

Exhibit A

To Application for Rulemaking

Case No. _____

Chairman Fesmire, Commissioner Olsen, and Commissioner Bailey, my testimony will be a line-by-line discussion of the proposed pit rule which will include the intent for each provision. I will identify concepts and ideas (consensus and non-consensus) recommended by the Pit Rule Task Force. The green text illustrates the provisions within the proposed Rule in which the OCD incorporated the Task Force consensus recommendations. The red text illustrates the provisions and individual items within the proposed Rule in which the OCD addressed the Task Force non-consensus issues. The black text illustrates either language from the existing Rule 50 or new language proposed by OCD. The footnotes are comments from Task Force member regarding their review of an earlier draft version of the proposed rule. I will address each footnote comment by providing an explanation of our consideration and will indicate if the comment initiated a change in the proposed rule or not. In addition, I will be addressing proposals and recommendations from parties of interest that have submitted changes to the proposed Rule.

TITLE 19 NATURAL RESOURCES AND WILDLIFE

CHAPTER 15 OIL AND GAS

PART 17 PITS, CLOSED-LOOP SYSTEMS, BELOW-GRADE TANKS AND SUMPS The Part was renamed to include and reference all items addressed under this Rule.

19.15.17.1 ISSUING AGENCY: Energy, Minerals and Natural Resources Department, Oil Conservation Division.

[19.15.17.1 NMAC - N, //07]

19.15.17.2 SCOPE: 19.15.17 NMAC applies to persons engaged in oil and gas development and production within New Mexico.

[19.15.17.2 NMAC - N, //07]

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

[19.15.17.3 NMAC - N, //07]

19.15.17.4 DURATION: Permanent.

[19.15.17.4 NMAC - N, //07]

19.15.17.5 EFFECTIVE DATE: _____, 2007, unless a later date is cited at the end of a section.

[19.15.17.5 NMAC - N, //07]

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

[19.15.17.6 NMAC - N, //07] This Section has been modified to include and reference all items addressed under this Rule

19.15.17.7 DEFINITIONS:

FN #1 and FN #2 *Industry suggested that OCD provide a definition for hazardous waste. Hazardous waste is defined in 19.15.1.7 NMAC. The definitions provided in Part 1 are general definitions that apply to all Rules under Chapter 15 (Oil and Gas).*

FN #3 *Definitions for a "downstream facility" and an "upstream facility" were relocated to 19.15.1.7 NMAC. The definitions provided in Part 1 are general definitions that apply to all Rules under Chapter 15 (Oil and Gas).*

A. "Alluvium" means detrital material that water or other erosional forces have transported and deposited at points along a watercourse's flood plain. It typically is composed of sands, silts and gravels; exhibits high porosity and permeability; and generally carries fresh water. The source of the definition is from Rule 50. It has been modified from a passive to active tense.

B. "Closed-loop system" means a system that uses above ground steel tanks for the management of drilling or workover fluids without using below-grade tanks or pits. This is a new definition created to identify an advanced method of drilling that recycles and reuses drilling fluids and reduces waste solids. **FN #4** *Industry suggested OCD modify the definition to include the management of solids and restrict the operator from using pits.*

OCD considers the distinction of the closed-loop system is its ability to recycle and reuse drilling fluids (the management of drilling or workover fluids). OCD has observed that not all operators may have the equipment to centrifuge the liquids from the drill cuttings that would reduce the need for a pit; therefore a pit might be required. The management of solids may vary, from the use of a pit or a drying pad. Each of the methods, closed-looped systems using a pit or a drying pad, is addressed separately throughout the Rule.

C. “Division-approved facility” means a division-permitted surface waste management or injection facility, a facility permitted pursuant to 20.6.2 NMAC, a facility approved pursuant to 19.15.9.712 NMAC or other facility that the division specifically approves for the particular purpose. The division shall not approve any facility not otherwise permitted unless it finds that the facility’s use for the specified purpose will protect fresh water, public health and the environment and comply with other applicable federal or state statutes, federal regulations, state rules and local ordinances. This a new definition created to broaden OCD’s ability to utilize other facilities designed and permitted for a similar purpose. Certain parties (Industry Committee/Yates Petroleum Corporation) have requested that small landfarms registered pursuant to 19.15.36 NMAC (the surface waste management regulations) be identified and listed as a division-approved facility. The reason for not specifically listing small registered landfarms is due to their limitations to accept waste. Small landfarms have a specified a waste acceptance criteria that limits the operator to “accept only exempt or non-hazardous waste consisting of soils (excluding drill cuttings) generated as a result of accidental releases from production operations, that are predominantly contaminated by petroleum hydrocarbons, do not contain free liquids, would pass the paint filter test and where testing shows chloride concentration are 500 mg/kg or below.”

D. “Emergency pit” means a pit that is constructed as a precautionary matter to contain a spill in the event of a release. The source of the definition is from Rule 50. The definition was previously imbedded into the regulatory language.

E. “Permanent pit” means a pit, including a pit used for collection, retention or storage of produced water or brine that is constructed with the conditions and for the duration provided in its permit, and is not a temporary pit. This a new definition created by the Pit Rule Task Force. The definition assists in identifying certain pits in order to inform applicant and operator on how they are regulated and permitted.

F. “Restore” means to return a site to its former condition, in the manner and to the extent required by applicable provisions of 19.15.17 NMAC. This a new definition created to provide a general concept of the term. The term “restore” is utilized twice in the proposed Rule. In each case, the conditions in which the term is used are specified. *FN #5 Industry has suggested that OCD change the term to “site restoration.” The term “site restoration” is not used in the proposed Rule. Therefore, if changed the term and definition would not be applicable to the proposed rule.* Certain parties (Industry Committee/Yates Petroleum Corporation/Energen) have also recommended to change the term to “site restoration” in their proposed language change.

G. “Re-vegetate” means to seed or plant a site with plant species that are predominantly native in a quantity that controls erosion. This is a new definition created to provide a general concept of the term. The details pertaining to re-vegetation are provided in the “re-vegetation requirements” of Subsection G of 19.15.17.13 NMAC.

H. “Sump” means an impermeable vessel, or a collection device incorporated within a secondary containment system, with a capacity less than 500 gallons, which remains predominantly empty, serves as a drain or receptacle for de minimis releases on an intermittent basis and is not used to store, treat, dispose of or evaporate products or wastes. The source of the definition is from Rule 50. The intent of the proposed modifications to the original definition is not to place limits on the options of the vessel utilized (such as limiting it to only single walled vessels), to ensure that secondary containment is either incorporated into the original vessel or used in conjunction with the primary vessel to prevent potential releases from overflows, and not limit the ability of a sumps to be used either below or above the ground surface. The proposed modifications reflect the current use and practices of such vessels by operators. IPANM has requested that the words “within a secondary containment system” be omitted from the definition. Their justification is that “a sump is already a secondary containment vessel.” Their justification does not coincide with the current definition of Subsection B of 19.15.2.7 which begins with “sump shall mean any impermeable single wall vessel with a capacity less than 500 gallons, where any portion of the sidewalls of the reservoir is below the surface of the ground and not visible which vessel remains predominantly empty, serves as a drain or receptacle for spilled or leaked liquids on an intermittent basis and is not used to store, treat, dispose of or evaporate products or wastes.” The current definition clear states that a sump is a single wall vessel and does not require secondary containment or the incorporation within a secondary containment system. The OCD proposed definition provides this clarification.

I. “Temporary pit” means a pit, including a drilling or workover pit, which is constructed with the intent that the pit will hold liquids for less than six months and will be closed in less than one year. This is a new definition created by the Pit Rule Task Force. The definition assists in identifying certain pits in order to inform

applicant and operator on how they are regulated and permitted. **FN #6** *Industry suggests that OCD should change the term "liquids" to "fluids." OCD contends that a liquid can be considered a fluid, but a fluid is not a liquid. This was a crucial consideration when determining the proper term use in the definition. OCD considers "liquids" to be free liquids, such as produced water. "Fluids" may include drilling mud, gels, and additives that may have the potential to settle out with the drill cuttings. Industry's suggestion would require the removal of all contents except the drill cuttings. This would not be a practical suggestion due to the operator's inability to accomplish the task. This is contrary to current practice by operators since they remove free liquids to allow the remaining pit contents (muds, cuttings, gels, other additives) to dry. Much like the footnote, certain parties (Industry Committee/Yates Petroleum Corporation/Energen) have also recommended to change the term "liquids" to "fluids."*

[19.15.17.7 NMAC - Rp, 19.15.2.7 NMAC, / /07]

19.15.17.8 PERMIT REQUIRED:

A. A person shall not construct or use a pit or below-grade tank except in accordance with a division-issued permit. Only an operator may apply for a division-issued permit. Facilities permitted pursuant to 19.15.36 NMAC or WQCC rules are exempt from 19.15.17 NMAC. After _____, 200_ [effective date], an unlined permanent pit is prohibited and the division shall not issue a permit for an unlined permanent pit.

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

[19.15.17.8 NMAC - Rp, 19.15.2.50 NMAC, / /07] The Pit Rule Task Force agreed upon the language requiring the permitting of pits (temporary and permanent), below-grade tanks, and closed-looped systems. OCD has expanded these subsections to notify applicants that unlined permanent pits are prohibited and will no longer be permitted. In Subsection B, OCD has provided language to inform applicants of closed-looped systems which use a temporary pit that they must comply with the requirements for temporary pits. **FN #7** *Any proposed alternative method will be processed as an exception under 19.15.17.15 NMAC. Operators or applicants that propose an alternative method would have to demonstrate equivalent protection based upon the construction and design, operational, and closure requirements of a prescribed method in the Rule. This does not prevent or restrict the permitting of new methods in regards to liquids-fluids-solids management. It is not OCD's position or responsibility to dictate or restrict operators by listing or identifying a limited number of alternative methods - it is up to industry to propose the possible alternative methods. FN #8* *OCD has provided a subsection heading or listing for closed-loop systems under each section of the Rule for clarification and identification of which requirements pertain to closed-loop systems. The permitting of below-grade tanks originates from the existing Rule 50 and continues to be proposed based upon the design, construction, operational, and closure standards provided by the Pit Rule Task Force. A permit will allow for the OCD to ensure that a below-grade tank is properly designed, constructed, and closed and will allow the OCD the regulatory authority to enforce if an operator does not comply with the construction and operational provisions or permit conditions. A certain party (Energen) has requested that the proposed language be modified to allow closed-looped systems to be used "as submitted on the sundry notice or OCD C-144." To accept such a change could be interpreted as to allow operators of closed-looped systems to use such a method without a review or approval from OCD. Also, the sundry notice requirements do not fulfill or satisfy all of the provisions of this Part. Without the submittal of the C-144 form and applicable attachments, OCD would not be able to properly assess and approved the closure of a closed-looped system, therefore not be able to approve the permit to use a closed-looped system. Energen has also omitted closed-looped systems from the requirements of the submittal of an application, including the engineering design plan, the submittal and approval of a closure plan, and the approval of a permit*

19.15.17.9 PERMIT APPLICATION:

A. An operator shall apply to the division for a permit to construct or use a pit, closed-loop system, below-grade tank or other proposed alternative method to which 19.15.17 NMAC applies, using form C-144, submitted either separately or as an attachment to a permit application for a facility with which the pit, closed-loop system, below-grade tank or other proposed alternative method will be associated. For upstream facilities, the operator may submit form C-144 separately or as an attachment to an application for a well permit (form C-101 or C-103). This subsection was created based upon Pit Rule Task Force input to provide instructions to applicants on the different methods and operations one can apply for a permit. The concept of the utilization of the C-144 form originates from the current Rule 50. The Pit Rule Task Force consensus language expands beyond the existing Rule

50 language by recommending that the applicant be required to submit of a C-144 form in order to request a permit at an upstream facility. OCD agrees with the Task Force and has incorporated the concepts proposed in the consensus language into the proposed Rule. OCD's intent is to use the C-144 form as the sole mechanism to track and permit a pit, closed-loop system, below-grade tank or other proposed alternative method. Since the proposed rule requires an application to include an engineering design plan which incorporates a closure plan in order for consideration for approval, using one form simplifies the tracking process and ensures that the appropriate OCD representatives reviews the application. The current C-144, C-101, and C-103 forms will have to be modified if the proposed rule is adopted by the Commission. **FN #9** *The Pit Rule Task Force consensus language originally suggested that the application should include proof of compliance with the Surface Owner's Protection Act. Upon consideration, OCD has determined that the implementation and compliance of the Surface Owner's Protection Act is an issue best resolved between the surface owner and the applicant.*

B. The permit application shall include a detailed engineering design plan. For clarification purposes, the C-144 form is only part of the permit application. The other portion of the application is the engineering design plan. The Pit Rule Task Force recommended that an applicant should provide a detailed engineering design plan in their application for a permit for a pit (temporary or permanent). The Task Force consensus language proposed that the detailed engineering design plan should include operating and maintenance procedures, a closure plan, a hydrogeologic report, and the details on the site's depth to ground water. The OCD agrees that such information is required for a proper review in order to determine approval or denial of an application and has incorporated these ideas into the Rule. In the engineering design plan, the operational and maintenance procedures should be based upon the specified provisions of the proposed Rule. Once created, they can provide operators a format or an instructional guide for proper operations and may be utilized as a template for future submittals of similar projects. The submittal of a closure plan as part of the permit application for consideration of approval for a permit is a new concept suggested in the consensus language proposed by the Task Force. The OCD agrees with this concept. Having the applicant submit the closure plan for approval as part of the initial permit prevents delays in the closure. The current Rule 50 requires operators to submit a closure plan for review and approval prior to commencing closure. By approving the closure plan as part of the permit, closure can commence immediately. The hydrogeologic report provides OCD with information that can be utilize to assess the proper siting for a permit, but the more importantly provides information that, if submitted, can be utilized to assess a potential release and determine the possible mobility, extent, and/or direction that a plume may follow. This information will allow the OCD to determine if a release presents an imminent treat to fresh water, public health or the environment and to determine if immediate action is required. The OCD also proposes to require the submittal of an engineering design plan for all activities under this Rule that require a permit. **FN #10** *Industry has suggested that "detailed" should be replaced with "an" since the details of the engineering design plan are provided. OCD considers "detailed" to reflect the quality of the information provided in the engineering design plan, since the quantity or items required are listed. OCD wants detailed information provided for each of the items listed.*

(1) Permanent pits. A registered professional engineer shall certify engineering design plans for permanent pits. The engineering design plan shall include:

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

required for evaporation ponds permitted pursuant to Part 36 (Surface Waste Management Facilities), which requires a registered professional engineer to certify the engineering design plan. OCD accepted the Task Force recommendation and has applied the Part 36 concept throughout the Rule for permanent pits. OCD is proposing the additional requirement of the submittal of a quality control/quality assurance construction and installation plan. This is to ensure that a permanent pit is properly installed based upon the approved design. This usually involves assessment of the foundation or subgrade and the placement and testing of geomembrane seams. The additional provisions, subparagraphs (e) through (n) come from the Part 36.

