50 foot depth requirement is adequate, and should be adopted.

86. Yates objected to the 50-foot distance to groundwater as over-protective and unnecessary. However, the Commission concludes that this requirement is reasonable in view of NMED's requirement of a 100-foot depth to ground water and the availability of many locations that will meet the 50-foot depth requirement.

87. Paragraph (3) of Proposed Rule 53.E limits the size of permitted facilities to a maximum of 500 acres. No party objected to this proposal, and it should be adopted.

88. Paragraphs (4) through (11) of Proposed Rule 53.E prescribe operating requirements applicable to all permitted facilities. Except as indicated below, these requirements are similar to provisions of existing Rule 711 or Division guidelines.

89. The provision of Paragraph (5) requiring that waste introduced into landfarms and landfills be dry continues a guideline requirement as to landfarms, but is new as to landfills. The Division's witness, Mr. Chavez, testified that wastes deposited into landfills should be as dry as possible, since moisture in the waste would cause leachate management problems (Tr 389). No party objected to the extension of the moisture ban to landfills.

90. The provision of Paragraph (5) requiring use of the paint filter test is new. Yates objected to requiring application of the paint filter test to every load of waste brought to a facility, due to the alleged difficulty of conducting it. However, the Division's witness, Mr. Chavez testified that the test is easy to perform, and an operator should not have difficulty applying it (Tr 384-85). Mr. Chavez described how the test should be conducted (Tr 389). Furthermore, the provision for use of the paint filter test is a performance standard. The proposed regulatory language does not prescribe application of the test to every load, but could be satisfied by a sampling procedure. Accordingly, the Commission concludes that the paint filter test is an appropriate method to require.

91. The provision of Paragraph (6) requiring that disposition of regulated NORM be in accordance with Rule 714 is not a substantive change since that rule would govern in any case.

92. Subparagraph (6)(b) eliminates the provision of existing Rule 711 requiring that a form C-138 be filed with, and approved by, the Division before a facility can accept non-exempt, non-hazardous oil field waste. This provision has imposed significant administrative burden on the Division and has minimal relevance to any regulatory objective. No party objected to this change.

93. Subparagraph (6)(c) addresses the acceptance of non-oil field waste at permitted facilities. It continues a provision of existing Rule 711 allowing acceptance of non-oilfield waste in emergencies pursuant to orders of the Department of Public Safety. However, it eliminates a

provision the now purports to authorize, with Division approval, acceptance non-oil field waste that is similar in physical and chemical composition to the oilfield wastes.

94. The Commission concludes that the provision of the existing rule allowing the Division to authorize acceptance of non-oil field waste at permitted facilities exceeds the Commission's and the Division's statutory authority, and was improvidently adopted.

95. The Commission's and the Division's authority over waste management facilities is derived exclusively from provisions of NMSA 1978 Section 70-2-12.B that authorize regulation of wastes resulting from oil and gas industry activities. Accordingly the Commission concludes that the Commission and the Division lack statutory authority to authorize a waste management facility to accept or treat any non-oil field waste, except pursuant to the direction of another agency having appropriate jurisdiction.

96. Paragraph (7) requires operators to maintain waste acceptance records until five years after facility closure. Existing Rule 711 requires maintenance of such records only for five years after waste acceptance. CRI objected to this change. However, the Commission concludes that requiring maintenance of records till five years after closure is necessary to preserve information about the identity of waste disposers who might be responsible for cleaning up the site in the event of operator insolvency.

97. Paragraph (9) requires netting of pits and ponds, and of open tanks exceeding eight feet in diameter, to exclude birds. The corresponding provision of existing Rule 711 is identical, except that it requires netting of open tanks only if they exceed 16 feet in diameter.

98. Paragraphs (12), (13), (14) and (15) require each facility to have, respectively, an inspection and maintenance plan (12), a plan to control run-on and run-off of storm waters (13), a contingency plan (14) and a gas safety management plan. Corresponding provisions of existing Rule 711 and of the guidelines require all of these plans except the gas safety management plan. However, the proposed rule includes greater detail. Also, the existing rule and guidelines specifically require only a spill/leak contingency plan and an H2S contingency plan. The proposed rule requires that the contingency plan address these matters, as well as other matters not specifically covered in the existing rule or guidelines. The principal objection to these provisions, other than the gas safety management plan requirement, was that separate plans for the matters treated in these paragraphs should not be necessary. The Division witnesses, however, explained that the rule was intended only to require that each of the matters specified be covered in the facility's operations plan, whether contained in one document of several. The Commission concludes that all of the requirements relate to aspects of facility operation that the Division should supervise and that the requirements are appropriate.

99. CRI objected to the requirement for a gas safety management plan, and presented the testimony of I. Keith Gordon, an expert in landfill design and operation. Mr. Gordon testified that gas build-up would not be a problem in oil field waste landfills. However, the Division's expert witness, Mr. Chavez, testified that this could happen because the proposed rule would not limit hydrocarbon content of oilfield waste, which accordingly might emit volatile hydrocarbons after deposit in a landfill. (Tr 415-16) The Commission concludes that the

requirement of a gas safety management *plan* is an appropriate regulatory tool. The sufficiency of the gas safety measures that the operator proposes at a particular landfill, whether extensive or perfunctory, can be assessed on a site-specific basis through the permit approval process.

100. Paragraph (5) of proposed Rule 53.F will require installation of specific gas control systems only if the gas safety management plan (proposed and approved on the basis of site-specific conditions) or other applicable laws or rules require such systems.

101. Paragraph (16) requires that each facility operator have a training program for its employees. This provision is new; however, no party objected to the requirement. CRI requested the addition of a provision requiring the Division to provide a curriculum for such training programs. However, the Commission concludes that operators should have the expertise necessary to train those who will operate their facilities.

Proposed Rule 53.F: Specific Requirements Applicable to Landfills

102. The provisions of proposed Rule 53.F are new. Neither existing Rule 711 nor the guidelines contains specific provisions concerning design, construction and operation of landfills. The guidelines provide liner and leak detection system specifications for evaporation ponds (G-p.4) that may be applicable to landfills. However, the liner provisions of the guidelines are significantly revised in proposed Rule 53.F.

103. Paragraph (1) of proposed Rule 53.F provides general operating rules for landfills. No party objected to these proposed provisions, except that CRI objected to the requirement that a landfill control odors. CRI urged that this requirement was unfairly subjective. The Commission concludes that, whatever may be the difficulties associated with controlling odors from landfills, the landfill operator is in the best position of anyone to know what may cause odors and what measures will adequately control them.

104. Paragraph (2) requires a landfill operator to have a groundwater monitoring program that includes monitoring wells around the landfill to determine if contaminants are escaping. Mr. Chavez, the Division's expert witness on landfills, testified that a proper groundwater monitoring program is vital to protection of fresh water and to ensure the long-term security of the disposal area. (Tr 396-398)

105. NMCCAW objected to the absence of any provision in the proposed rule requiring reporting to the Division on the results of groundwater monitoring. Mr. Chavez pointed out, however, that the rule would require prompt reporting to the Division if the operator encountered any evidence of a release from the landfill. (Tr 398). The Commission accordingly concludes that the proposed groundwater monitoring provisions are both necessary and adequate.