(2) Temporary pits. An engineering design plan for a temporary pit shall use appropriate engineering principles and practices and follow applicable manufacturers' recommendations. The engineering design plan shall include operating and maintenance procedures, a closure plan and a hydrogeologic report that provides sufficient information and detail on the site's topography, soils, geology, surface hydrology and ground water hydrology to enable the appropriate division district office to evaluate the actual and potential effects on soils, surface water and ground water. An engineering design plan for a temporary pit may incorporate by reference a standard design for multiple temporary pits that the operator files with the application or has previously filed with the appropriate division district office. OCD's intent to require applicants of temporary pits to submit a detailed engineering plan with their application is to ensure that a temporary pit is properly sited, designed, and constructed; a closure plan is approved and in place for the immediate implementation of closure; and to ensure that the operator has a complete understanding of the operational requirements of the Rule. The source of the proposed language for the detailed engineering plan originates from the Task Force and the proposed concept regarding the use of a standard design for multiple temporary pits originates from OCD's 2004 guideline, which was also suggested by the Task Force. OCD proposes to apply the provision of the engineering plan and standard design to closed-loop systems and below-grade tanks. **FN #11** *OCD requires the submittal of a detailed hydrogeologic report to in order to make an informed decision and determine if the proposal complies with the siting requirements and to have the information available in order to determine if a release may be an imminent danger to fresh water, public health and the environment.* Certain parties (Industry Committee/Yates Petroleum Corporation) have recommended to replace the OCD proposed language with "the permit application for a temporary pit shall include a design plan for construction and operation of the temporary pit meeting the applicable requirements of 19.15.17.11 NMAC and shall include a closure plan meeting the applicable requirements of 19.15.17.13 NMAC. Such a change would limit the information submitted to OCD for review to the extent that OCD would not be able to determine is the proposal is approvable. It would prevent the submittal of a standard design. Also for clarification purposes, Section 11 of 19.15.17 NMAC only pertains to design and construction. The operational requirement reside in Section 12.

The IPANM has suggested that the last sentence be modified to allow applicants reference a standard design regardless of which company may have submitted it. OCD is opposed to such a change. If the change is accepted it will create a delay in the review of the application due to the district office having to locate the referenced design in order to determine if the design is appropriate since it will not be a design submitted by that party. By not changing the language, industry can create a standard design and submit it each time, which will expedite the review process. The intent of the application process is to have the applicant to submit the appropriate information that will allow OCD expedite the review. By requiring OCD the search files to determine which standard design by which pervious applicant is being proposed, the application review process will be extended and the consideration for approval will be delayed. It is not OCD intent to create such a delay.

(3) Closed-loop systems. An engineering design plan for a closed-loop system shall use appropriate engineering principles and practices and follow applicable manufacturers' recommendations. The engineering design plan shall include operating and maintenance procedures and a closure plan. An engineering design plan for a closed-loop system may incorporate by reference a standard design for multiple projects that the operator files with the application or has previously filed with the appropriate division district office. This is new language created by OCD. The source of the idea for the proposed language derived from the Task Force consensus language regarding engineering design plans and a standard design for temporary pits. Such information is required for a proper review of the application in order to determine approval or denial. Once again, the OCD's intent is the same as that as for a temporary pit: to ensure that closed-looped systems are properly designed, and constructed; a closure plan is approved and in place for the immediate implementation of closure; and to ensure that the operator has a complete understanding of the operational requirements of the Rule. As you will notice, the engineering design plan for a closed-loop system does not require a hydrogeologic report. This is due to the ability of a closed-loop system to recycle and reuse process drilling fluids that results in drier, less saturated waste solids with a reduced volume. Applicants of closed-looped systems that request to implement an on-site closure method will be required to submit information to demonstrate compliance to the specified siting criteria. Energen has recommended to omit closed-

looped systems from the requirements of the submittal of an application, including the engineering design plan, the submittal and approval of a closure plan, and the approval of a permit. Such a change would allow operators of closed-looped systems to not be regulated by OCD, therefore prohibiting OCD the authority to deny, suspend, or modify their operations. Certain parties (Industry Committee/Yates Petroleum Corporation) have recommended to that the reference to "applicable manufacturers' recommendations" be removed for temporary pits and closed-looped systems. Their justification is that "there are not manufacturers" of temporary pits or closed-looped systems. They are some what correct. There are installers of temporary pits and closed-looped systems and manufacturers of geomembrane material installed in the design and construction of temporary pits and closed-looped systems. The installer use the applicable manufacturers' recommendations when installing the geomembrane.

The IPANM has suggested that the last sentence be modified to allow applicants reference a standard design regardless of which company may have submitted it. OCD is opposed to such a change. If the change is accepted it will create a delay in the review of the application due to the district office having to locate the referenced design in order to determine if the design is appropriate since it will not be a design submitted by that party. By not changing the language, industry can create a standard design and submit it each time, which will expedite the review process. The intent of the application process is to have the applicant to submit the appropriate information that will allow OCD expedite the review. By requiring OCD the search files to determine which standard design by which pervious applicant is being proposed, the application review process will be extended and the consideration for approval will be delayed. It is not OCD intent to create such a delay.

(4) Below-grade tanks. An engineering design plan for a below-grade tank shall use appropriate engineering principles and practices and follow applicable manufacturers' recommendations. The engineering design plan shall include operating and maintenance procedures, a closure plan and a hydrogeologic report that provides sufficient information and detail on the site's topography, soils, geology, surface hydrology and ground water hydrology to enable the appropriate division district office to evaluate the actual and potential effects on soils, surface water and ground water. An engineering design plan for a below-grade tank may incorporate by reference a standard design for multiple below-grade tanks that the operator files with the application or has previously filed with the appropriate division district office. This is new language created by OCD. The current rule, Rule 50, requires a permit for below-grade tanks. The Task Force also recommended the requirement of permits for below-grade tanks. In order to ensure that a below-grade tank is properly designed, constructed and closed, that the placement of a below-grade tank satisfies the siting criteria, the OCD requires the submittal of an engineering design plan for review. Without it, a proper assessment and determination cannot be performed. Once again, the OCD's intent is the same as that as for a temporary pit: to ensure that below-grade tanks are properly sited, designed, and constructed; a closure plan is approved and in place for the immediate implementation of closure; and to ensure that the operator has a complete understanding of the operational requirements of the Rule.

The IPANM has suggested that the last sentence be modified to allow applicants reference a standard design regardless of which company may have submitted it. OCD is opposed to such a change. If the change is accepted it will create a delay in the review of the application due to the district office having to locate the referenced design in order to determine if the design is appropriate since it will not be a design submitted by that party. By not changing the language, industry can create a standard design and submit it each time, which will expedite the review process. The intent of the application process is to have the applicant to submit the appropriate information that will allow OCD expedite the review. By requiring OCD the search files to determine which standard design by which pervious applicant is being proposed, the application review process will be extended and the consideration for approval will be delayed. It is not OCD intent to create such a delay.

C. Closure plans. A closure plan that an operator submits in an engineering design plan, or any other closure plan required pursuant to 19.15.17 NMAC, shall describe the proposed closure method and the proposed procedures and protocols to implement and complete the closure. The OCD created this subsection with the intent to inform and educate applicants of the anticipated information required for a proper closure plan submittal. The current Rule 50 does not specify any prescribed closure methods or provided detail protocols for a complete closure. The proposed rule does. A closure plan shall demonstrate which identified closure method the applicant or operator proposes and state how they will comply with the closure requirement section, Section 13, of the proposed rule. For example: if an applicant proposes to close a temporary pit by the method of waste removal (dig and haul), the applicant shall describe such activities as the removal and disposal of free liquids, including the identification of the proposed disposal facility; the method of treatment to stabilize the contents of the pit (if necessary); the excavation

of the pit contents and liner material; the testing and sampling protocol to determine and/or delineate a release beneath the temporary pit; and if a release has not occurred, instructions describing the backfilling of the excavation, the installation of the prescribed soil cover, and the re-vegetation of the impacted area.

(1) If the operator proposes an on-site closure method, the operator shall also propose other methods to be used if the initial method does not satisfy the on-site closure standards specified in Subparagraph (d) of Paragraph (2) of Subsection F of 19.15.17.13 NMAC or, if applicable, other on-site closure standards that the environmental bureau in the division's Santa Fe office approves. OCD received several comments from Task Force expressing concerns regarding re-notification if the initial proposed on-site closure method cannot be achieved. The OCD created this paragraph with the intent to inform and educate applicants to address all scenarios in case the initial proposal for on-site closure cannot be achieved. An example or scenario would be if the operator or applicant proposed to implement the on-site closure method of deep trench burial, was able to satisfy the siting criteria and obtain the surface owner's written authorization, and stated in the closure plan that no treatment would be required because the pit contents will not exceed the deep trench burial standards. If this closure plan is approved and the pit contents do not satisfy the standards for deep trench burial, the options available to the operator are to request a modification to the closure plan if they continue to pursue an on-site closure method (which would involve obtaining the surface owner's written authorization), pursue an alternative closure method under exceptions which would require public or request administrative approval to dig and haul. OCD propose language recommends that applicant or operator provide a comprehensive closure plan to address all scenarios, such as including provisions if the pit contents exceed the standards, such as proposing a treatment method. It is recommended in order to prevent multiple requests for modifications to the permit and mailing and posting of additional notices for each modification. Energen has recommended that this provision be omitted. Such a change would eliminate instructions to prevent multiple modifications and addition notice and would create delays in closure.

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

(3) An operator of an existing unlined, temporary pit or an existing below-grade tank, identified under Paragraphs (3) or (4) of Subsection A of 19.15.17.13 NMAC, shall submit the respective closure plan required under the transitional provisions of Subsection B of 19.15.17.17 NMAC to the appropriate division district office. The OCD created these paragraphs (2) and (3) with the intent to notify and instruct operators required to submit a closure plan, but who are not seeking a permit, to which office of the OCD the plan should be submitted. Energen has recommended that this provision be omitted. Such a change would eliminate instructions to inform operators which office they should submit their closure plan.

(4) An operator shall include in the permit application an engineering design plan with an attached closure plan. The OCD created this paragraph with the intent to inform and remind applicants that a closure plan is required in or as part of the engineering design plan. Certain parties (Industry Committee/Yates Petroleum Corporation) have recommended that this provision be omitted, due to it being require elsewhere in the proposed rule. OCD provided this provision based upon the recommendation of legal consul. It serves as a reminder to applicants.

D. Filing of permit application.

(1) Permanent pits and exceptions requested pursuant to 19.15.17.15 NMAC. An operator shall file an application, form C-144, and all required attachments with the environmental bureau in the division's Santa Fe office to request approval to use or construct a permanent pit or request an exception pursuant to 19.15.17.15 NMAC and shall provide a copy to the appropriate division district office. OCD proposes that all exceptions and permanent pit application be submitted to the Santa Fe office for consideration of approval. The Task Force suggested that the Santa Fe office be responsible for the review of applications for permanent pits due to the technical complexity and similarity to evaporation ponds permitted under Rule 36, in which the Santa Fe office currently processes. The intent is to have one central office process exceptions in order to establish uniformity and regulatory consistency in the decision and determination of approvals and denials.

(2) Temporary pits, closed-loop systems and below-grade tanks. To request approval to use or construct a temporary pit, closed-loop system or below-grade tank, an operator shall file an application, form C-144, and all required attachments with the appropriate division district office. The Pit Rule Task Force consensus language suggested that operators should apply to the district for a permit to construct or use a pit, below-grade tank, or closed-loop system at an upstream facility. OCD agreed and incorporated this concept into the Rule.

[19.15.17.9 NMAC - Rp, 19.15.2.50 NMAC, //07]

19.15.17.10 SITING REQUIREMENTS: The development of the siting criteria evolved from the Pit Rule Task Force. Siting criteria, such as watercourse, lakebed, sinkhole, or playa lake, wetland, wellhead protection areas currently exist for pits in Rule 50. The Task Force only addressed temporary pits, permanent pits, and emergency pits during their deliberations.

A. Except as otherwise provided in 19.15.17 NMAC.

(1) An operator shall not locate a temporary pit or below-grade tank: The decision to apply the siting criteria of temporary pits to below-grade tanks is based upon operational, safety, and practical application concerns. The proper placement, construction, and operation of a below-grade tank establish a cumulative level of protection to prevent contamination of fresh water and protect human health and environment.

(a) where ground water is less than 50 feet below the bottom of the temporary pit or below-grade tank; The distance or separation to ground water from the bottom of the temporary pit or below-grade tank was a non-consensus item for the Task Force. Concerned citizen and local governmental members of the Task Force suggested 100 foot separation for adequate protect of ground water. Some industry members of the Task Force suggested as little as two feet of separation. Discussions amongst Task Force members revealed that a current investigation of an existing pit with confirmed contamination at least 30 feet below the pit. OCD's intent to require a 50 foot separation from the bottom of the pit or tank to ground water is to provide adequate protect of fresh water. An example of compliance for this siting criterion would be current ground water data from such reliable sources as the NM State Engineers Office, USGS or real-time data obtained from nearby wells. This information would be provided as part of the hydrogeologic report of the engineer design plan. Mr. Wayne Price has discussed the topic of the 50 foot separation in detail. **FN #12 & 13** *The 50 foot separation to ground water provides a minimum level of protection to support a proper construction and installation. The combination of a properly installed prescribed design and the 50 foot separation is required to establish a cumulative level of protection for fresh water, public health, and the environment.* Energen has recommended that this provision be omitted from the proposed rule. Such a change would allow operators the opportunity to install temporary pits and below-grade tanks in ground water.

(b) within 300 feet of a continuously flowing watercourse, or 200 feet of any other watercourse, lakebed, sinkhole or playa lake (measured from the ordinary high-water mark), unless the appropriate division district office approves an alternative distance based upon the operator's demonstration that surface and ground water will be protected; **FN #14** *The 30 feet presented in the Task Force Summary report is colored red; indicating it was a non-consensus item. The initial or original distance prior to the final Task Force meeting was 200 feet. In the final Task Force meeting some members suggested a shorter setback of 30 feet, which was presented as a non-consensus item in the Task Force Summary report. Other opposed the 30 foot recommendation based upon the impracticability of sufficient room or area to operate large machinery (backhoes, track-hoes, and front-end loaders).* OCD agrees with this assessment. The construction of a temporary pit requires anchor trenches to secure the liner in place during operations, utilizing a portion of the setback area. The operation of a temporary pit or below-grade tank requires the operator to install and implement diversion measures to control surface water on, which is usually the construction of berms or ditches that will restrict the use of the setback area. Between the construction of the anchor trench and the diversion methods there will be little or no room remaining for proper operation of the pit or below-grade tank. A 200 foot setback allows ample room for the construction and operation of the pit or below-grade tank. It also provides the operator additional area to implement measures to prevent erosional run-off from the site into surface water. An example of compliance for this siting criterion would be the submittal of a site-specific topographic map with the appropriate scale. This information would be provided as part of the hydrogeologic report of the engineer design plan. Certain parties (Industry Committee/Yates Petroleum Corporation) have suggested to modify the proposed language reduce the setback to 100 feet and limit it to only a watercourse, lakebed, sinkhole or playa lake and locate such activities "safely" above the high water mark. Such a change would allow operators to construct a temporary pit either next to or within less than 5 feet of a watercourse or depression. Such a change would increase the chance of the surface water contamination from erosional and storm water run-off. The Industry Committee and Yates Petroleum Corporation have also requested this change to the same provision for excavated material and on-site closure

The IPANM has suggested to modify the proposed language reduce the setback to 10 feet. Their justification is that it "is more than ample. A leak from the pit lining is not going to cause the contents to go sideways. Groundwater also has to be more than 50' below already per (a). In addition, with the lining requirements of the proposed rule, it shouldn't matter how far away the non-flowing water is." The justification provided by IPANM does not demonstrate in concern to erosional run-off and potential surface water contamination, nor does consider the required design and construction features of a temporary pit and operational requirements of the proposed rule. One of the most basic considerations not addressed is practicality of working around the pit. As for the movement of

liquids from a release, free liquids released from a pit or any other type of containment can and will move in all directions (sideways, up, and down) by diffusion, capillary pull, and hydraulic head. IPANM has also requested this change to the same provision for permanent pits, excavated material, and on-site closure.

Energen and Devon have recommended that this provision be replaced with the siting criteria of Rule 50. "No pit shall be located in any watercourse, lakebed, sinkhole or playa lake. Pits adjacent to any such watercourse or depression shall be located safely above the ordinary high-water mark of such watercourse or depression. No pit shall be located in any wetland. The division may require additional protective measures for pits located in groundwater sensitive areas or wellhead protection areas." Devon has also requested this change to the same provision for excavated material and on-site closure. Energen has also requested this change to the same provision for permanent pits. Such a change would increase the chance of the surface water contamination from erosional and storm water run-off.

(c) within 300 feet from a permanent residence, school, hospital, institution or church in existence at the time of initial application; **FN #15** *This is Task Force consensus language. Not all municipalities (City, Towns, Villages, or Counties) have established ordinances to address the location of drilling and a pit or below-grade tank, especially in rural areas. This concern was discussed during the Task Force committee meetings. In the final Task Force meeting the Task Force agreed to reduce the distance from 1000 feet to 300 feet. OCD agrees with the assessment of the Task Force and has proposed the setback requirement to provide (or it might be better said "establish") an equivalent level of protection for all individuals and communities, especially for those without established ordinances. The 300 foot setback may expand to 500 or 1000 if the proposed structure or structures may have a fresh water well or wells present at the time of application. An example of compliance for this siting criterion will most likely be a check off box with a confirmation or certification statement for signature on the C-144 form.*

(d) within 500 horizontal feet of a private, domestic fresh water well or spring that less than five households use for domestic or stock watering purposes, or within 1000 horizontal feet of any other fresh water well or spring, in existence at the time of initial application; This is Task Force consensus language. The proposed language is the definition for a wellhead protection area, as defined in 19.15.1.7 NMAC. The protection of a wellhead protection area currently exists in Rule 50. OCD's intent is to protect existing and established fresh water sources, thus protecting public health and the environment. An example of an expectation of compliance for this siting criterion would be current data from the NM State Engineers Office, which would be provided as part of the hydrologic report of the engineer design plan and a check off box with a confirmation or certification statement for signature on the C-144 form. Certain parties (Industry Committee/Yates Petroleum Corporation) have recommended to reduce the setback of a fresh water well or spring to 500 feet. Their justification is that the OCD proposal "provides greater protection to public wells and springs." Such a change would allow operators to construct a temporary pit or below-grade tank within a wellhead protection area, which is not the intent of the proposed provision and conflicts with the requirements operators have been and are currently complying with today. The Industry Committee and Yates Petroleum Corporation have also requested this change to the same provision for on-site closure.

(e) within incorporated municipal boundaries or within a defined municipal fresh water well field covered under a municipal ordinance adopted pursuant to NMSA 1978, Section 3-27-3, as amended, unless the municipality specifically approves; The Task Force proposed language that only addressed the incorporated municipal boundaries and the ability of the municipality to specifically approve an alternative setback. The generation of the siting criterion stemmed from concerns associated with population density and the potential of future construction over buried waste material. **FN #16** *OCD provided the additional language addressing the municipal fresh water well fields due to cases where such well fields may be located outside or separate from the incorporated municipal boundary. The additional provision identifies Section 3: Potable: jurisdiction over water facilities and sources of Article 27: Water Facilities of Chapter 3: Municipalities of the New Mexico Statute, which authorizes the jurisdiction of the municipality to protect its water facilities and water from pollution, which extends within and without its boundary to all territory occupied by the water facilities; all reservoirs, streams, and other sources supplying the reservoirs and streams; and five miles above the point from which the water is taken. By doing so, it ensures the protection of fresh water, public health and the environment. An example of an expectation of compliance for this siting criterion would be a check off box with a confirmation or certification statement for signature on the C-144 form and a written statement from the municipality approving and identifying an alternative to the standard. The municipality may approve an alternative, but for clarification it would not trump the stricter or more stringent other siting criteria in the paragraph.*

(f) within 500 feet of a wetland; This is Task Force consensus language. The protection of a wetland area currently exists in Rule 50. The generation of the siting criterion stemmed from concerns associated with the sensitivity of wetlands due to surface water impacts from contaminants and erosional run-off. By establishing a setback to a wetland, it reduces the risk of contamination to surface water and ground water, thus protecting public health and the environment. An example of compliance for this siting criterion would be the submittal of a site-specific topographic map. This information would be provided as part of the hydrologic report of the engineer design plan.

(g) within the area overlying a subsurface mine, unless the appropriate division district office specifically approves the proposed location based upon the operator's demonstration that subsurface integrity will not be compromised; This is Task Force consensus language. The intent is to ensure that a temporary pit or below-grade tank is constructed in an area that is structurally sound. If placed over a shallow or unstable subsurface mine, a temporary pit or below-grade tank could collapse in on the mine and create a release or endanger workers. An example of compliance for this siting criterion would be a written response and assessment from the Mining and Mineral Division which identify the legal description of the proposed area that was assessed. This information would be provided as part of the hydrologic report of the engineer design plan.

(h) within an unstable area, unless the operator demonstrates that it has incorporated engineering measures into the design to ensure that the temporary pit's or below-grade tank's integrity is not compromised; or This is Task Force consensus language. The intent is to ensure that a temporary pit or below-grade tank is constructed in an area that is structurally sound. Examples of an unstable area would include areas of poor foundation conditions, areas susceptible to mass earth movements and Karst terrain areas where Karst topography is developed as a result of dissolution of limestone, dolomite or other soluble rock. OCD has proposed a definition for "unstable area" in 19.15.1.7 NMAC, general definitions, that can be applied to all OCD rules unless specifically defined within the rule. An example of compliance for this siting criterion would be data from such reliable sources as the New Mexico Bureau of Geology & Mineral Resources, USGS, or NM Geological Society and the submittal of a topographic map. This information would be provided as part of the hydrologic report of the engineer design plan.

(i) within a 100-year floodplain. This is Task Force consensus language. The intent of this language is to ensure that a temporary pit or below-grade tank is *not* constructed in an area subject to a 100 year flood event. This siting requirement prevents the flooding and/or washing away of temporary pits or below-grade tanks. An example of compliance for this siting criterion would be the submittal of FEMA map. This information would be provided as part of the hydrologic report of the engineer design plan. Energen have suggested that this provision be omitted. Such a change would subject such activities to flooding and overflowing, causing it to wash away during a flood event. Energen has also requested this change to the same provision for permanent pits.

The examples of compliance for the siting criteria are only a few. Each proposal will have to be assessed on a case-by-case basis. In some cases, OCD may have knowledge or data that contradicts or opposes the information or statements provided in the application. In such instances, the OCD may request additional information or require a more extensive assessment of the proposed site. For example, the district office may require the installation of a piezometer if there is question about the 50 foot separation from ground water to the bottom of a temporary pit.

As you may have observed some of the siting criteria are subject to district office administrative approval for alternatives based upon specified demonstrations. Those not subject to administrative approval are open to exceptions, which must be pursued thorough the exception provisions and submitted to the Santa Fe office for consideration.

If an application is approved, a permit is issued, and an OCD representative visits the site during the operation of the permitted activity and observes that the siting criteria proposed in the approved application does not represent the location of the activities at the site, the OCD may determine that the operator is in breach of the conditions of the permit and the operator may be at risk of having their permit revoked or suspended.

(2) An operator shall not locate a permanent pit: The Task Force agreed that the siting criteria of permanent pits, due to their intended use to hold liquids for extended periods, should demonstrate compliance to the criteria established for evaporation ponds permitted under the surface waste management Rule – Part 36. OCD agrees with the intent of the Task Force consensus language. The difference in siting requirements between permanent pits and temporary pits is the setback from a permanent residence, school, hospital, institution or church. It is 1000 feet for a permanent pit rather than 300 feet. The 1000 foot distance is proposed in order to provide additional protection due to the duration of use, the size (most permanent pits hold large volumes of liquids), and

due to operation (most do not require full-time personnel on-site, they are un-manned). As already stated, the primary justification of the siting criteria is due to the similarities in design and function of permanent pits to evaporation ponds permitted under Part 36. Most, if not all, of the justifications and expressed intents provided for the siting criteria for temporary pits and below-grade tanks can be applied for permanent pits. As for examples of demonstrations for compliance, most of the suggested examples would be acceptable. The only one that might require a more detailed investigation would be the ground water determination. The OCD would most likely require the installation of a piezometer for verification.

- (a) where ground water is less than 50 feet below the bottom of the permanent pit;
- (b) within 300 feet of a continuously flowing watercourse, or 200 feet of any other watercourse, lakebed, sinkhole or playa lake (measured from the ordinary high-water mark), unless the environmental bureau in the division's Santa Fe office approves an alternative distance based upon the operator's demonstration that surface and ground water will be protected;
- (c) within 1000 feet from a permanent residence, school, hospital, institution or church in existence at the time of initial application;
- (d) within 500 horizontal feet of a private, domestic fresh water well or spring less than five households use for domestic or stock watering purposes, or within 1000 horizontal feet of any other fresh water well or spring, in existence at the time of initial application;
- (e) within incorporated municipal boundaries or within a defined municipal fresh water well field covered under a municipal ordinance adopted pursuant to NMSA 1978, Section 3-27-3, as amended, unless the municipality specifically approves;
- (f) within 500 feet of a wetland;
- (g) within the area overlying a subsurface mine, unless the environmental bureau in the division's Santa Fe office specifically approves the proposed location based upon the operator's demonstration that subsurface integrity will not be compromised;
- (h) within an unstable area, unless the operator demonstrates that it has incorporated engineering measures into the design to ensure that the permanent pit's integrity is not compromised; or
- (i) within a 100-year floodplain.

(3) An operator shall not locate material excavated from the construction of the pit: This topic was brought up and discussed by the Task Force. It was agreed upon by the Task Force to incorporate it in the siting requirements for temporary pits. OCD decided that it should be a separate item, expanded and applied to all pits. OCD expanded upon the Task Force siting criteria for the placement of excavated material, to include wetlands and floodplains, in order to prevent natural forces or events from displacing the excavated material and to prevent erosional run-off from contaminating surface water.

- (a) within 300 feet of a continuously flowing watercourse, or 200 feet of any other watercourse, lakebed, sinkhole or playa lake (measured from the ordinary high-water mark), unless the division approves an alternative distance based upon the operator's demonstration that surface and ground water will be protected;
- (b) within 500 feet of a wetland; or
- (c) within a 100-year floodplain.

B. An emergency pit is exempt from the siting criteria of 19.15.17 NMAC. OCD's intent to exempt emergency pits from the siting criteria is to promote the application of immediate safety protocols for the primary protection of human and public health and the secondary protection of fresh water and the environment. The emergency action section 19.15.17.14 NMAC requires operators to construct an emergency pit in a manner consistent with the requirements for a temporary pit.

C. An operator shall not implement an on-site closure method: OCD's intent to establish siting criteria for an on-site closure method is based upon the permanence or duration of the application of the closure. The siting criteria provide an additional level of protection over time. The siting criteria are the same as those for the construction of a temporary pit or below-grade tank. The conceptual idea is that an operator should not bury or leave waste material in a location that a temporary pit cannot be constructed, operated, or permitted. Most, if not all, of the justifications and expressed intents provided for the siting criteria for temporary pits can be applied for permanent pits. As for examples of demonstrations for compliance, most of the suggested examples would be acceptable. **FN #17** *OCD created this subsection to ensure that equivalent protection would be considered when implementing an on-site closure method.*

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

- (2) within 300 feet of a continuously flowing watercourse, or 200 feet of any other watercourse, lakebed, sinkhole or playa lake (measured from the ordinary high-water mark), unless the division approves an alternative distance based upon the operator's demonstration that surface and ground water will be protected;
- (3) within 300 feet from a permanent residence, school, hospital, institution or church in existence at the time of initial application;
- (4) within 500 horizontal feet of a private, domestic fresh water well or spring less than five households use for domestic or stock watering purposes or within 1000 horizontal feet of any other fresh water well or spring, existing at the time the operator files the application for exception;
- (5) within incorporated municipal boundaries or within a defined municipal fresh water well field covered under a municipal ordinance adopted pursuant to NMSA 1978, Section 3-27-3, as amended, unless the municipality specifically approves;
- (6) within 500 feet of a wetland;
- (7) within the area overlying a subsurface mine, unless the division specifically approves the proposed location based upon the operator's demonstration that subsurface integrity will not be compromised;
- (8) within an unstable area, unless the operator demonstrates that it has incorporated engineering measures into the design to ensure that the on-site closure method will prevent contamination of fresh water and protect public health and the environment; or
- (9) within a 100-year floodplain.