106. Paragraph (3) prescribes a design for landfill's that will meet all of the Division's requirements. Mr. Chavez testified that the design and construction requirements of Paragraph (3) are similar to NMED's design and construction requirements for solid waste landfills, and also incorporate design features of hazardous waste landfills, as prescribed by the United States Environmental Protection Agency (EPA). (Tr 398-413) Mr. Chavez presented a table and

diagram (Division Ex. 10, pages 122 and 123) comparing requirements applicable to solid waste landfills and hazardous waste landfills with the requirements of the proposed rule. He further testified that oilfield waste would likely contain constituents identified as hazardous, and would, in many cases, be classified as hazardous if not exempt. (Tr 383-88, Ex 109-111) Accordingly, he concluded that incorporation of features of hazardous landfill design is an appropriate precaution to protect the environment. (Tr 413)

107. Paragraph (3) also provides that the Division will consider other landfill designs, and will evaluate proposed designs using the EPA's HELP model, or other acceptable model an operator proposes. Mr. Chavez testified that the HELP model is a standard reference that EPA uses to evaluate landfill designs. (Tr 418-19)

108. Paragraph (4) sets forth specifications for design and construction of landfill liners and liner systems, including components of leachate collection and removal systems and leak detection systems.

109. Mr. Chavez testified to the necessity for each of these requirements. (Tr 420-35) No party objected to any of the specific requirements of Paragraph 4.

110. The Industry Committee and Yates objected that the liner requirements should be more flexible and proposed alternative language that would allow dispensing with some requirements upon a showing that groundwater would not be impacted. However, the Commission concludes that the Division's proposed language is sufficiently flexible, both because specific provisions of Subparagraph 53.F(2)(i) allow an operator to propose alternative designs, and because provisions of Subsection 53.K allow for variances upon a proper showing.

111. Paragraphs (5) and (6) deal with landfill gas control systems and gas response generally. Gas control systems are required only if required by the facility's gas safety management plan or other applicable laws or rules. Mr. Chavez testified that gas control systems would ordinarily be needed only in very large landfarms. (Tr 443)

112. CRI objected to the gas management safety plan provisions, contending that gas accumulations are not an issue at oil and gas landfills.

113. Since Mr. Chavez's testimony indicates that gas build-up problems at oil and gas landfills represent a safety hazard that could occur in some cases, the Commission concludes that Paragraphs (5) and (6) should be included to allow the Division regulatory flexibility to deal with this contingency if and when it does occur.

114. For the reason explained by Mr. Chavez and other reasons noted in specific findings above, the Commission concludes that the landfill rules set forth in Subsection 53.F should be adopted.

Proposed Rule 53.G: Specific Requirements Applicable to Landfarms

115. Proposed Rule 53.G was the focus of the most comment and evidence presented at the hearing. Though this subsection incorporates many provisions of the existing guidelines, it also contains many new provisions and requirements.

116. Paragraph (1) of proposed Rule 53.G limits the waste that landfarms may accept to (a) soils and drill cuttings that (b) are predominantly contaminated by petroleum hydrocarbons, (c) contain not more than 1,000 mg/kg of chlorides, and (d) are sufficiently dry to pass the paint filter test. Drill cuttings may be accepted only where there are no other practical alternatives available for their disposition. Except for the requirement of the guidelines that the waste not contain free liquids (G-p.11), these provisions are new. Existing guidelines only limit landfarms to accepting oil field contaminated solids that are either exempt or non-hazardous (G-pp.11-12). The prescription of the paint filter test as the screening method for moisture content is also new. The chloride limitation is an outgrowth of the Division's directive issued March 4, 2005, prohibiting the further acceptance of chloride-contaminated waste at landfarms.

117. The Industry Committee and Yates proposed to revise Paragraph (1) to provide separately for Tier I and Tier II landfarms. Only Tier I landfarms would be subject to the waste acceptance provisions of the Division's proposed Paragraph (1). Tier II landfarms could accept wastes that do not pass the paint filter test or that contain more than 1,000 mg/kg of chlorides "provided that such materials will not cause an exceedance of applicable WQCC groundwater standards." Only Tier II landfarms could accept tank bottoms. The Industry Committee did not offer specific evidence in support of this proposal, and it is unclear how the Division would determine whether acceptance at Tier II landfarms of wastes that would not be acceptable at Tier I landfarms would cause an exceedance of groundwater standards. Accordingly, the Commission concludes that this approach should not be adopted.

118. The limitation of the chloride content of wastes accepted at landfarms to 1,000 mg/kg was the focus of much debate at the hearing. The Division's witness, Mr. Price, testified, using a modeling approach based on peer-reviewed modeling methods, that 1,000 mg/kg would be an appropriate level for protection of groundwater based on a five-acre site with treated soils left in place at closure. The Industry Committee's witness, Dr. Stephens, did not take significant issue with Mr. Price's methodology.

119. The NMCCAW and CRI objected that the proposed chloride standard was too high and urged the adoption of a lower standard of 500 mg/kg. NMCCAW witness, Dr. Neeper, testified that many plant species would not grow effectively in the presence of chloride concentrations higher than 500 mg/kg.

120. The Commission finds the testimony of Mr. Price and the results of his modeling persuasive, and concludes that the 1,000 mg/kg standard should be adopted. While the evidence concerning the chloride levels that would support plant growth was inconclusive, the Commission finds that at least some plant species would grow adequately at the 1,000 mg/kg level; and, accordingly, the proposed level would not preclude re-vegetation.

121. Paragraph (2) requires that landfarms test for background concentrations of pollutants prior to initial waste acceptance. Existing guidelines contain a similar provision (G-p.9). However, Paragraph (2), as proposed by the Division, requires taking more samples than the guidelines (four as compared to one), increases the sampling depth from two feet provided in the guidelines to three feet below the surface, and specifies testing methods. Also Paragraph (2) substitutes a requirement of testing for constituents listed in Water Quality Control Commission Rule 20.6.2.3103 (Section 3103 constituents), a category that includes, but is broader than, the category of "heavy metals" provided in the guidelines.

122. The Industry Committee proposed that background testing be conducted at a depth of up to ten feet, as opposed to three to five feet as proposed by the Division. On this issue, the Task Force recommended background testing at a depth of not less than six inches.

123. The Task Force also recommended changing Paragraph (2) to further increase the number of samples required to 12 composite samples, each consisting of 16 discrete samples.

124. Since the object of background testing is to get an accurate assessment of conditions existing at the site prior to commencement of waste treatment, the Commission concludes that the requirements for testing a larger number of samples, and testing closer to the surface on which the contaminated soils will be laid, are appropriate and should be adopted.