[19.15.17.10 NMAC - Rp, 19.15.2.50 NMAC, / /07]

19.15.17.11 DESIGN AND CONSTRUCTION SPECIFICATIONS: OCD's intent is to establish uniform design and construction standards that when applied collectively with proper siting and operations provides an adequate level of protection for fresh water, public health and the environment. The current Rule 50 does not provide any detailed design and construction specifications for pits or below-grade tanks. The current regulatory language only requires general performance based standards. Such as, "each drilling pit or workover pit shall contain, at a minimum, a single liner appropriate for conditions at the site." As I discuss this section, you will see that the proposed language not only establishes a minimum standard, but also provides guidance and instruction to the operator.

A. General specifications. An operator shall design and construct a pit, closed-loop system, below-grade tank or sump to contain liquids and solids and prevent contamination of fresh water and protect public health and the environment. The general specifications are just that, a general performance standard. In the footnote you will notice the query from Industry about sumps. **FN #18** *Sumps were a subject of discussion of the Task Force. The consensus Task Force language proposed operational requirements for operators of sumps. OCD incorporated the language into the operational requirements of the Rule. The permitting of sumps was discussed amongst Task Force members and it was agreed that the intended purpose of a sump is not to store waste material but be in place to capture material if a leak occurs, thus the proposed operational requirements would be sufficient to support OCD's ability for enforcement. The current and proposed definition originates from the definition provided in 19.15.2.7 NMAC, in definition section of the Part in which Rule 50 or Section 50 exists.* OCD concurs with the Task Force assessment of the operational requirements, but also thought it would be prudent to ensure that a sump be generally designed and constructed for proper containment and prevent contamination of fresh water and protect public health and the environment.

B. Stockpiling of topsoil. Prior to constructing a pit or closed-looped system, except a pit constructed in an emergency, the operator shall strip and stockpile the topsoil for use as the final cover or fill at the time of closure. The intent of this language is to provide instruction to operators to assist in the facilitation and implementation of best management practices that are goal oriented. The concept of stockpiling soil is not new. It currently exists and originates from the 2004 OCD guidelines.

C. Signs. The operator shall post an upright sign not less than 12 inches by 24 inches with lettering not less than two inches in height in a conspicuous place on the fence surrounding the pit, closed-loop system or below-grade tank, unless the pit, closed-loop system or below-grade tank is located on a well site that the operator controls. The operator shall post the sign in a manner and location such that a person can easily read the legend. The sign shall provide the following information: the operator's name; the location of the site by quarter-quarter or unit letter, section, township and range; and emergency telephone numbers. OCD's intent is to provide information and instruction to regulators, the general public, and operators to assist in the identification of the responsible party and contact information in order to resolve any emergencies or outstanding compliance and/or safety issues. Once again, the concept of requiring signs is not new. It originates from the 2004 OCD guidance.

D. Fencing. The Pit Rule Task Force consensus language for fencing was created to address safety issues for the protection of the public (especially children), wildlife, and livestock. The current Rule 50 does not provide any detailed construction specifications or application regarding fencing. The current rule only provides general performance based standards. It states, "All pits shall be fenced or enclosed to prevent access by livestock, and fences shall be maintained in good repair." OCD agrees with the Task Force that specific design and construction are needed in order to establish a minimum standard of protection.

(1) The operator shall fence or enclose a pit or below-grade tank in a manner that prevents unauthorized access and shall maintain the fences in good repair. Fences are not required if there is an adequate surrounding perimeter fence that prevents unauthorized access to the well site or facility, including the pit or below-grade tank. During drilling operations, the operator is not required to fence the edge of the pit adjacent to the drilling rig. The majority of the proposed wording in this provision is Task Force consensus language, except for the inclusion of below-grade tanks. As stated before, the main focus of the Task Force discussions were issues regarding pits. Thus, below-grade tanks and closed-loop systems were not always included in discussions regarding specific requirements. This left the OCD with the responsibility to determine which other permitted activities should be incorporated and covered by concepts suggested by the Task Force. In this case, the OCD decided that including the fencing requirement for below-grade tanks was prudent in order to establish a minimum level of protection for the public (especially children), wildlife, and livestock. The proposed language expands beyond the existing language in Rule 50 and informs operators that if the surrounding perimeter fencing satisfies the specified requirements below, additional fencing is not required. OCD agrees with the concept of the suggested Task Force language and incorporated it into the proposed rule.

(2) The operator shall fence or enclose a pit or below-grade tank located within 1000 feet of a permanent residence, school, hospital, institution or church with a chain link security fence, at least six feet in height with at least two strands of barbed wire at the top. The operator shall ensure that all gates associated with the fence are closed and locked when responsible personnel are not on-site. During drilling operations, the operator is not required to fence the edge of the temporary pit adjacent to the drilling rig. The siting requirement, minimum design specifications, and operational requirements are proposed to provide a minimum level of protection to the general public, especially when the operator or personnel are not on-site. The 1000 foot was recommended by the Task Force due to concerns of public safety. OCD agrees with the Task Force recommendation and has incorporated it into the proposed rule. Energen has suggested to reduce the setback to 300 feet. Such a change would allow operators to only use a four strand barbed wire fence, at 301 feet, to restrict unauthorized access and provide public safety. OCD does not feel that the setback is adequate.

(3) The operator shall fence any other pit or below-grade tank to exclude wildlife and livestock, with at least four strands of barbed wire in the interval between one foot and five feet above ground level. The appropriate division district office may approve an alternative to this requirement if the operator demonstrates that an alternative provides equivalent or better protection. The appropriate division district office may impose additional fencing requirements for protection of wildlife in particular areas. The minimum design specifications provided are primarily for the protection of wildlife and livestock. The language allows the OCD the opportunity to require additional fencing if the minimum specifications are not sufficient. This language and authority is in the current rule – Rule 50. Certain parties (Industry Committee/Yates Petroleum Corporation) have recommended to change the "five feet" to "four feet." Stating that the "standard fence height is four feet and establishing a five foot condition would require operators to purchase and install non-standard height fencing at great additional time and expense." I would like to clarify that the five feet refers to the required maximum height in which a strand of barbed wire must be installed or placed. This provision requires the installation of a barbed wire fence, which are commonly constructed and not pre-manufactured.

E. Netting. The operator shall ensure that a permanent pit or a permanent open top tank is screened, netted or otherwise rendered non-hazardous to wildlife, including migratory birds. Where netting is not feasible, the operator shall routinely inspect for and report discovery of dead migratory birds or other wildlife to the appropriate wildlife agency and to the appropriate division district office in order to facilitate assessment and implementation of measures to prevent incidents from reoccurring. The Pit Rule Task Force consensus language for netting is a modified and expanded version of the requirement in the existing rule. The new language requires routine inspections and reporting if netting is not feasible. It also allows the operator the chance to work with OCD to resolve any outstanding issues. OCD agrees with the concepts proposed in the Task Force language and has incorporated it into the proposed rule. As you will notice, there are no design specifications for netting. This is due to the multiple methods that can be applied or have yet to be proposed. OCD was unwilling to place a restriction on any practical proposed method.

F. Temporary pits. The operator shall design and construct a temporary pit in accordance with the following requirements. The intent of the proposed language is to incorporate specific design specifications into the regulations in order to establish a standard level of protection. Siting requirements, design and construction specifications, operational requirements and proper closure combined provide a cumulative level of protection to fresh water, public health and the environment. Much like the cumulative effects of each of the requirements just identified, so are the cumulative effects of a proper design, construction, and installation of a temporary pit.

(1) The operator shall design and construct a temporary pit to ensure the confinement of oil, gas or water to prevent uncontrolled releases. This is a modified version of Task Force consensus language. The proposed language informs the applicant or operator that proper sizing and construction are required. OCD agrees with the general concepts presented in the Task Force language and has incorporated them into the proposed rule. Certain parties have requested that "gas" be removed from the provision. Due to the multiple phases of gas, such as a liquid and vapor phase, OCD thought it was prudent to include it. Condensate would classify as a multi-phase constituent encountered during drilling.

(2) A temporary pit shall have a properly constructed foundation and interior slopes consisting of a firm, unyielding base, smooth and free of rocks, debris, sharp edges or irregularities to prevent the liner's rupture or tear. The operator shall construct a temporary pit so that the slopes are no steeper than two horizontal feet to one vertical foot (2H:1V). The appropriate division district office may approve an alternative to the slope requirement if the operator demonstrates that it can construct and operate the temporary pit in safe manner to prevent contamination of fresh water and protect public health and the environment. The Pit Rule Task Force consensus language for subgrade or foundation preparation derived from similar specifications in the 2004 OCD guideline. The current Rule 50 does not provide any instruction or specifications for the subgrade or foundation preparation in which the liner will be placed. OCD has discovered that one of the primary causes of liner integrity failure is due to the operator not preparing or properly preparing the foundation prior to the installation of the geomembrane liner material. Another issue addressed in the provision is the interior slopes of the temporary pit. Slopes steeper than 2H:1V place undue static stress on the liner material and seams as drilling fluids and cuttings accumulate and build up on the bottom of the pit. The elasticity or the ability of the geomembrane material to stretch does have its limits. Mr. Carl Chavez will demonstrate later to the Commission the importance of a properly prepared subgrade and its impact on the integrity of the liner material. Certain parties (Industry Committee/Yates Petroleum Corporation/IPANM) have recommended to omit the interior slope requirements. The Industry Committee and Yates Petroleum Corporation recommend "that slope be established to avoid undue stress on the liner system and not exceed the angle of repose." This is an example of a performance based provision. Such a change would allow operators to construction temporary pits with interior slopes of 90 degrees. Such an angle would create a safety issue if a person happen to fall into such a pit. From my own personal experience from the OCD sampling event, there were several instances where I would have not been able to get out of the pit or would have not been able to prevent myself from sliding further into the pit due to the steepness if the interior slopes and the slickness of the liner material.

(3) The operator shall design and construct a temporary pit with a geomembrane liner. The geomembrane liner shall consist of 20-mil string reinforced LLDPE or equivalent liner material that the appropriate division district office approves. The geomembrane liner shall be composed of an impervious, synthetic material that is resistant to petroleum hydrocarbons, salts and acidic and alkaline solutions. The liner material shall be resistant to ultraviolet light. Liner compatibility shall comply with EPA SW-846 method 9090A. **FN #19** *The determination of a liner specification or specifications was a non-consensus item for the Task Force. Several options (12-mil LLDPE, 20-mil PVC, HDPE, LLDPE, 30-mil PVC, and 60-mil HDPE geosynthetic material) were discussed. OCD's proposal of a 20-mil liner provides an observed higher level of protection in conjunction with proper siting and operations.* Mr. Carl Chavez will discuss the details regarding a proper liner. OCD's intent is to move away from the archaic practice of using unlined pits and substandard liners. Mr. Wayne Price has testified in detail on this subject.

(4) The operator shall minimize liner seams and orient them up and down, not across a slope. The operator shall use factory seams where possible. The operator shall overlap liners four to six inches before seaming, and orient seams parallel to the line of maximum slope, *i.e.*, oriented along, not across, the slope. The operator shall minimize the number of field seams in corners and irregularly shaped areas. Qualified personnel shall perform field seaming. OCD's intent is to ensure the proper placement of liner seams in order to prevent seam failures due to unavoidable design and construction static stresses. During the process of creating, reviewing, and revising the proposed rule, OCD accidentally removed some Pit Rule Task Force consensus language for liner seams. At this we wish to note for the record that OCD proposes an additional sentence be added to this paragraph. The new language shall read "The seams shall be welded." The current practice of field seaming is stitching, which resembles the

cotton string stitching applied to large bags of dry goods, such as dog food. When applied, stitching requires needling or sewing to connect the separate pieces of geomembrane material together, thus weakening the integrity of the geomembrane liner and creating a conduit or pathway in which fluids can escape. Geomembrane material, such as LLDPE, is designed to stretch. Elasticity is a characteristic of the material. The field seaming method of stitching is not designed to give. If stress is applied to a stitched seam, the geomembrane will give and stretch but the stitching will not, thus compromising the seam. Welded seam may involve the use of solvents (a chemical weld) or a thermal weld from such methods as heat seals, heat guns, dielectric seaming, extrusion welding and hot wedge techniques. Welded seams allow the installer to verify the integrity of the seam by performing a non-destructive test. A common non-destructive test would involve pressuring up the seam with a constant air pressure to determine if it is capable of sustaining the pressure. Such a test cannot be performed on stitched seams.

(5) Construction shall avoid excessive stress-strain on the liner. The intent of the proposed language is to inform applicants and operators that care is required in the installation of the geosynthetic liner material. If the operator installs the liner material in a manner in which it does not rest smoothly on the prepared foundation and the interior slopes exceed the 2:1 requirement, excessive stress and strain will be placed on the liner when the operator begins to collect fluids and solids into the temporary pit.

(6) Geotextile is required under the liner where needed to reduce localized stress-strain or protuberances that may otherwise compromise the liner's integrity. The proposed language is a modified version of the suggested Task Force language. The intent of the proposed language is to address situations or scenarios where the existing subgrade or foundation consists of rocks, debris, sharp edges or irregularities that may compromise the integrity of the liner material. The Task Force suggested that the Geotextile material "may" be required, making it optional and not specifying which party has the authority to make the determination. The language proposed by OCD states that it "is" required to ensure the protection of the liner.

(7) The operator shall anchor the edges of all liners in the bottom of a compacted earth-filled trench. The anchor trench shall be at least 18 inches deep. The Task Force recommended the concept of anchoring of the edges of the liner, but suggested an additional method to the use of an anchor trench. An undefined method that would prevent the pulling of the edge of the liner to the surface of the ground where it would be exposed to the wind as the liner settles in the pit. The most common application of such a method is to allow the edge of the liner to lie on the ground and place dirt on it. Mr. Von Gonten has shown photos in his slide that demonstrate the deficiency of this method. The anchor trench requirement ensures that the liner is secure and will not allow for erosion to occur beneath the pit, compromising its integrity or washing the liner edge into the pit below the fluid level creating the potential for or causing a release. IPANM has recommended that "the anchor trench shall be at least 18 inches deep" be omitted from the provision. Their justification is that "field evidence demonstrates that anchor trenches are not needed."

(8) The operator shall ensure that the liner is protected from any fluid force or mechanical damage at any point of discharge into or suction from the lined temporary pit. The intent of the proposed language is to protect the liner from damage during discharge into or suction from the pit. Photos shown during Mr. Von Gonten's slide demonstrate that some operators will stake rebar, fence post, and other items into or through the liner material in order to discharge into or suction from the pit, thus compromising the integrity of the liner material. The concept originates from the 2004 OCD guidelines and was recommended by the Task Force with a few additions. OCD has incorporated the Task Force version into the Rule.

(9) The operator shall design and construct a temporary pit to prevent run-on of surface water. A berm, ditch or other diversion shall surround a temporary pit to prevent run-on of surface water. During drilling operations, the edge of the temporary pit adjacent to the drilling rig is not required to have run-on protection if the operator is using the temporary pit to collect liquids escaping from the rig. The intent of the proposed language is to require the operator to implement measures that will divert surface water run-on away from the temporary pit and prevent the collection of run-on surface water in the pit, the overfilling and overflowing of fluids from the pit if collected, and any erosional issues around or beneath the pit that may compromise the integrity of the liner. The proposed language was recommended by the Task Force and incorporated into the rule. Von Gonten slide show.

(10) The size of a temporary pit shall not exceed 10 acre-feet, including freeboard. The proposed size limit was suggested by the Task Force. OCD modified the proposed language to include the 2 foot freeboard in the calculation of the size.

(11) The part of a temporary pit used to vent or flare gas during a drilling or workover operation that is designed to allow liquids to drain to a separate temporary pit does not require a liner, unless the appropriate division district office requires an alternative design in order to protect surface water, ground water and the environment. The proposed language recognizes and identifies current and common practices which are implemented during drilling. The installation of a liner would not always be prudent due to the result of the venting

and flaring of gas compromising the integrity of the liner material. In the case of lining an area subject to flaring gas, a liner would provide no protection. As for venting of gas, usually such events or activities include the venting of gas and liquids in which the force of the venting would compromise the liner, making it ineffective. The OCD would like to request from the Commission to add one additional sentence to this provision in order to provide clarification of the anticipated operational requirements regarding the part of a temporary pit used to vent or flare gas during a drilling or workover operation. The additional sentence would be added to the end of the provision and state "The operator shall not allow freestanding fluids to remain on the unlined part of a temporary pit used to vent or flare gas."

G. Permanent pits. The operator shall design and construct a permanent pit in accordance with the following requirements. **FN #21** *It was agreed upon by the Task Force that permanent pits would be designed and constructed in the same, if not a similar manner, as evaporation ponds under the surface waste management Rule (19.15.36 NMAC). Since the design and construction specifications for evaporation ponds were already established and in effect under the surface waste management Rule, the Task Force chose not to readdress the technical requirements.* OCD agreed with assessment of the Task Force, due to the nature and purpose of permanent pits to store and hold liquids for extended periods of time and the large volume of liquids commonly associated with such pits.

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

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

(3) The primary (upper) liner and secondary (lower) liner shall be geomembrane liners. The geomembrane liner shall consist of 30-mil flexible PVC or 60-mil HDPE liner, or an equivalent liner material the environmental bureau in the division's Santa Fe office approves. The geomembrane liner shall have a hydraulic conductivity no greater than 1×10^{-9} cm/sec. The geomembrane liner shall be composed of an impervious, synthetic material that is resistant to petroleum hydrocarbons, salts and acidic and alkaline solutions. The liner material shall be resistant to ultraviolet light. Liner compatibility shall comply with EPA SW-846 method 9090A. **FN #22** *The regulatory language provided a draft version to the Task Force mimicked the regulatory language of Part 36 for evaporation ponds, which allows an operator to use a three foot clay (in place of a synthetic liner) to construct the secondary liner in which the leak detection system is incorporated. As the regulatory language continues it refers to the upper and lower geomembrane liners.* OCD agrees with Dr. Neepser that the language from Part 36 may create some confusion. OCD has decided that a secondary liner constructed of three feet of clay is inappropriate for this design and proposes that both the primary and secondary are geomembrane liners.

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

(5) The operator shall minimize liner seams and orient them up and down, not across a slope. The operator shall use factory seams where possible. The operator shall ensure field seams in geosynthetic material are thermally seamed (hot wedge) with a double track weld to create an air pocket for non-destructive air channel testing. A stabilized air pressure of 35 psi, plus or minus one percent, shall be maintained for at least five minutes. The operator shall overlap liners four to six inches before seaming, and orient seams parallel to the line of maximum slope, *i.e.*, oriented along, not across, the slope. The operator shall minimize the number of field seams in corners and irregularly shaped areas. There shall be no horizontal seams within five feet of the slope's toe. Qualified personnel shall perform field seaming.

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

(7) The operator shall place a leak detection system between the lower and upper geomembrane liners that consists of two feet of compacted soil with a saturated hydraulic conductivity of 1×10^{-5} cm/sec or greater to facilitate drainage. The leak detection system shall consist of a properly designed drainage and collection and removal system placed above the lower geomembrane liner in depressions and sloped to facilitate the earliest possible leak detection. Piping used shall be designed to withstand chemical attack from oil field waste or leachate;

structural loading from stresses and disturbances from overlying oil field waste, cover materials, equipment operation or expansion or contraction; and to facilitate clean-out maintenance. The material the operator places between the pipes and laterals shall be sufficiently permeable to allow the transport of fluids to the drainage pipe. The slope of the interior sub-grade and of drainage lines and laterals shall be at least a two percent grade, *i.e.*, two feet vertical drop per 100 horizontal feet. The piping collection system shall be comprised of solid and perforated pipe having a minimum diameter of four inches and a minimum wall thickness of schedule 80. The operator shall seal a solid sidewall riser pipe to convey collected fluids to a collection, observation and disposal system located outside the permanent pit's perimeter. The operator may install alternative methods that the environmental bureau in the division's Santa Fe office approves.

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

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

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

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

H. Closed-loop systems. The intent of the proposed language is to instruct operators of which design and construction requirements apply depended on how the closed-loop system is utilized. Operators of closed-loop systems that use temporary pits must comply with the requirements for temporary pits. For operators of closed-loop systems that use drying pads, the OCD proposes less stringent design and construction requirements due to the ability of their method to reduce the waste volume and reduce the risk of contamination to fresh water, public health and the environment by extracting and removing fluids and liquids from the waste stream.

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

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

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

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

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

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

I. Below-grade tanks. The operator shall design and construct a below-grade tank in accordance with the following requirements. The proposed requirements for the design and construction of a below-grade tank is a combination of language proposed by the Task Force, regulatory language from the existing Rule (Rule 50), and language from the 2004 OCD guidelines. OCD's intent is to ensure that all below-grade tanks will have both secondary containment and leak detection. The secondary containment provided a level of protection for fresh water, public health and the environment, if the integrity of the primary tank fails. The leak detection system is the mechanism that allows the operator to monitor the integrity of the primary tank.

(1) The below-grade tank's side walls, where the tank's bottom is below-grade, shall be open for visual inspection for leaks. The below-grade tank's bottom shall be equipped with an underlying mechanism to divert leaked liquid to a location that can be visually inspected. A below-grade tank not meeting these conditions shall be in a vault or have a double wall that will contain any leaked liquids. Based upon comments and recommendations provided from various industry groups, the OCD has determined there seems to be some misunderstanding or confusion of the provisions regarding below-grade tanks. Multiple parties have stated that "a double wall below-grade tank located in a pit or vault be exempt from the secondary containment requirement." OCD incorporated the recommended Task Force language provided here in Paragraph (1) in order to clarify below-grade tanks in vaults or having a double wall. OCD also incorporated additional language from the 2004 guidelines, under Paragraph (6) which specifically states that a below-grade tank system can consist of a double wall system.

(2) A below-grade tank shall have secondary containment and leak detection. The concepts of secondary containment and leak detection and annual integrity testing expressed in Paragraphs (2) and (3) originate from the existing Rule 50. The Task Force made the same recommendation and also included the five year grace period for operators to retrofit or equip existing below-grade tanks. OCD agrees with the Task Force recommendations has integrated the concepts into the proposed Rule.

(3) The operator of a below-grade tank constructed prior to _____, 200_ [effective date] that does not have secondary containment and leak detection shall test its integrity annually. If the existing below-grade tank does not demonstrate integrity, the operator shall promptly install a below-grade tank that complies with Paragraph (2) of Subsection I of 19.15.17.11 NMAC. In any event, the operator shall equip or retrofit such below-grade tank with secondary containment and leak detection, or close it, within five years after _____, 200_ [effective date]. Since the posting of the proposed rule, OCD has received or reviewed comments from parties stating that the proposed language mandates that all below-grade tanks without secondary containment and leak detection will have to be closed and replaced with new tanks with secondary containment and leak detection. This assessment is not a correct interpretation of the requirements. The proposed language of the Rule allows operators the opportunity to retrofit their existing tanks. An example of a retrofit would be placing a tank within an existing tank. The new tank would be the primary tanks and existing tank would serve as secondary containment. Some form or method of leak detection would have to be incorporated. A scenario where a retrofit would not be allowed, would be if the integrity of the existing tank was compromised and could not provide secondary containment. Then a replacement might be required.

(4) The operator shall ensure that a below-grade tank is constructed of materials resistant to the below-grade tank's particular contents and resistant to damage from sunlight. Since the posting of the proposed rule, comments have been provided to modify some of the language for this provision. Certain parties (Industry Committee/Yates Petroleum Corporation) have recommended replacing "resistant" with "compatible," the term "compatible" weakens the standard. The intent of the provision is to ensure that the below-grade tank is capable of containing its content. Having the tank constructed of material resistant to its contents would suggest that the material would not allow the contents to penetrate or pass through the material. If the tank is constructed of material compatible with its contents, it does not imply that it would be able to contain the contents. A simple example of comparison would be wax coated paper cup and a plastic cup. A wax coated paper cup would be compatible to holding water, but not resistant. Over time, the integrity of the wax coated paper cup would become compromised by the water (the contents). The resistance nature of the plastic cup would not. As to the application of this provision, what material would be considered "compatible"? Such a change could result to unlined tanks, because soil is compatible to drilling fluids and solids. Another recommended change by (Industry Committee/Yates Petroleum Corporation) is to restrict the resistance of the material of the tanks to damage caused from "prolonged exposure" to sunlight, thus allowing the use of material subject to damage from any duration of light. Be it short or intermittent. OCD's intent of the provision is to ensure that a below-grade tank is constructed of material resistant to sunlight damage regardless of the length of exposure. Paragraphs (1) through (4) are Task Force consensus items in which the OCD agreed with the recommended concepts and incorporated into the proposed Rule.

(5) A below-grade tank system shall have a properly constructed foundation consisting of a level base free of rocks, debris, sharp edges or irregularities to prevent punctures, cracks or indentations of the liner or tank bottom. The proposed language for this provision originates from the 2004 OCD guidelines. OCD incorporated the concept to ensure the integrity of the below-grade tank system. A properly constructed foundation provides an additional level of security that the secondary containment component will not be compromised.

(6) A below-grade tank system shall consist of either a double wall system with the capability to detect leaks or a tank placed within a geomembrane lined collection system, or an alternative system that the appropriate division district office approves based upon the operator's demonstration that an alternative provides equivalent or better protection. The proposed language for this provision originates from the 2004 OCD guidelines. Once again, I would like to identify where the Rule allows the use of double wall systems in below-grade tanks. The proposed provision also identifies two additional options. OCD has modified the 2004 guideline language and incorporated it into the rule. The intent of the proposed language is to identify approvable options for below-grade systems.

(7) The operator shall design and construct a below-grade tank system in accordance with the following requirements, if the below-grade tank system consists of a tank placed within a geomembrane lined collection system. The proposed language for this provision and the subparagraphs below originate from the 2004 OCD guidelines. The intent of the proposed language is to instruct and inform applicants and operators of the design and construction specifications required for a below-grade tank system that consists of a tank placed within a geomembrane lined collection system.

(a) The operator shall install a geomembrane liner upon the constructed foundation, specified in Paragraph (5) of Subsection I of 19.15.17.11 NMAC, prior to the placement of the collection system and tank. The installed geomembrane liner shall extend above the existing grade. The liner shall consist of 30-mil flexible PVC or 60-mil HDPE liner, or an equivalent liner material that the appropriate division district office approves. The geomembrane liner shall have a hydraulic conductivity no greater than 1×10^{-9} cm/sec. The geomembrane liner

shall be composed of an impervious, synthetic material that is resistant to petroleum hydrocarbons, salts and acidic and alkaline solutions. The liner material shall be resistant to ultraviolet light. Liner compatibility shall comply with EPA SW-846 method 9090A.

(b) The operator shall install slotted or perforated drainage pipe (lateral) on the geomembrane liner with the drainage pipe sloped at least one inch per 10 feet towards the collection system. The drainage pipe shall be at least one inch in diameter.

(c) The operator shall cover the drainage pipe with sand, gravel or other material with sufficient permeability to convey fluids to the drainage pipe.

(d) The operator shall install the tank upon the lined collection system and connect a riser pipe to the collection system. The riser pipe shall be at least two inches in diameter.

(e) The operator shall secure the secondary liner to the tank above the ground surface in a manner that prevents rainwater from entering the space between the tank and liner.

(8) The operator shall construct a below-grade tank to prevent overflow and the collection of surface water run-on. The intent of this provision is pretty straight forward. It originates from the OCD 2004 Pit and Below-Grade Tank guidelines.

J. On-site deep trenches for closure. The operator shall design and construct an on-site deep trench for closure, specified in Paragraph (2) of Subsection B of 19.15.17.13 NMAC or Paragraph (2) of Subsection D of 19.15.17.13 NMAC, in accordance with the following requirements. The OCD has created a new subsection which specifies the design and construction requirements of on-site deep trenches for on-site closure. The intent of the proposed language is to instruct and educate operators of some of the expected and anticipated information and details that should be included in a closure plan if the operator proposes this method. Since the posting of the proposed rule, comments have been provided recommending that the design and construction specification for on-site deep trenches be incorporated into the closure requirements. OCD has formatted the rule with the intent to keep permit, application, siting, design and construction, operation, and closure requirements separate. By doing so and not directly integrating and combining one into the other or others, it provides clear instruction and direction to applicants and operators which provisions apply when general references, such as siting requirements, design and construction specifications, operation requirements, and closure requirements, are requested.