125. Paragraph (3) sets out detailed operating requirements for landfarms. These requirements are substantially the same as those in existing guidelines (G-pp 9-11). Changes allow waste to be spread in lifts up to eight inches thick (guidelines limit lift thickness to six inches), require removal of standing water within 24 hours (guidelines allow 72 hours), eliminate a requirement for division approval for use of fertilizer, and include new provisions for biopiles. Subparagraph (j), expressly authorizing the Division to approve alternative treatment methods, is also new.

126. No party objected to proposed Paragraph (3), except that the Industry Committee objected to the change of the time provided for removal of pooled liquids from 72 to 24 hours.

127. The Division's witness, Mr. von Gonten testified that requiring removal of ponded water from landfarms is directly related to environmental protection, since ponded water, when it soaks into the ground, will tend to carry pollutants toward ground water. In New Mexico's arid climate, ponded water will likely soak into the ground in less than 72 hours. (Tr 529) Accordingly, the Commission concludes that requiring removal of such water within 24 hours is appropriate.

128. Paragraph (4) establishes requirements for testing of a landfarm's treatment zone and the remediation standards that must be achieved prior to adding new lifts. These provisions are more detailed than the guidelines in that they specify the number of samples (four) and prescribe test methods. The standards for adding new lifts are significantly changed. New lifts may be added when the total petroleum hydrocarbon (TPH) level in the treatment zone does not exceed 2,500 mg/kg and the chloride level does not exceed 1,000 mg/kg. The guidelines require

that TPH be reduced to 100 mg/kg, BTEX to 50 mg/kg and benzene to 10 mg/kg before a new lift may be added. The guidelines do not provide a chloride standard.

129. The Industry Committee objected to inclusion in the rule of *any* treatment zone monitoring requirements, contending that the closure standards would be sufficient to protect the environment.

130. The Commission concludes, however, that treatment zone monitoring is appropriate so that landfarm operators and the Division can make judgments as to whether a landfarm is likely to meet its closure standards, and take appropriate corrective action early in the life of the landfarm if there are indications that it will not.

131. The Task Force recommends changing Paragraph (4) to require one composite sample, consisting of four discrete samples, per landfarm cell, instead of four separate samples.

132. In view of the Task Force's recommendation, which the Commission is adopting, to limit landfarm cell size to 10 acres, the Commission concludes that one composite sample per cell will provide adequate monitoring, and the recommendation of the Task Force in this respect should be adopted.

133. Paragraph (5) establishes requirements for testing the vadose zone beneath a landfarm to determine if contaminants are escaping from the treatment zone. Its provisions are similar to those of the paragraph of the guidelines entitled "Treatment Zone Monitoring." (G-p.9-10) As compared to the guidelines, Paragraph (5) increases the number of required vadose zone samples from one to four and prescribes testing methods. The guidelines require quarterly testing for TPH and BTEX and annual testing for cations and anions and heavy metals. Paragraph (5), in the Division's proposal, requires semi-annual testing for TPH, BTEX and chlorides and annual testing for Section 3103 constituents. Paragraph (5) adds a new requirement that if testing identifies a release, the operator will submit a corrective action plan to prevent further contamination and isolate or remedy existing contamination.

134. The Industry Committee proposed elimination of vadose zone monitoring for Section 3103 constituents, and sampling the vadose zone for hydrocarbons at a depth of up to 10 feet below the original landfarm surface. The NMCCAW, on the other hand, proposed that vadose zone monitoring be conducted at a depth of less than two feet, in order to detect any release sooner.

135. The Task Force recommended changing Paragraph (5) to require testing the vadose zone for Section 3103 constituents only every five years, or if hydrocarbon and chloride monitoring indicates that a release has occurred. They agreed that vadose zone testing should be conducted at a depth of three to four feet below the original ground surface as the Division proposed.

136. The Commission recognizes that hydrocarbons and chlorides are more mobile that the other Section 3103 constituents. Thus, less frequent monitoring for the other constituents is appropriate so long as the semiannual monitoring for hydrocarbons and chlorides does not

indicate a problem. Accordingly, the Task Force recommendation in this respect should be adopted.

137. The Division's proposal would increase the depth requirement for vadose zone testing from one foot to three to four feet. In this connection, the Commission also recognizes that, as Mr. von Gonten testified (Tr. 531 and 578), some constituents from the treatment zone will become mixed with the upper levels of native soil during normal operation of a landfarm. Vadose zone monitoring should be conducted at a depth below that at which such mixing of treated and native soils will ordinarily occur. On the other hand, testing at a depth of ten feet would not alert the operator or the Division to the existence of a release until contaminants had penetrated the native soils to a substantial extent. Accordingly the Commission concludes that the Division's proposal of a three of five-foot vadose zone sampling depth, as also recommended by the Task Force, should be adopted.

138. The Industry Committee proposed application of a statistical method to compare vadose zone testing results to background test results to determine if a release had occurred. There was, however, no clear demonstration in the evidence of how such a statistical method would work.

139. The Task Force did not recommend use of a statistical method of comparison, but did recommend that vadose zone test results be compared to the higher of the background level or Practical Quantitation Limit (PQL).

140. Comparison to the higher of background or the PQL is appropriate. If a vadose zone test indicates a detected concentration of a contaminant at a level lower than the PQL used to establish background, and that test were compared to a "non detect" indication from a background test applying a higher PQL, it would give a likely false indication of a release. Accordingly, the Commission concludes that the Task Force's recommendation in this respect should be adopted.

141. The Task Force further recommended changing the designation of the plan required with a report of a release from a "corrective action plan" to a "response action plan," that would propose means to prevent further contamination, and *if necessary,* clean up existing contamination.

142. These proposed changes would avoid confusion with the "corrective action plan" required in event of a spill or leak pursuant to Rule 116. Accordingly, this recommendation also should be adopted. The proposal that clean up be required only if, upon assessment of all circumstances the Division concluded that such action was warranted reflects the Division's actual intention, as stated by the Division's witness, Mr. von Gonten. (Tr. 533)

143. Paragraph (6) establishes standards that must be met before an operator can close a landfarm cell and leave the treated soils in place. This provision is new. The existing guidelines provide that landfarm cells will be closed in accordance with the Division's closure standards in effect at the time of closure.

144. Under Paragraph (6), as proposed by the Division, the soils in the treatment zone must, at the time of closure, contain not more than 1,000 mg/kg TPH, 500 mg/kg gasoline range organic and diesel range organic hydrocarbons (GRO/DRO), 0.2 mg/kg benzenes, 50 mg/kg BTEX, 1,000 mg/kg chlorides and the greatest of background concentration, practical quantitation limit or the quantities specified in a table included in the proposed rule, of each of the Section 3103 constituents. Mr. von Gonten testified that the Division based these recommendations on screening levels for these constituents established by other agencies. (Tr 535-37)

145. The Industry Committee objected to any standard based on TPH. In support of this position, the Industry's landfarm expert, Dr. Sublette, testified that once a landfarm reached its bioremediation endpoint, further reductions in TPH levels would be impossible. He testified that the Division's proposed standard could probably not be achieved unless the landfarm operator limited waste acceptance to condensates. Industry's toxicologist, Dr. Thomas, testified that hydrocarbons remaining in a landfarm when it reached its bioremediation endpoint would not present a significant hazard to human health.