(1) The operator shall locate the trench to satisfy the siting criteria specified in Subsection C of 19.15.17.10 NMAC and Subparagraph (e) of Paragraph (2) of Subsection F of 19.15.17.13 NMAC and excavate to an appropriate depth that allows for the installation of the geomembrane bottom liner, geomembrane liner cover and the division-prescribed soil cover required pursuant to Paragraphs (2) and (3) of Subsection G of 19.15.17.13 NMAC. The intent of this provision is to notify the operator of the variables that must be considered and demonstrated prior to pursuing this closure method. The recommended initial consideration is the siting criteria. It is basically the siting criteria for a temporary pit or below-grade tank. The intent of the proposed language is to prevent the burial waste in a location that a lined temporary pit would be prohibited.

(2) An on-site deep trench shall have a properly constructed foundation and side walls consisting of a firm, unyielding base, smooth and free of rocks, debris, sharp edges or irregularities to prevent the liner's rupture or tear. OCD has discovered that one of the primary causes of liner integrity failure is due to the operator not preparing or properly preparing the foundation. For on-site deep trench burial, OCD believes that that same care and considerations that are taken to construct a temporary pit should be applied when constructing a deep trench for burial of waste.

(3) Geotextile is required under the liner where needed to reduce localized stress-strain or protuberances that may otherwise compromise the liner's integrity. The intent of the proposed language is to address situations or scenarios where the existing subgrade or foundation consists of rocks, debris, sharp edges or irregularities that may compromise the integrity of the liner material.

(4) An on-site deep trench shall be constructed with a geomembrane liner. The geomembrane shall consist of a 20-mil string reinforced LLDPE liner or equivalent liner that the appropriate division district office approves. The geomembrane liner shall be composed of an impervious, synthetic material that is resistant to petroleum hydrocarbons, salts and acidic and alkaline solutions. The liner material shall be resistant to ultraviolet light. Liner compatibility shall comply with EPA SW-846 method 9090A. The determination of a liner specification or specifications was a non-consensus item for the Task Force. Several options (20-mil PVC, HDPE, LLDPE, 30-mil PVC, and 60-mil HDPE geosynthetic material) were discussed. OCD's proposal of a 20-mil LLDPE liner provides an observed higher level of protection in conjunction with proper siting and construction. Mr. Carl Chavez will discuss the details regarding a proper liner. The first level of protection is the siting criteria. The second level of protection is the geomembrane liner and the integrity of the liner, which involves proper construction. The third level of protection is the proper treatment and concentration of contaminants of the waste

material (which will be discussed later in closure requirements). The fifth level of protection is the proper placement of waste into the properly constructed deep trench. The sixth level of protection is the proper placement and installation of the geomembrane cover. The seventh level of protection is the installation of the prescribed soil cover and the final level of protection is re-vegetation. Each level of protection supports the next. Working backwards, establishing vegetation prevents erosion and the vegetation extracts water from the soils; the prescribed soil cover allows for the establishment of the vegetation and the design facilitates evapotranspiration – which reduces the downward movement of water; the geomembrane cover prevents water from coming into contact with the buried waste, thus preventing the accumulation of water in the lined deep trench and the leaching of contaminants from the waste material; the proper placement of the waste ensures that the waste material placed into the lined trench (not outside of the liner) and the outer edges of the trench liner is overlapped over the waste material to properly enclose or encapsulate the waste material; proper treatment of the waste material ensures that it can pass the paint filter test, reduce the contaminant concentrations, that reduces the probability of leachate accumulation on the liner; a properly constructed lined deep trench (proper foundation, placement of seams, use of geotextile) secures the integrity of the geomembrane liner material which prevents the release from the buried waste material; the siting criteria is the first and last line of defense, if any of the previously mentioned provisions are not implemented properly then the assessment of the location and the depth or distance to groundwater will be crucial. Mr. Hansen's modeling demonstrates the importance of proper closure and siting.

(5) The operator shall minimize liner seams and orient them up and down, not across a slope. The operator shall use factory seams where possible. The operator shall overlap liners four to six inches before seaming, and orient seams parallel to the line of maximum slope, *i.e.*, oriented along, not across, the slope. The operator shall minimize the number of field seams in corners and irregularly shaped areas. Qualified personnel shall perform field seaming. OCD's intent is to ensure the proper placement of liner seams in order to prevent seam failures due to unavoidable design and construction static stresses. During the process of creating, reviewing, and revising the proposed rule, OCD accidentally removed some Pit Rule Task Force consensus language for liner seams. At this we wish to note for the record that OCD proposes an additional sentence be added to this paragraph. The new language shall read "The seams shall be welded." The current practice of field seaming is stitching resembles the cotton string stitching applied to large bags of dry goods, such as dog food. When applied, stitching requires needling or sewing to connect the separate pieces of geomembrane material together, thus weakening the integrity of the geomembrane liner and creating a conduit or pathway in which fluids can escape. Welded seam may involve the use of solvents (a chemical weld) or a thermal weld from such methods as heat seals, heat guns, dielectric seaming, extrusion welding and hot wedge techniques. Welded seams allow the installer to verify the integrity of the seam by performing a non-destructive test. A common non-destructive test would involve pressuring up the seam with a constant air pressure to determine if it is capable of sustaining the pressure. Such a test cannot be performed on stitched seams.

(6) The operator shall install sufficient liner material to reduce stress-strain on the liner. The intent of the proposed language is to inform applicants and operators that care is required in the installation of the geosynthetic liner material. If the operator installs the liner material in a manner in which sufficient liner material is not utilized and the liner does not rest smoothly on the prepared foundation, excessive stress and strain will be placed on the liner when the operator begins to place waste material into the trench or the liner will collapse into the trench and the waste material will be placed on top of the liner and not into the lined trench..

(7) The operator shall ensure that the outer edges of all liners are secured for the placement of the excavated waste material into the trench. The intent of the proposed language is to support the significance of the previous provision. If sufficient liner material is utilized, then the outer edges can be secured to ensure that the waste material is placed in a properly lined trench and not on top of a liner which has fallen into the trench.

(8) The operator shall fold the outer edges of the trench liner to overlap the waste material in the trench prior to the installation of the geomembrane cover. The intent of this provision is to ensure that the operator envelopes the waste material with the liner. The goal is to prevent the collection and accumulation of water in the trench liner and the leaching of contaminants from the waste material. By folding and overlapping the edges and not cutting off the edges, it prevents the trench liner from becoming a bathtub in which infiltration water will collect.

(9) The operator shall install a geomembrane cover over the excavated material in the lined trench. The operator shall install the geomembrane cover in a manner that prevents the collection of infiltration water in the lined trench and on the geomembrane cover after the soil cover is in place. The installation of the geomembrane cover ensures that waste material is completely enveloped and infiltration or rain water will not come in contact with the waste material. By requiring the operator to install the geomembrane cover in a manner that prevents the collection, water should not accumulate and penetrate the geomembrane cover and be diverted around the enveloped waste material.

(10) The geomembrane cover shall consist of a 20-mil string reinforced LLDPE liner or equivalent cover that the appropriate division district office approves. The geomembrane cover shall be composed of an impervious, synthetic material that is resistant to petroleum hydrocarbons, salts and acidic and alkaline solutions. Cover compatibility shall comply with EPA SW-846 method 9090A. Having the geomembrane cover consist of the same material as the trench liner ensures equivalent protection and security from the buried waste material. [19.15.17.11 NMAC - Rp, 19.15.2.50 NMAC, //07]

19.15.17.12 OPERATIONAL REQUIREMENTS:

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

(1) The operator shall operate and maintain a pit, closed-loop system, below-grade tank or sump to contain liquids and solids and maintain the integrity of the liner, liner system or secondary containment system, prevent contamination of fresh water and protect public health and the environment. The intent of the provision is to inform the operator of their obligation and responsibility to operate and maintain each activity for its intended purpose. **FN #23** *All of the listed operations listed under this provision are subject to or maybe subject to using geosynthetic liners or liner systems. Closed-loop systems use liners in the construction of drying pads to facilitate the collection of liquids derived from the drill cuttings.*

(2) The operator shall recycle, reuse or reclaim all drilling fluids in a manner that prevents the contamination of fresh water and protects public health and the environment. The intent of the proposed language is to address only those operators that recycle, reuse or reclaim all drilling fluids during the operation of their activities and inform or notify them of their responsibility, not the disposal of such fluids during closure. This is an operational requirement which indicate that the drilling fluids are in use. Based upon comments from industry (Industry Committee/Yates Petroleum Corporation/IPANM), there seems to be some confusion. Industry has suggested that language addressing the disposal of drilling fluids be added to the provision. Such language would indicate that the operation of the drilling has ceased and closure has commenced, therefore the implementation of the closure requirements - not operational requirements. By mixing or incorporating closure requirements into the operational requirements would create confusion to operators when other provisions of the proposed rule instruct operators that they must comply with the closure requirements. The OCD would like to request from the Commission to modify the provision and include some additional language to this provision in order to allow operators the opportunity to request an alternative to their original approved proposal and allow the appropriate division district office to grant administrative approval. The new proposed language would state "The operator shall recycle, reuse or reclaim all drilling fluids in a manner that prevents the contamination of fresh water and protects public health and the environment and the appropriate division district office approves."

(3) The operator shall not discharge into or store any hazardous waste in a pit, closed-loop system, below-grade tank or sump. The intent of this provision is pretty straight forward. For clarification, hazardous waste is currently defined in Section 7 of Part 1, General Provisions and Definitions, of 19.15 NMAC. The definition identifies the non-exempt status and references the Federal regulations that apply. The definitions in Part 1 apply to all of the Rules, unless otherwise defined under each Part. Certain parties (Industry Committee/Yates Petroleum Corporation) recommended to reference 20.4.1 NMAC to define hazardous waste. Such a change would require operators to access a different set of regulations to make a determination when it is currently defined in the oil and gas rules.

(4) If the integrity of the pit liner is compromised, or if any penetration of the liner occurs above the liquid's surface, then the operator shall notify the appropriate division district office within 48 hours of the discovery and repair the damage or replace the liner. The intent of the proposed language is to provide a protocol which allows the OCD an opportunity to determine if the damage to the liner poses an imminent treat or not and if immediate action is required. Energen has recommended that the notification requirement be removed from this provision. The result of such a change would require the OCD, upon discovery of the damage, to enforce and fine the operator for not immediately repairing the damage. The 48 hour notice requirement allows the operator time to assess the damage, inform OCD of the results of their assessment, and provide OCD with a schedule for repair or replacement.

(5) If a lined pit develops a leak, or if any penetration of the liner occurs below the liquid's surface, then the operator shall remove all liquid above the damage or leak line from the pit within 48 hours and repair the damage or replace the liner. The intent of the proposed language is to have the operator take immediate action to the stop and prevent a release. The provision allows the operator to initiate action and make repairs without the involvement of the OCD. Energen has recommended removing the provision of the 48 hour response time. Without the specified action time, the operator is allowed to continue to operate. By restricting the fluid level, the operator

must repair the damage to continue to use the pit. R.T. Hicks has recommended that the proposed language be modified to begin with "if a lined pit releases material to underlying soil or ground water" due to permanent pits double liner system. There are multiple problems with the recommended modification to the provision. In order to make the proper assessment for a release, the liner would have to be removed. As for permanent pits, if the primary inner is damaged and the operator decides not to make the repair, the secondary liner becomes the primary liner and the permanent pit no longer satisfies the design and construction specification of having a primary (upper) liner and a secondary (lower) liner with a leak detection system. It becomes a single lined permanent pit.

(6) The operator shall install a level measuring device in a lined pit containing fluids to monitor the level of the fluid surface, so that the operator may recognize unanticipated change in volume of fluids. The intent of the proposed language is to require the operator to monitor the fluids for drastic changes in a lined pit to determine if there is damage to the liner that cannot be seen and to control a potential release. Certain parties (Industry Committee/Yates Petroleum Corporation) have argued that the installation or implementation of such a device would be expensive. OCD believes that the cost of a clean up and remediation of a release would far out weigh the costs associated with the purchase of a device that can be utilized at multiple sites. Energen has recommended that this provision be omitted from the rule. This provision was suggested by the Task Force and incorporated into the rule.

(7) The injection or withdrawal of liquids from a lined pit shall be accomplished through a header, diverter or other hardware that prevents damage to the liner by erosion, fluid jets or impact from installation and removal of hoses or pipes. The intent of the proposed language is to instruct operators of which mechanisms may be utilized to inject and withdraw fluids from lined pits and the care required to prevent damage to the liner. Certain parties (Industry Committee/Yates Petroleum Corporation) have recommended that "other material" be added after "other hardware." As stated before, the provision identifies mechanisms that may be used. "other material" is not a mechanism. The intent of the language proposed by OCD is not to specify the material in which a mechanism is composed of, but to identify the mechanisms and their ability not to damage the liner.

(8) The operator shall operate and install a pit, below-grade tank or sump to prevent the collection of surface water run-on. The intent of the proposed language is to instruct operators of their responsibility to prevent the collection of surface water run-on. Even though the design and construction specification require operators install and implement diversion measures, the operational requirement allow the OCD the authority to require the operator to repair or initiate other diversion measures if the initial measures fail. Energen has recommended that this provision be omitted from the rule.

(9) The operator shall install, or maintain on site, an oil absorbent boom or other device to contain and remove oil from a pit's surface. *FN #24 OCD proposed this language to ensure that the operator has a device in place that will address the Task Force consensus items of the removal "of any visible or measurable layer of oil from the surface of any drilling or workover pit" or "No oil or floating hydrocarbon shall be present in a permanent pit." For clarification purposes the OCD has modified the Task Force draft version language to reflect the intent.*

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

(1) Only fluids used or generated during the drilling or workover process may be discharged into a temporary pit. The operator shall maintain a temporary pit free of miscellaneous solid waste or debris. The operator shall use a tank made of steel or other material to contain hydrocarbon-based drilling fluids that the appropriate division district office approves. Immediately after cessation of a drilling or workover operation, the operator shall remove any visible or measurable layer of oil from the surface of a drilling or workover pit. The intent of the proposed language is to instruct the operator of the intended permitted use of a temporary pit and the manner in which the temporary pit is to be operated. Mr. Von Gonten's slide show demonstrates that some operators may not have a complete understanding. The photos illustrated miscellaneous solid waste and debris in several pits. Certain parties (Industry Committee/Yates Petroleum Corporation) recommend that "visible or measurable layer of oil" be changed to "visible **and** measurable layer of oil." Such a change would limit the removal to measurable oil and would not require the removal of non-measurable visible oil such as sheen from condensate. This provision was suggested by the Task Force and incorporated into the rule. *FN #25 The containment requirements for hydrocarbon-based drilling fluids are operational requirements for materials used during the drilling operations. The aboveground tanks are not used to store or hold exempt waste generated from the drilling operation. By relocating this language it would create confusion by implying that OCD may require individual permits for any temporary above ground tanks for circulating drilling fluids, which is not OCD's intent. The containment requirements ensure that the tanks are capable of holding the hydrocarbon-based drilling fluids during the drilling without a release.*

(2) The operator shall maintain at least two feet of freeboard for a temporary pit. The intent of the proposed language is to specify an operational standard in order to prevent the overtopping or overflowing of fluids. This provision was suggested by the Task Force and incorporated into the rule.