146. The Division, however, presented evidence of tests conducted at operating landfarms in New Mexico that the operators identified as ready for closure. (Tr. 561-66) These tests indicated that a very high percentage of these operating landfarms had actually achieved the Division's recommended hydrocarbon concentration closure standards. (Exhibit 11, pages 192A and 192B) The Division's Environment Bureau Chief, Mr. Price, testified that the Division's proposal took into account soil quality and aesthetics, as well as toxicity, in arriving at its recommended closure standard. The Division's landfarm expert, Mr. von Gonten testified that assessing the toxicity of hydrocarbon waste is difficult because of the large variety of particular substances included. (Tr-558) The NMCCAW's witness, Dr. Neeper, testified that some studies had found that hydrocarbons in soils could produce an adverse effect the ability of soils to absorb moisture (hydrophobicity), thereby reducing soil fertility. Although Dr. Thomas testified that hydrophobicity would not be encountered at TPH concentrations below 10,000 mg/kg, Dr. Neeper presented evidence from a published study that disputed that conclusion.

147. The Commission concludes that, in fixing standards for landfarm closure when the operator proposes to leave treated soils in place, it can, pursuant to its power to regulate was disposal to protect the environment, consider soil quality, aesthetics, and the inherently waste-like character of material the operator intends to leave on the land, as well as specific toxicity risks. Although the evidence is insufficient to establish a level at which hydrophobicity is a serious concern, it is also a factor that should be considered in fixing hydrocarbon standards, and counsels adoption of conservative standards.

148. The Task Force recommended retaining the TPH closure standard, but increasing the maximum screening level for total TPH (EPA Method 418.1 or equivalent) to 2,500 mg/kg.

149. Based on the foregoing evidence, the Commission concludes that the hydrocarbon screening levels recommended by the Division for landfarm closure should be adopted, except that the screening level for TPH (Method 418.1 or equivalent) should be increased to 2,500 mg/kg as the Task Force recommended.

150. In view of the uncertainties surrounding hydrophobicity and the toxicity of particular hydrocarbon constituents, the Commission does not accept that residual hydrocarbons in landfarms do not involve environmental hazards, or that the alternative screening level of 10,000 mg/kg proposed in the letter between the Industry Committee and the NMCCAW, introduced on the last day of the hearing, would adequately protect against those hazards.

151. Furthermore, the Commission concludes that the object of waste management is the prevention of non-essential introduction contaminants into the environment. The Division's evidence indicates that landfarms are achieving reductions in TPH to levels lower than 2,500 mg/kg with almost uniform consistency. (Exhibit 11, page 192B) Additionally, ED uses a 2,500 ppm screening level for "waste oil" [*See* testimony of Mr. von Gonten (Tr. 535, 552-53) and Exhibit 11, page 179 and 181] and this number is very close to Canada's residential soil screening standard for high-end hydrocarbons in coarse-grained soils. (Tr. 555 and Exhibit 11, page 183)

152. The Commission concludes that the Division's proposed hydrocarbon screening levels, with the incorporation of the 2,500 mg/kg TPH standard, achieve a proper balance between what is achievable, as demonstrated by the Division's empirical data, and the possible environmental risks, including aesthetic detriment and risk of hydrophobicity, that could ensue from adopting less restrictive standards.

153. The Task Force also recommended the number of samples required to demonstrate that a landfarm cell has achieved the closure standards of Paragraph (6) be reduced from four independent samples to one composite sample.

154. In view of the ten-acre cell size limitation adopted pursuant to the Task Force recommendation, the Commission concludes that one composite sample will provide an adequate demonstration that closure standards have been achieved, and the Task Force recommendation in this respect should be adopted.

155. Paragraph (6) provides a chloride soil screening standard for landfarm closure of 1,000 mg/kg, identical to the standard for waste acceptance. The NMCCAW and CRI objected to this standard at being too high to protect soil fertility. They recommended instead a closure standard based on sodium absorption ratio (SAR) and electrical conductivity (EC). Dr. Neeper testified that these measures are directly related to plant toxicity. Though these criteria bear a general relationship to chloride concentration in the soil, it is not a definite proportional relationship.

156. The Task Force recommended that only landfarms using the environmentally acceptable bioremediation endpoint approach as provided in paragraph 53.G(8) be required to meet a soil electrical conductivity (EC) standard less than or equal to 4.0 mmhos/cm and a sodium adsorption ratio (SAR) of less than or equal to 13.0 for closure. These requirements would be in addition to, and not in lieu of, the 1,000 ppm soil screening standard, which is designed primarily to protect ground water. Based on the testimony of Dr. Neeper and the recommendation of the Task Force, the Commission concludes that this requirement should be

adopted, and the SAR and EC standards for landfarms using the bioremediation endpoint approach are incorporated into the landfarm closure requirements of Subparagraph 53.J(4)(d).

157. Paragraph 6 prescribes specific screening levels for each of the applicable Section 3103 constituents and provides that the standard for *in situ* closure would be a concentration of each of these constituents not greater than the higher of the prescribed level or site background.

158. The Industry Committee objected to the inclusion of any screening standards for Section 3103 constituents. Industry's witnesses questioned whether Section 3103 constituents were likely to be present in oil field water that would be received in landfarms. However, the Division's witnesses, Mr. Price and Mr. von Gonten (Tr. 539-42) presented in evidence published waste characterization studies indicating than most of the constituents had, in fact, been identified in crude oils. (*See* Exhibit 8, pp 15-28, offered in connection with Mr. Price's testimony, and Exhibit 11, pp 173-175, offered in connection with Mr. von Gonten's testimony.) Mr. von Gonten further testified that all of the Section 3103 constituents included in the Paragraph 6 closure standards would likely be found in waste from down-stream oil and gas facilities such as refineries or oil field service operations. (Tr. 539)

159. Mr. von Gonten described the method the Division used to arrive at the screening standards. He testified that the list of constituents in Section 3103 of the WQCC rules is a list of substances that the WQCC has identified as being of concern with respect to protection of ground water. (Tr 538-39) The Division looked at soil screening levels for these constituents employed by ED and EPA, and adopted the most conservative levels for each constituent. (Tr 542-46 and Exhibit 11, page 177) In most cases, the soil screening levels necessary to prevent introduction of the constituents into ground water in quantities exceeding WQCC groundwater standards were the most conservative, and became the screening levels that the Division proposed in paragraph 6. (Tr. 546)

160. Mr. von Gonten testified that the Division applied a DAF of 1 to NMED's screening levels designed for groundwater protection. (Tr. 546-47) He explained that DAF is an adjustment of the permissible level of a pollutant that can be introduced into water to allow for the fact that dilution in the water will reduce the concentration of the pollutant in the water body to a lower level than the level introduced into the water. (Tr 547-48) When a DAF is applied, the screening level is multiplied by the DAF to compute the permissible level of a constituent that may be introduced into a water body. Thus, use of a DAF of 1 means that no adjustment is made for dilution/attenuation. (Tr 548) Mr. von Gonten testified that using a DAF of 1 was appropriate in this context because of the potentially large extent of surface waste management facilities.

161. Industry proposed that if theses standards were to be applied, the rule should assume a DAF of 20, rather than the DAF of 1 employed by the Division. Mr. von Gonten testified that EPA recommends using a DAF of 20 for sites of one-half acre or less, (Tr. 550) but prescribes a curve that reduces the DAF as the site size increases. For a site of 500 acres or close that that size, the EPA's curve would indicate a DAF of 1 regardless of other factors. (Tr. 550-51) Furthermore, a lower DAF is appropriate in fractured or karst terrain such as it typical in the oil and gas producing areas of particularly southeastern New Mexico. (Tr. 550-51)

162. The Commission concludes that requiring that landfarm-treated soils that will be left in place a closure to be tested for, and to conform to, the Division's proposed standards for Section 3103 constituents is appropriate. The WQCC has identified all of these constituents as constituents of concern for groundwater protection. The Division's evidence establishes that almost all of these constituents have been identified in crude oils, and that crude oils will be a major component of most landfarm-treated waste. There is no evidence on the basis of which the Commission can rule out the possibility that any of these constituents might be present in landfarm-treated waste.

163. The Commission further concludes that the proposed standards for particular constituents were determined by other governmental agencies to be appropriate to insure that soils will meet health requirements for a residential environment, or that pollutants not be introduced into water at levels exceeding WQCC water quality standards. The application of a DAF to these numbers is largely a matter of judgment, and the Commission concludes that its judgment is properly exercised most conservatively in the interest of ground water protection by applying a DAF of 1, the appropriate level for large sites, and the level most protective of ground water resources.

164. Accordingly, the Commission accordingly concludes that the Division's recommended landfarm testing and closure standards for Section 3103 constituents should be adopted.

165. The Task Force raised an issue regarding the landfarm closure standards for Section 3103 constituents. As proposed, Paragraph 53.G(6) would require that, for a landfarm to close and leave the treated soils in place, the concentration levels of each of the Section 3103 constituents be less than the greater of the screening levels provision in Paragraph 53.G(6), the applicable PQL or background. However, background would be the concentration measured at the landfarm site prior to commencement of operations. If the waste tendered for treatment resulted from a hydrocarbon spill at another site where the background concentration of certain constituents was higher than at the landfarm site, this could cause an exceedance of the screening levels. Although the Task Force identified this as a significant issue, it did not recommend any change in the rule, and indicated that further study would be required.

166. In view of the Task Force's conclusion that more study would be required to formulate a suitable regulatory response to the issue they identified, the Commission concludes that no change in the proposed rule should be adopted to address this issue at this time.

167. Paragraph (7) provides that if the soils in the landfarm do not meet the standards of Paragraph (6) after five years, then the operator must remove the treated soils and either use or dispose of them in a manner approved by the Division. It also provides that the Division may approve alternative closure standards to those of Paragraph (6) after public notice. These provisions are new. No party objected to Paragraph (7), except that CRI objected to the provision allowing the Division, after notice, to approve alternative closure standards. In view of the very conservative closure standards prescribed by the rule, especially for Section 3103 constituents, and the high cost of removing treated soils, the Commission concludes that the

Division must have the discretion to allow exceedance of these closure standards in appropriate cases.

168. The Task Force recommends adding to Paragraph (7) a provision that if the landfarm does not meet the *in situ* closure standards of Paragraph (6) within five years, the Division may require that the operator furnish additional financial assurance.

169. The Commission recognizes that if a landfarm cannot meet the requirements for closure leaving the treated soils in place, then the cost of closing that landfarms will be significantly greater. The Commission also recognizes that failure of a landfarm to achieve meet the applicable closure standards within five years is an indication that it may not meet those standards. Accordingly, the Commission concludes that this change and the conforming change that the Task Force recommended to Subparagraph 53.C(6)(e) should be adopted.

170. Paragraph (8) provides that a landfarm cell or cells may be operated in accordance with an "environmentally acceptable bioremediation endpoint approach." A cell so operated may be closed leaving the treated soils in place without reference to the TPH and GRO/DRO standards provided in Paragraph (6) when the cell achieves its "environmentally acceptable bioremediation endpoint."

171. The environmentally acceptable bioremediation endpoint is defined in Subparagraph (8)(a)as that point when the TPH concentration has been reduced by at least 80% and the rate of change in the reduction of TPH concentration is negligible. Operation of a landfarm cell in accordance with an environmentally acceptable bioremediation endpoint approach requires compliance with detailed provisions set forth in Paragraph (8), including limiting hydrocarbon loading to less than 5%, maintaining pH, applying proper nutrients and maintaining moisture in the treatment zone to between 60% and 80% of field capacity. The provision for the environmentally acceptable bioremediation endpoint approach is entirely new.

172. The Industry Committee's witness, Dr. Sublette, explained the concept of a bioremediation endpoint. He testified that some hydrocarbon constituents can be eliminated by a process of bioremediation, while others can not be. Under ideal conditions, with adequate moisture and nutrient levels and proper landfarm maintenance, the bioremediation process will continue until it has eliminated substantially all of the bioremediatable components. Beyond that point landfarming will not further reduce TPH levels. Thus it is appropriate to dispense with particular TPH standards for closure for a landfarm that has been properly operated in accordance with the bioremediation endpoint approach and has achieved its endpoint.

173. Mr. von Gotten testified, however, that not all hydrocarbon wastes would be susceptible to bioremediation (Tr. 569 and 575). If applied uncritically, the bioremediation endpoint approach that substitutes achievement of the endpoint for achievement of environmentally acceptable residual hydrocarbon levels in a landfarm could become a loophole to allow dumping of non-remediable or marginally remediable wastes. Furthermore, Mr. Von Gotten testified that if the landfarm were not operated in an ideal manner, or adequate moisture were not available to satisfy the ideal conditions of bioremediation, a landfarm could reach a

bioremediation endpoint (where bioremediation would cease) at a time when significant quantities of bioremediable constituents remained in the waste. (Tr. 582)

174. In view of these considerations, the Division, in Paragraph (8), has proposed allowing landfarms to avoid the TPH closure standards only if they operated in accordance with an *environmentally acceptable* bioremediation endpoint approach and achieved an *environmentally acceptable* bioremediation endpoint. The environmentally acceptable bioremediation endpoint approach requires operation of the landfarm in accordance with a plan that incorporates the parameters for proper bioremediation, and an environmentally acceptable bioremediation endpoint is an endpoint achieved by that approach that has reduced the TPH content of the waste by at least 80%.