(3) The operator shall inspect a temporary pit containing drilling fluids at least daily while the drilling or workover rig is on-site. Thereafter, the operator shall inspect the temporary pit weekly so long as liquids remain in the temporary pit. The operator shall maintain a log of such inspections and make the log available for the appropriate division district office's review upon request. The operator shall file a copy of the log with the appropriate division district office when the operator closes the temporary pit. The intent of the proposed language is to create a mechanism that will encourage operators to observe fluid levels within the temporary pit. The log can also be used to determine if immediate action is required based upon the assessment of fluid loss. This provision was suggested by the Task Force and incorporated into the rule.

(4) The operator shall remove all free liquids from a drilling pit within 30 days from the date that the operator releases the drilling rig. The appropriate division district office may grant an extension of up to three months. The intent of the proposed language to require the operator to remove all free liquids from the drilling pit as soon as possible in order to reduce risk of a liquid release, to reduce the overtopping of fluids from the collection of additional fluids, such as rain or run-on, and to reduce the hydraulic head on the liner. Throughout discussions amongst Task Force member, it was recognized by all parties the importance of rapid removal of free liquids and a properly constructed and lined pit. Certain parties (Industry Committee/Yates Petroleum Corporation) have recommended that this provision be omitted from the rule.

(5) The operator shall remove all free liquids from a workover pit within 15 days from the date that the operator releases the workover rig. The appropriate division district office may grant an extension of up to three months. The intent of the proposed language to require the operator to remove all free liquids from the drilling pit as soon as possible in order to reduce risk of a liquid release, to reduce the overtopping of fluids from the collection of additional fluids, such as rain or run-on, and to reduce the hydraulic head on the liner. Throughout discussions amongst Task Force member, it was recognized by all parties the importance of rapid removal of free liquids and a properly constructed and lined pit. IPANM has recommended that the proposed time period of 15 days be extended to 30 days to give operators time to operators time to make the proper arrangements. This would suggest that the operator would have no prior knowledge when they would anticipate the workover activities completion. OCD believes that the provision grants the operator the opportunity to request an extension, if necessary. A one sentence written or email request will not be burden on OCD to respond in kind. Other parties (Industry Committee/Yates Petroleum Corporation) have recommended that this provision be omitted from the rule.

C. Permanent pits. An operator shall maintain and operate a permanent pit in accordance with the following requirements. The minimal operational requirements proposed in this subsection are based upon the general operational requirements listed above and the permanent pit design of a primary (upper) liner and a secondary (lower) liner with a leak detection system.

(1) The operator shall maintain at least three feet of freeboard for a permanent pit. The intent of the proposed language is to specify an operational standard in order to prevent the overtopping or overflowing of fluids. This provision was suggested by the Task Force and incorporated into the rule.

(2) No oil or floating hydrocarbon shall be present in a permanent pit. The intent of the proposed language is to ensure the removal of oil or floating hydrocarbon from a permanent pit. This provision originates from the 2004 OCD guideline and was suggested by the Task Force. The OCD agrees with the concept and has incorporated into the rule.

D. Below-grade tanks. The operator shall not allow a below-grade tank to overflow or allow surface water run-on to enter the below-grade tank. The intent of the proposed language is to instruct operators of their responsibility to prevent the overflow of fluids and liquids and the collection of surface water run-on. Even though the design and construction specification require operators to design and construct in a manner to prevent overflow and the collection of surface water run-on, the operational requirement allow the OCD the authority to require the operator to initiate other measures if the initial design fails. The OCD would like to request from the Commission to include an additional provision in order to instruct and inform operators of their responsibility to oil from accumulating on the surface of a below-grade tank. The new proposed language would state "The operator shall remove any visible or measurable layer of oil from the surface of a below-grade tank."

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

(1) The operator shall test a sump's integrity annually and promptly repair or replace a sump that fails the integrity test. The intent of the proposed language is to ensure the integrity of sumps and their capability to collect and contain leaks. The proposed provision currently exists in Rule 50 and was recommended by the Task

Force to be included in the proposed rule. OCD agrees with the Task Force recommendation and has incorporated the provision in the proposed rule.

(2) An operator shall test a sump that can be removed from its emplacement by visual inspection. The operator shall test other sumps by appropriate mechanical means. The intent of the proposed language is to instruct operators how the integrity tests shall be performed. The proposed provision currently exists in Rule 50 and was recommended by the Task Force to be included in the proposed rule. OCD agrees with the Task Force recommendation and has incorporated the provision in the proposed rule.

(3) The operator shall maintain records of sump inspection and testing and make the records available for the appropriate division district office's review upon request. The intent of the proposed language is to create a mechanism that will remind and encourage operators to inspect and test sumps. This provision was suggested by the Task Force and incorporated into the rule.

[19.15.17.12 NMAC - Rp, 19.15.2.50 NMAC, / /07]

19.15.17.13 CLOSURE REQUIREMENTS:

A. Time requirements for closure. An operator shall close a pit, closed-loop system or below-grade tank within the time periods provided in 19.15.17.13 NMAC, or by an earlier date that the division requires because of imminent danger to fresh water, public health or the environment. The intent of the proposed time requirements for closure are provided to notify operators when and under what circumstances closure is required. **FN #26** *Section 17 does reference paragraphs (1-4) for closure of existing operations, which directs operators to this subsection of the proposed rule. OCD feels that the appropriate location for this information is the Closure Requirements section since it addresses the closure all operations, existing and future. Future permitted operations would not qualify for transitional provision since they would be permitted under this part.* Energen has recommended that this section, time requirements for closure, be omitted from the proposed rule. Such a change would allow operators to never close or close such activities at their leisure and would tie OCD's hands in requiring closure.

(1) An existing unlined, permitted or registered permanent pit shall be closed within two years after _____ [the effective date of 19.15.17 NMAC]. The intent of the proposed language is to close existing unlined permanent pits.

(2) An existing lined or unlined, permanent pit not permitted or registered shall be closed within 60 days after _____, 200_ [effective date]. The intent of the proposed language is to close existing permanent pits not permitted or registered as required by the current Rule 50. Under the existing rule, operators had until September 30, 2004 to file an application in order to continue use of an existing pit or below-grade tank. The provision is designed to address operators who have failed to satisfy the existing deadline.

(3) An existing unlined, temporary pit shall be closed within three months after _____, 200_ [effective date]. The intent of the proposed language is to close existing unlined temporary pits.

(4) An existing below-grade tank that is not equipped with secondary containment and leak detection shall be closed within five years after _____, 200_ [effective date], if not retrofitted with secondary containment and leak detection in accordance with Subsection I of 19.15.17.11 NMAC. The intent of the proposed language is to close existing below-grade tanks not equipped with secondary containment and leak detection. There seems to be some confusion by industry about the language regarding below-grade tanks. The design and construction provisions allow operators to retrofit existing tanks "with an underlying mechanism to divert leaked liquids to a location that can be visually inspected." OCD interprets the retrofit language to equate to a technique or method that allows operators to satisfy the requirements of secondary containment (an underlying mechanism to divert leaked liquids) and leak detection (divert leaked liquids to a location that can be visually inspected.). Industry comments suggest that the proposed language means something other than secondary containment and leak detection.

(5) Any other permitted permanent pit shall be closed within 60 days of cessation of operation of the permanent pit in accordance with a closure plan that the environmental bureau in the division's Santa Fe office approves. The intent of the proposed language is to close permitted permanent pits within 60 days of cessation of operation. The proposed timeline for closure requires the operator to immediately remove the liquids from the permanent pit and properly closure the pit within an adequate time frame. The OCD can find no reason to allow a permanent pit to continue to hold and store liquids if it is no longer in operation.

(6) Any other permitted temporary pit shall be closed within six months from the date the operator releases the rig. The appropriate division district office may grant an extension not to exceed three months. The intent of the proposed language is to ensure closure of a permitted temporary pit, especially a permitted temporary pit permitted under this Part, to close within an adequate time frame. The six month period allows ample time for the operator to remove free liquids, allow for evaporation of fluids and solids remaining in the pit, and make arrangements for the remainder of the closure requirements.

(7) A closed-loop system permitted under 19.15.17 NMAC or in operation on _____, 200_ [effective date], shall be closed within six months from the date the operator releases the rig. The appropriate division district office may grant an extension not to exceed six months. Much like the requirements for a permitted temporary pit, the intent of the proposed language is to ensure closure of a closed-loop system to close within an adequate time frame. The six month period allows ample time for the operator to remove free liquids, if necessary, allow for evaporation of solids on the drying pad and make arrangements for the remainder of the closure requirements.

(8) A permitted below-grade tank shall be closed within 60 days of cessation of the below-grade tank's operation or as required by the transitional provisions of Subsection B of 19.15.17.17 NMAC in accordance with a closure plan that the appropriate division district office approves. The intent of the proposed language is to close permitted below-grade tanks within 60 days of cessation of operation. The proposed timeline for closure requires the operator to immediately remove the liquids from the below-grade tank and properly closure the pit within an adequate time frame. The OCD can find no reason to allow a below-grade tank to continue to hold and store liquids and solids if it is no longer in operation.

B. Closure methods for temporary pits. The operator of a temporary pit shall remove all liquids from the temporary pit prior to implementing a closure method and dispose of the liquids in a division-approved facility or recycle, reuse or reclaim the liquids in a manner that the appropriate division district office approves. The operator shall close the temporary pit by one of the following methods. The intent of the proposed language is to create specific closure requirements. The provision for closure in the current Rule provide little to no instruction for closure. It states, "the operator shall describe the proposed disposal method in the application for permit to drill or the sundry notices and reports on wells" or "where the pit's contents will likely migrate and cause ground water or surface water to exceed water quality control commission standards, the pit's contents and the liner shall be removed and disposed of in a manner approved by the division." OCD is proposing similar options which are currently utilized by operators today, but with a few modifications. IPANM has recommended to include the word "evaporate" in the list of methods to handle liquids. The language proposed by OCD requires operators to remove free liquids within 30 to 15 days, depending if it is a drilling or workover pit. The operator must closure the temporary pit within six months of the release of the rig. This allows for a period of approximately 4 months for evaporation to occur prior to the implementation of the closure method. Therefore, the language proposed by OCD allows for evaporation. Other parties (Industry Committee/Yates Petroleum Corporation) have recommended that the proposed language regarding the removal of liquids be omitted from this provision. Their justification is that "all liquids must be removed from the pit in any event, but the timing and handling of the removal will vary by the nature of the closure option selected." OCD has learned from the past not to assume. By specifying the requirement in the rule, the operator will clearly understand their responsibility. As to the second portion of their justification, each proposed closure method requires the removal of liquids. If an operator proposes the waste excavation and removal closure method, the waste material is required to be free of liquids in order to be accepted at a division-approved disposal facility. If the operator proposes the on-site deep trench burial, the waste material is required to pass the paint filter test.

Energen has recommended to allow the use of a general plan for on-site closure of a plan OCD has previously approved "which includes the techniques used at any particular site." The general plan would not require separate OCD approval. Since on-site closure has siting criteria and there were no recommendation to omit the siting criteria for on-site closure, having such a provision for a general plan would not be applicable. Each site would have to be assessed for compliance to the siting criteria.

(1) Waste excavation and removal. Waste excavation or dig and haul is a closure method which is currently utilized by operators throughout the State. When used in its current practice, operators treat or stabilize the pit contents for removal and excavate the pit contents, the liner material, and a few additional feet of soil. No testing beneath the excavated pit and liner is performed to determine if a release has occurred. The excavated area is backfilled without an assessment. This explains such comments from industry that they have no documented releases. Without any type of assessment, the status will remain unknown until contamination of private or public water wells occurs. At which point, the costs of remediation and cleanup will far exceed the minimal time and additional expense required for testing. The intent of the proposed provision is to inform operators the procedures and protocols required to the complete the waste excavation and removal closure method. It also provides a format in which applicants should create and submit a closure plan. IPANM has recommended that this provision be omitted or deleted from the proposed rule. Such a change would limit the options of the operators to properly dispose of the waste material. This same party stated they would "rely on industry committee comments for

proposed reasons.” For clarification purposes, the industry committee did not request that this option be omitted or deleted, they did recommend modifications.