175. In proposing the 80% reduction, the Division was also concerned about the residual hydrocarbon concentration at landfarms that were eligible for closure in place due to having reached the bioremediation endpoint. Mr. von Gonten testified that the Division sought to set the bar high enough to be protective of human health and the environment. The requirements for a maximum five percent hydrocarbon loading and a minimum 80 percent hydrocarbon reduction from inception to the bioremediation endpoint, the proposed rule would insure a maximum 10,000 mg/kg TPH concentration at closure. (Tr. 568)

176. Mr. von Gonten further testified that the evidence available to the Division, both from EPA documents and from experience with landfarming in New Mexico indicated that the 80% reduction requirement is realistic and generally achievable. (Tr. 576-77)

177. The Industry Committee objected to the provision of Paragraph (8) requiring an 80% reduction in the waste's TPH content. Dr. Sublette testified that achievement of an 80% TPH reduction would likely not be possible. He presented an exhibit that purported to correlate achievable TPH endpoints with API gravity of oils. Based on that exhibit, he testified that only if the waste accepted at the landfarm consistent exclusively of condensates or very light oils could an 80% TPH reduction be achieved.

178. Comparison of the exhibit with evidence that the Division offered concerning specific gravities of crude oils in New Mexico (Div. Exhibit 11, page 209) indicated, however, that even if Dr. Sublette's data were accepted, an 80% TPH reduction should be achievable for many New Mexico oils. In addition, Mr. von Gonten testified that bioremediability does not bear a linear relationship to API gravity, but depends on many factors not incorporated in Dr. Sublette's exhibit. (Tr. 587-88)

179. The Commission shares the Division's concern that allowing closure of landfarms based on achievement of the bioremediation endpoint without regard to the amount of hydrocarbon reduction achieved could allow landfarms to be used as dumpsites for wastes not susceptible to effective treatment. The Commission also finds it significant that an 80% TPH reduction applied to the maximum 5% TPH loading factor would leave a residual TPH at closure of 1%, or 10,000 mg/kg, four times the closure level that the Commission has concluded represents an appropriate maximum.

180. The Commission concludes that the most environmentally acceptable disposition of wastes for which the hydrocarbon concentration could not be materially reduced, or could not be reduced to an acceptable level, by bioremediation would be sequestration in a landfill. Accordingly, the Commission concludes that the Division's proposal for an environmentally acceptable bioremediation endpoint approach, including the 5% maximum hydrocarbon loading factor and the minimum 80% TPH reduction requirement, should be adopted.

181. Of course, a landfarm operated using the bioremediation endpoint approach could still close without removal of the treated soils, even if it did not reduce the waste's TPH by 80%, if it achieved the TPH closure standards provided in Paragraph (6), as revised in accordance with the Task Force recommendation.

182. The Industry Committee also objected to provisions of Paragraph (8) requiring that the operating plan for a landfarm using the environmentally acceptable bioremediation endpoint approach include a characterization of native soils.

183. Mr. von Gonten testified, however, that the character of the native soils could affect the bioremediation process (Tr. 578-79). He also testified that, in view of the novelty of the bioremediation endpoint approach, at least in New Mexico, the Division wanted to design the program to acquire as much information as possible. (Tr. 578).

184. The Commission finds these considerations persuasive, and concludes that the requirement for native soil characterization should be adopted.

185. The Commission concludes from the testimony of Dr. Sublette and Mr. von Gonten that the bioremediation endpoint approach is a viable approach to landfarming, and Paragraph 53.G(8) allowing its use as an alternative subject to the conditions provided in the Division's proposal, should be adopted.

Proposed Rule 53.H: Small Landfarms

186. Proposed Rule 53.H regulates small landfarms. "Small landfarm" is defined in Rule 53.A(1)(e). Under the Division's proposal, a small landfarm is a centralized landfarm (*i.e.*, one operated by an oil and gas operator for treatment of its own waste) having a total capacity of 1,400 cubic yards or less, that is active for no more than three years, and that accepts for treatment only hydrocarbon contaminated soils (not including drill cuttings).

187. The small landfarm provisions of the proposed rule are new. Existing Rule 711 provides an exemption from permitting for centralized facilities having a capacity of not more that 1,400 cubic yards of solids. [Rule 711.A(3)(b)] However such facilities are subject to other provisions of the existing rule.

188. The purpose of the small landfarm proposal, articulated by the Division, is to allow operators to collect contaminated soils from isolated spill sites for remediation at a common site in close proximity to their production facilities. Remediation of particular spill

sites, either where they occur, or at an alternative location, would not be a subject to proposed Rule 53. *See* the definition of "surface waste management facility" in proposed Rule 7.S(10)(f).

189. Paragraph (1) of proposed Rule 53 (H) requires that an operator establishing a small landfarm file a registration with the Division, accompanied by certification that it has a written agreement with the surface owner at the site.

190. Paragraph (1) further provides that an operator may establish not more than one small landfarm per governmental section. As proposed by the Division prior to the hearing this provision would have limited small land farms to one such facility per lease. In its June 5 draft, however, the Division requested to change the limitation to that in the present proposal due to the difficulty of precisely defining the term "lease" as the Division uses it. This change is also a partial response to a comment filed by NMOGA objecting to the hauling costs incident to the one small landfarm per lease requirement as applied to large leases that cover multiple sections.

191. Paragraph (1), as revised in the June 5 draft, also requires that a small landfarm be located no more than one mile from the operator's production facility. The requirement maintains the concept that the purpose of these facilities is to provide opportunities for treatment in proximity to the source of the waste.

192. The Commission concludes that the limitations of small landfarms to one per section and the requirement of proximity to production facilities serve the same purpose as the original limitation of one such facility per lease, and are more workable. Accordingly these changes recommended in the June 5 draft should be adopted.

193. Paragraphs (2), (3) and (4) specify the requirements that apply to small landfarms. Small landfarms are subject to the siting requirements. However, the applicable testing rules are much more limited. In lieu of semi-annual treatment zone testing required for landfarms operated under Subsection G, treatment zone monitoring in a small landfarm is required only as needed to demonstrate remediation to the extent required for laying additional lifts. Vadose zone monitoring for small landfarms is limited to one test at the time of closing.

194. Paragraph (5) provides closure requirements for small landfarms. Closure standards proposed by the Division are the same that the Division proposed in Subsection G, except that screening for Section 3103 constituents are not required.

195. The Task Force recommended increasing the closure TPH closure standard for small landfarms to 2,500 mg/kg, the same level that they recommended for permitted landfarms.

196. The Industry Committee objected to the requirement for certification of surface owner authorization, contending that this provision exceeded the Division's regulatory authority. However, Mr. von Gonten explained that the requirement for surface owner approval would provide a partial substitute for the permitting process from which small landfarms are exempt. (Tr. 596-98)

197. The Commission finds this reasoning persuasive. Although the Division would have no jurisdiction or responsibility with respect to property rights, it would have the jurisdiction and responsibility to address a surface owner's environmental concerns. The surface owner at the site would be among those most directly affected by any environmental issues. Exemption of small landfarms from the permitting process limits the surface owner's ability to present any environmental concerns to the Division. Thus the provision conditioning the exemption from permitting on the surface owner's approval of the facility is a rational means of discharging the Division's responsibility to provide a forum for addressing relevant environmental issues, and should be adopted.

198. The Industry Committee also objected to the provision limiting the number and proximity of small landfarms. The Division's witness, Mr. Martin, testified that this provision was included because, absent such a provision an operator could avoid the permitting requirements of proposed Rule 53.G by registering multiple small landfarms adjacent to, or in close proximity to, each other. (Tr. 1487) This restriction was a response to a comment submitted by NMCCAW at an earlier stage of this rulemaking proceeding, pointing out that that the lack of a limit on proximity of small, unpermitted facilities would establish a loophole. The Division's witness, Mr. Price, testified that the potential impact of pollutant loading the environment would depend on the total load deposited in a given area. (Tr-93) Thus, the Division, in limiting the proximity of exempt small landfarms was concerned about the cumulative affects of such facilities in close proximity to each other.

199. The Commission finds these concerns persuasive, and concludes that the provision limiting small landfarms to one per governmental section, per operator, should be adopted.

200. The Industry Committee also proposed that higher chloride limits that the 1,000 mg/kg standard be allowed in small landfarms.

201. In support of the 1,000 mg/kg chloride standard, the Division's witness, Mr. Price, testified to modeling studies he performed that indicated that the 1,000 mg/kg standard would be protective of groundwater assuming a five-acre site loaded with chlorides to that extent. The Industry Committee argued that, since small landfarms would be less than five acres, allowing a larger chloride concentration in such facilities would be consistent with the assumptions of Mr. Price's modeling.

202. In view of the larger number of small landfarms that might exist, the cumulative effects of multiple such facilities might create contaminant loading hazards comparable to those of a larger facility. No party offered evidence sufficient to permit a rigorous analysis of the potential for cumulative effects, and the Commission accordingly concludes from Mr. Price's testimony that a 1,000 mg/kg standard, which would be protective of ground water for sites up to five acres, and accordingly would allow a margin of safety to protect from cumulative effects of multiple smaller sites.

203. Furthermore, Dr. Neeper's testimony indicated that the ability of soils to support plant growth would decrease significantly at chloride levels higher than 1,000 mg/kg, making re-vegetation of small landfarms difficult if a higher chloride standard were adopted.

204. For both these reasons, The Commission concludes that the closure standards for small landfarms, except for the Section 3103 constituents, should be the same as those for permitted landfarms.

205. With respect to the Section 3103 constituents, however, the testimony indicated that these substances would be significantly less mobile that the chlorides. The size restriction on small land farms would limit the loading of these substances in small landfarms, and, accordingly, mitigate any hazard to ground water. Accordingly, the Commission concludes that screening of small landfarms for Section 3103 constituents should not be required.

206. The Industry Committee proposed that the maximum size of landfarms exempt from permitting be increased from 1,400 cubic yards provided in existing Rule 711 to 6,400 cubic yards.

207. The Task Force considered the issue of maximum size of small landfarms, and recommended that the maximum capacity be increased to from 1,400 cubic yards to 2,000 cubic yards, with the addition of a surface area limitation of two acres.

208. Since the two-acre limitation serves to limit contaminant loading, the Commission concludes that the Task Force recommendations in this respect should be adopted.

Proposed Rule 53.I: Specific Requirements Applicable to Evaporation, Storage, Treatment and Skimmer Ponds

209. Proposed Rule 53.I establishes design, construction and operation standards for pits to be used as evaporation, storage, treatment or skimmer ponds, and for below-grade tanks. There are provisions concerning ponds in the existing guidelines. (G-pp 3-8) The proposed rule is similar in substance to the existing guidelines, but revises the requirements in detail, conforming the liner and leak detection specifications to those provided in subsection F with respect to landfills. Furthermore, the proposed rule requires that all pits and ponds be lines. The existing guidelines contemplated that some pits and ponds in some areas might be unlined. (G-p.7)

210. The New Mexico Oil and Gas Association objected to inclusion of provisions regarding pits and ponds in proposed Rule 53, contending that these matters should be addressed in Rule 50, relating to pits.

211. The Division's witness, Mr. Price, explained that Rule 50 expressly excludes pits at facilities permitted pursuant to existing Rule 711. (Rule 50.A). Since the Division's proposal Rule 53 contemplates repeal of Rule 711, if pits and ponds at permitted facilities were not covered in Rule 53, they would be wholly unregulated until such time as Rule 50 is amended to cover them. (Tr. 95) Furthermore, Rule 50 provides for permitting only and does not provide

for public notice and comment. This permitted with limited review may be appropriate for small and temporary pits that are excluded from the definition of "surface waste management facility" pursuant to proposed Rule 7.S(10), but would not be appropriate for large pits that the Division proposes to regulate under proposed Rule 53.I. (Tr 96-97)

212. The Commission finds this logic persuasive.

213. No party objected to any of the substantive changes proposed in Rule 53.I.

Proposed Rule 53.J: Closure and Post Closure

214. Paragraphs (1), (2) and (3) of proposed Rule 53.J establish procedures applicable to closure of permitted facilities by the operator or by the Division and for release or forfeiture of the operator's financial assurance. These provisions are similar to provisions of existing Rule 711.D.

215. A new provision included in Paragraph (1) allows the Division a period of 60 days (subject to one optional extension) to review the review the closure plan, inspect the facility, and determine if it will require additional closure conditions beyond those provided in the existing closure plan. If the Division imposes additional closure requirements, the proposed rule provides for notice to the operator and opportunity for a hearing.

216. Other new provisions provide for the Division to retain a portion of the operator's financial assurance after closure of the facility is otherwise complete in order to secure the operator's compliance with new post closure requirements of proposed Rule 53.J, including requirements to re-vegetate the facility site.

217. Paragraph (1) also provides standards for site re-vegetation. These provisions are new. Existing Rule 711 does not expressly require site re-vegetation, and the Guidelines only require reseeding.

218. Except for landfarms (which are subject to separate re-vegetation requirements of proposed Rule 53.J(4)(b)(ii), required re-vegetation consists of establishment of a vegetative cover equivalent to 70% of the vegetative cover prevailing in the surrounding area, consisting of native plants and excluding noxious weeds.

219. The Task Force recommended revision of the re-vegetation requirements proposed by the Division as to various details, including a recommendation modifying the description of the reference area that would establish the required extent of coverage, and including at least one grass among the plant species to be established on the site.

220. The re-vegetation standards recommended by the Division and included in Paragraph 53.J(1) are generally in accordance with recommendations of the Department of Game and Fish articulated in comments filed in this proceeding. As the Task Force, recognized, however, establishment of the reference area that would determine the required extent of re-vegetation might not always be easy, and that reference should be had to available scientific data,

as well as direct observation. Accordingly, the Commission concludes that the Division's proposal, as modified by the recommendations of the Task Force in this respect, should be adopted.

221. Paragraph (4) establishes closure and post-closure standards, respectively for oil treating plants [Subparagraph (a)], landfills [Subparagraphs (b) and (c)]; landfarms [Subparagraphs (d) and (f)], and pits and ponds [Subparagraphs (e) and (f)]. These provisions are new.

222. The Division's witness, Mr. Chavez described the closure and post-closure provisions for landfills. With respect to the closure requirements, Mr. Chavez explained that the proposed top cover construction requirements, sloping and special re-vegetation provisions [different from those provided in Paragraph (1) for other facilities] would be necessary to prevent invasion of moisture into the landfill. He further testified that moisture invasion could compromise the integrity of the landfill and allow the escape of contaminants.

223. The landfill provisions require for post closure monitoring and maintenance of the top cover for a period of 30 years after closure. Mr. Chavez testified that these provisions were needed to insure that landfill integrity was maintained.

224. For landfarms and ponds, the proposed rule contemplates that all contamination will be either rendered harmless or removed. Accordingly, the post closure period for such facilities is limited to three years for the purpose of assuring successful re-vegetation.

225. NMCCAW's witness, Dr. Neeper testified at the hearing that EC and SAR were the most sensitive indicators of the ability of soils to support plant growth, and his testimony supports the reasonableness of these standards. The Commission accordingly concludes that the recommendation of the Task Force in this respect should be adopted.

226. Paragraph (5) provides for an exception to re-vegetation requirements, with Division approval, if the operator or site owner plans another use for the site. To prevent the provision from becoming a means of evading responsibility for re-vegetation it also provides that the Division may withhold final release of the operator's financial assurance until the operator or site owner has obtained necessary regulatory approvals for the contemplated alternative use and begun implementation.

227. The Industry Committee objected to several details of proposed Rule 53.J, as follows:

a. The committee objected that the time provided for review of an operator's closure plan at the time closure is initiated (60 days after the proposed date for cessation of operations, with an optional extension) is too long. The committee proposed 30 days from notification of intent to close. The Commission concludes, however, that the longer time period proposed by the Division is reasonable to allow adequate review.

b. The committee proposed that re-vegetation be required to the extent of 70% of natural coverage in the vicinity, instead of 70% of the area being site area. The Division accepted this objection and proposed a change in its May 13 draft partially adopting the committee's proposal in this respect. The Commission has adopted this proposal with changes recommended by the Task Force, as indicated below.

c. The committee objected to a provision allowing the Division to close a facility where there had been no significant activity for six months. This provision, however, is similar to a provision of existing Rule 711. The Commission concludes that retaining this provision is appropriate, as the Division has proposed, because, even though a facility might not receive waste for a six-month period, if the facility is properly operated, the operator would be conducting regular maintenance, which would constitute "significant activity," at the site more frequently that once per six-month period.

d. The committee and Yates objected to the 30-year post-closure period for landfills, suggesting a site-specific provision in the facility's closure plan be used instead. The Commission concludes, however, that a the variance procedure provided in Subparagraph 53.K is adequately to allow adoption of a site-specific post-closure plan where appropriate.

Proposed Rule 53.K: Exceptions and Waivers

228. Proposed Rule 53.K provides that the Division may grant exceptions to, or waivers of, any provision of the proposed rules in particular cases. Paragraph (1) of the proposal provides for that an applicant may seek, and the Division may grant, exceptions or waivers during the initial permitting process. Paragraph (2) provides for exceptions and waivers after a facility is permitted. This provision is new.

229. As originally proposed by the Division, Paragraph (2) attempted to describe a category of exceptions and waivers that the Division could grant after permitting without public notice, and Paragraph (3) provided that other exceptions and waivers could be granted post-permit after public notice and opportunity for members of the public to request a hearing.

230. No party objected to the concept of allowing exceptions and waivers, nor to the concept that some exceptions and waivers of a minor, or routine nature could be granted without public notice. However, the NMCCAW objected to the Division's original proposal on the ground that it did not provide an acceptable standard for when the public notice provisions would apply.

231. At the conclusion of the hearing, after witnesses and members of the Commission articulated difficulty in understanding the situations to which Paragraphs (2) and (3), respectively, would apply, the Division submitted a revision of proposed Rule 53.K which is its current proposal. The current proposal requires that an operator seeking an exception or waiver

of a rule provision, except in an emergency, will present that request in the form of an application for a permit modification. Under this proposal, the operator must give public notice and opportunity for a hearing if the modification is a major modification as defined in Rule 53.A(2)(i); whereas no notice would be required for a minor modification, and that significant waivers and exceptions might be allowed without public input.

232. The Task Force further addressed this concern with a recommendation to modify the public notice requirements of proposed Rule 53.C(4)(f). For the reasons stated in findings regarding Subsection 53.C, the Commission concludes that this recommendation should be adopted.

233. The Commission concludes that the Division's revised proposal provides a manageable standard for determining the procedure to be applied to variance requests, and, with the additional notice provision that the Task Force proposed, provides adequate public notice. Accordingly, the Commission concludes that the Division's proposal and the Task Force recommendation in this respect should be adopted.

Proposed Rule 53.L: Transitional Provisions

234. Proposed Rule 53.L addresses the extent to which the provisions of the proposed new rule will apply to existing facilities. Under the proposal, existing facilities can continue to operated and will not have to apply for a new permit. The waste acceptance, operation and closure provisions of the new rule would apply to existing facilities unless specifically otherwise provided in the facilities permit or a previously granted exception or waiver. Design and construction standards, however, would apply only to new facilities or major modifications of existing facilities.

235. During the hearing the Division submitted a modification of its proposal to provide that permit applications submitted to the Division on or after May 18, 2006, would be subject to the new rule. May 18, 2006 was the date that the Division submitted its revised proposal incorporating this provision.

236. The Task Force recommended a modification of the requirement that closure of existing facilities be in accordance with the new rule. Under the Task Force recommendation, existing cells at any existing landfarm could be closed "in accordance with the standards of its existing permit" if closed within ten years after adoption of the new rule.

237. The Commission concludes that the proposed transitional provisions strike a reasonable balance between the need to extend the application of the new rules to protect the environment and the possible unfairness of requiring existing operators to comply with design and construction requirements not contemplated when their facilities were constructed. Accordingly the provisions of the Division's revised proposal should be adopted.

238. The Commission is unable to determine the effect of the Task Force's recommendation that existing landfarm cells be closed in accordance with the terms of existing permits, in that the provisions of these permits are not in evidence. However, the Commission

recognizes that, to the extent that existing permits allow for closure of landfarm cells without removal of the treated soils based on standards less restrictive than those proposed, landfarm operators may have established their waste acceptance and operational practices in reliance on those provisions. Accordingly, the Task Force recommendation in this respect should be adopted.

Final Conclusions

239. For the reasons explained in connection with each of the proposed rule sections and subsections, and in order to provide a regiment for regulating the disposal of oil field waste at surface waste management facilities in a manner that will protect fresh water, human health and the environment, the Commission concludes that the proposed rules and Task Force recommendations should be adopted.

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

The Division respectfully submits the above Proposed Findings and Conclusions for adoption by the Commission.

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