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

(b) The operator shall test the soils beneath the temporary pit to determine whether a release has occurred. The operator shall collect, at a minimum, a five point, composite sample; collect individual grab samples from any hot spot; and analyze for BTEX, TPH and chlorides to demonstrate that the benzene concentration, as determined by EPA SW-846 methods 8021B or 8260B or other EPA method that the division approves, does not exceed 0.2 mg/kg; total BTEX concentration, as determined by EPA SW-846 methods 8021B or 8260B or other EPA method that the division approves, does not exceed 50 mg/kg; the TPH concentration, as determined by EPA method 418.1 or other EPA method that the division approves, does not exceed 100 mg/kg; and the chloride concentration, as determined by EPA method 300.1 or other EPA method that the division approves, does not exceed 250 mg/kg, or the background concentration, whichever is greater. The operator shall notify the division of its results on form C-141. The division may require additional delineation upon review of the results. The intent of the proposed language and specified constituent limits for the provision requiring testing beneath the excavation is not a closure standard, as interpreted by many parties. The specified constituent limits are limits for delineation. An operator would be required to continue to sample until the specified limits are obtained, at which point the delineation would be complete. Such methods of sampling may include the use of a geoprobe, trachoe, or backhoe to obtain the samples. A method that some operators have recently started to implement is to obtain background samples of the soil prior to the installation of the temporary pit. If an operators obtains such samples, then their delineation would be have to be to background concentrations or the specified limit, which ever is greater. The requirement for testing is also prompted from information shared by operators about the methods they use to stabilize waste and how it is implemented. Operators informed OCD during the Task Force meetings that in the process of stabilizing or solidifying the contents of the pit, the integrity of the liner is usually compromised, thus creating a release. Since the stabilization and solidification process may take a few days, it would be difficult to determine the volume of liquids and fluids lost. **FN #27** *OCD took into consideration the sampling of identifiable areas of contamination and modified the sampling protocol to include the collection and testing of individual grab samples of hot spots, in addition to the five point composite sampling. If there are areas of concern beneath the existing temporary pit, they should be assessed and addressed if required. As for the reduced sampling parameters, OCD did not consider it prudent since the chloride concentration in certain part of the state may not be at levels of concern therefore it would not be appropriate as an indicator constituent. Also, if the formation chloride concentrations are naturally low and the soil background concentrations are unknown, the concentration levels of other constituents may exceed the proposed levels.* **FN #28** *The draft version of the proposed Rule provided to the Task Force was just that, a draft. OCD agrees that other EPA approved methods may be required due to the continual assessment, omission and changes that occur, but OCD feels that it is importance that we (OCD) assess any proposed alternative EPA method to determine if it is appropriate. OCD has incorporated additional language that states: "...or other EPA method that the division approves" after each specified method for consistency.* **FN #29** *NMCGA support statement.* **FN #30** *In a perfect world if the siting, design, construction, and operational requirements were followed and liquids were removed in a timely manner, then sampling beneath the pit might be optional. But we are human and we are not perfect. Liner materials are allowed to leave the factory with minimum defects (pin holes), improper seams may leak, foundations are not always free of projectiles that can compromise the liner, some operators may not consider it prudent to repair tears in the pit liner or restrict the entry of other waste steams. Even if everything is done to perfection, industry has shared with the Task Force that most treatment methods to stabilize or solidify the contents usually results the destruction of the liner, which may unintentionally result in a release. The closure activity itself can be the culprit of a release. OCD considers testing beneath the pit crucial for confirmation that a release has not or did not occur. The results may be beneficial to the operator at a later date if parties make a claim that the pit associated with their drilling activities is a potential source of contamination. As for visual observation, the OCD does not consider visual observations to be sound science especially when compared to representative sampling and laboratory analytical results.* **FN #30&32** *The standardization constituent concentration levels is not a practical consideration since each separate governmental agency is delegated to create rules and standards based on its statutory objective (such as protection of air, drinking water, surface water, ground water, or human health).* **FN #31** *As mentioned previously, during the Task Force meetings, industry acknowledged that current practices utilized to stabilize/solidify the pit contents prior to its excavation results in the destruction of the pit liner. This would indirectly create a release. Therefore, testing the soil beneath the pit would allow the operator the opportunity to address any releases that may have occurred during the operation or closure. Certain parties (Industry Committee/Yates Petroleum Corporation) have recommended to*

modify the delineation testing parameters to one indicator constituent – chloride and increase the chloride standard to 5000 mg/kg. One of their justifications is that chloride is the most conservative of the various compounds. OCD agrees that chloride is the most conservative of the various compounds and has utilized it in our modeling demonstrations. Our objection is its use of chloride as a sole source indicator and the proposed delineation standard. Based upon the results of the pit sampling event performed by OCD and discussed by Mr. Von Gonten, the results demonstrate that in some cases the chloride concentrations were below 1000 mg/kg. The results also demonstrate that other constituents were elevated in their concentrations when the chloride concentrations were below 1000 mg/kg. In such a cases, if the operator would have tested beneath the pit for only chlorides at a concentration of 5000 mg/kg the testing protocol would be insufficient to determine if a release has occurred or not. The absence or limit of delineation constituents allows for and increases the chance of false negatives for release determinations. Certain parties (Industry Committee/Yates Petroleum Corporation) have also recommended that “the operator may propose alternative testing of the soils beneath the pit to determine whether a release has occurred based on site-specific hydrogeology, and propose alternative site closure standards for district approval.” The proposal does not identify which site-specific hydrogeologic will be considered or how the should be considered to determine approval. Since the same parties (Industry Committee/Yates Petroleum Corporation) are also requesting that the hydrogeologic report, submitted as part of the engineering plan of the application, to be omitted from the application submittal, the information required by the OCD will not be readily available to determine the appropriate action. The recommendation that “the operator may propose alternative testing of the soils..” does not specify how it is determined and why. It also does not allow for the OCD to have any involvement in the process other than approval. The recommended change to the language does not state that the alternative testing shall be submit to the district for review and consideration of approval. The recommended language for this addition provision allows operators to submit, not request, alternative testing for soils without a basis of why alternatives would be required. It limits OCD’s by mandating OCD to approve the submittal for alternatives. The only other option OCD is granted is to allow OCD to require additional information to “protect public health and the environment”, after the operator notifies the division of the results. Since the proposed provision limits OCD request for information to “protect public health and the environment”, OCD is not allowed to required to require additional information to protect “fresh water” which the intent of the testing.

Another provision recommended by certain parties (Industry Committee/Yates Petroleum Corporation) is the requirement of no testing. The recommended provision states “if records show that there is no useable ground water below the pit or no hydraulic connection between the pit and useable ground water, no testing is required.” In order for OCD to consider such a request, the operator would be required to install a monitoring well at each proposed pit to demonstrate the lithology beneath the pit and demonstrate if ground water is present, test the water if it is present to demonstrate that it is greater than 10,000 ppm TDS. Since a defined volume is not included in the statewide definition of ground water, the usability of the ground water would have to be determined by the TDS concentration which is used to determine if it is protectable. Any proposed records would be insufficient since most documented discovery cases of ground water are based on high yielding sources. Also, without the site specific lithology, the “hydraulic connection between the pit and useable ground water” cannot be considered or demonstrated. It is not OCD intent to complicate the closure process and require operators the additional cost of installing a monitoring well at each proposed site.

(c) If the operator or the division determines that a release has occurred, then the operator shall comply with 19.15.3.116 NMAC and 19.15.1.19 NMAC, as appropriate. The intent of the proposed provision is to instruct operators that if it is determined that a release has occurred, the operator shall address the release pursuant to the provisions for “prevention and abatement of water pollution” and/or “release notification and corrective action,” which ever one may apply. The release and the activities required to address it no longer fall under this part and must be addressed by one or both of the specified provisions. Certain parties (Industry Committee/Yates Petroleum Corporation) have recommended that additional language be provided to this provision. The recommended additional would place a condition or limit on the delineation, remediation, and corrective action process. The additional would change the provision to state “if the operator or the division determines that a release has occurred and there is a reasonable possibility to impact useable ground water, then the operator shall comply with 19.15.3.116 NMAC and 19.15.1.19 NMAC, as appropriate.” The additional language “and there is a reasonable possibility to impact useable ground water” requires both conditions to occur in order to for the operator to comply with the Rule 116 and Rule 19. Such a change would allow operators to not have to address confirmed contamination in the vadose zone, which is not OCD’s intent.

(d) If the sampling program demonstrates that a release has not occurred or that any release does not exceed the concentrations specified in Subparagraph (b) of Paragraph (1) of Subsection B of 19.15.17.13 NMAC, then the operator shall backfill the temporary pit excavation with compacted, non-waste containing, earthen

material; construct a division-prescribed soil cover; and re-vegetate the site. The division-prescribed soil cover and re-vegetation requirements shall comply with Paragraphs (1) and (3) of Subsection G of 19.15.17.13 NMAC and Subsection H of 19.15.17.13 NMAC. The intent of the proposed language is to inform operators of the actions or steps required to complete a waste excavation and removal closure if the delineation testing demonstrates a release has not occurred. The proposed backfilling, soil cover, and re-vegetation specifications provide instructions to the operators to complete the closure. The current rule only recommends that "the operator shall contour the surface where the pit was located to prevent erosion and ponding of rainwater." **FN #33** *During the Task Force meetings, only one soil cover design was discussed and presented. The limitation of the application of the soil cover was not a topic of discussion. The OCD has considered the application of the Task Force consensus soil cover and has determined that due to its evapotranspiration qualities it is best suited for deep trench burial. OCD is proposing a simpler, less complicated soil cover for closures of excavations.* Certain parties (Industry Committee/Yates Petroleum Corporation) have recommended to omit the initial language "If the sampling program demonstrates that a release has not occurred or that any release does not exceed the concentrations specified in Subparagraph (b) of Paragraph (1) of Subsection B of 19.15.17.13 NMAC" from the provision. Such a change would allow operators to implement the backfilling activities, and the installation of the soil cover and re-vegetation of the impacted area without addressing a confirmed release. The intent of the proposed closure requirements is to ensure that releases are addressed.

(2) On-site deep trench burial. The operator shall demonstrate and comply with the closure requirements and standards of Subsection F of 19.15.17.13 NMAC if the proposed closure method of a temporary pit involves on-site deep trench burial. The intent of the proposed provision is to allow operators to implement a closure method that is currently used, with a few additional requirements and modifications. The details of this will be discussed later, as we moved further down. **FN #34&35** *The draft version of the proposed rule provided to the Task Force originally required deep trench burial to be pursued under exceptions. OCD considered the comments from the Task Force members and created a new subsection within the closure requirements that incorporates provisions that address on-site closure methods, including deep trench burial (Subsection F).* Certain parties (Industry Committee/Yates Petroleum Corporation) have recommended to re-title this closure method "Deep Trench Burial." OCD's intent to include "on-site" in the title of the method is to clarify the applicants and operators that such a method fall under the provisions regarding or referring to on-site closure methods.

(3) Alternative closure methods. If the environmental bureau in the division's Santa Fe office grants an exception approving a closure method for a specific temporary pit other than as specified in Paragraphs (1) or (2) of Subsection B of 19.15.17.13 NMAC, then the operator shall close that temporary pit by the method that the environmental bureau in the division's Santa Fe office approves. The intent of the proposed provision is to allow operators to propose an alternative to waste excavation and removal or on-site deep trench burial. If the operator wishes to request an exception to any of the requirements of either of the two specified closure methods, the request for exception would be a request for a general exception, not one made under this provision. A request for an alternative closure method would be a request to something other than the two specified closure methods. A possible example would include utilizing the solidified pit contents to construct a tank battery pad. OCD intent is not to limit the imagination of the applicant by listing which alternatives are approvable. In order to pursue a request for an alternative, the operator must seek an exception and comply with the provisions of Subsection B of 19.15.17.15 NMAC.

Certain parties (Industry Committee/Yates Petroleum Corporation) have recommended a fourth closure option for temporary pits. The fourth option is referred to as "Closure In Place." This proposed option requires that "the operator must meet the siting requirements," not that the closure method satisfy the siting criteria for temporary pits and below-grade tanks. The proposed option would allow operators to backfill the existing pit and re-vegetate: if ground water is greater than 50 feet or considered unusable or not hydraulically connected, all free liquids are removed; the pit contents (after stabilization and based on ground water id greater than 50 feet) does not exceed a chloride concentration of 3500 mg/L; if ground water is unusable or not hydraulically connected then not testing of the waste material would be required for backfilling and re-vegetating. Their justification for such an option is that "this in place scenario is equally protective as deep trench burial where the initial chloride concentration is 3500 mg/l or less." The proposed justification is not supported by their recommended changes to the OCD proposed rule. The proposed recommendations regarding deep trench requires the operator to test the pit contents after treatment, such as stabilization, just as proposed in the in place closure method. The proposed recommendations regarding deep trench requires the operator to install a new liner in a separate trench, excavate the stabilized waste material and possibly compromised liner into the lined trench, to test beneath the temporary pit, to install a geomembrane cover over the excavated material in the lined trench, and to install a four foot soil cover. The closure in place method does not require or specify a soil cover standard, nor does it require the installation of a geomembrane cover

over the waste material to prevent the infiltration of water to or through the waste material or to prevent the accumulation of infiltration water in the original pit liner, nor does it require any testing beneath the temporary pit. Yet certain parties state ““this in place scenario is equally protective as deep trench burial...”” OCD disagrees. Such an addition would result in the “closure in place” becoming the primary closure method pursued.

C. Closure method for permanent pits. The intent of the proposed language is to create specific closure requirements. The provision for closure in the current Rule provide little to no instruction for closure. It states, “the operator shall describe the proposed disposal method in the application for permit to drill or the sundry notices and reports on wells” or “where the pit’s contents will likely migrate and cause ground water or surface water to exceed water quality control commission standards, the pit’s contents and the liner shall be removed and disposed of in a manner approved by the division.” OCD is proposing similar options which are currently utilized by operators today, but with a few modifications.

(1) The operator shall remove all liquids and BS&W from the permanent pit prior to implementing a closure method and shall dispose of the liquids and BS&W in a division-approved facility. The intent of the proposed language is to inform operators of their responsibilities. The removal of liquids and basic sediment and waste from the permanent pit prior the implementation of the closure method provides instruction to the operator in order to prevent or reduce the risk of a release.

(2) The operator shall remove the pit liner system, if applicable, and dispose of it in a division-approved facility. If there is on-site equipment associated with permanent pit, the operator shall remove the equipment, unless the equipment is required for some other purpose. The intent of the proposed language is to inform operators of the proper method of disposal for the liner system and how the site must be re-established for closure.

(3) The operator shall test the soils beneath the permanent pit to determine whether a release has occurred. The operator shall collect, at a minimum, a five point, composite sample; collect individual grab samples from any hot spot; and analyze for BTEX, TPH and chlorides to demonstrate that the benzene concentration, as determined by EPA SW-846 methods 8021B or 8260B or other EPA method that the division approves, does not exceed 0.2 mg/kg; total BTEX concentration, as determined by EPA SW-846 methods 8021B or 8260B or other EPA method that the division approves, does not exceed 50 mg/kg; the TPH concentration, as determined by EPA method 418.1 or other EPA method that the division approves, does not exceed 100 mg/kg; and the chloride concentration, as determined by EPA method 300.1 or other EPA method that the division approves, does not exceed 250 mg/kg, or the background concentration, whichever is greater. The operator shall notify the division of its results on form C-141. The division may require additional delineation upon review of the results. The intent of the proposed language and specified constituent limits for the provision requiring testing beneath the excavation is not a closure standard, as interpreted by many parties. The specified constituent limits are limits for delineation. An operator would be required to continue to sample until the specified limits are obtained, at which point the delineation would be complete. Such methods of sampling may include the use of a geoprobe, trachoe, or backhoe to obtain the samples. A method that some operators have recently started to implement is to obtain background samples of the soil prior to the installation of the temporary pit. If an operators obtains such samples, then their delineation would be have to be to background concentrations or the specified limit, which ever is greater. The specific importance for testing beneath permanent pits is due to duration off use of such pits. A slow or small leak may never be noticed and may take an extended period of time to accumulate in the leak detection system in order to identify. Since there is no system in place to monitor the integrity of the secondary (lower) liner, there is no way to know if the secondary liner has been breached. The delineation testing will allow operators to backfill excavation with confidence and will eliminate closed pit areas as potential sources of contamination in the future. **FN #36** *OCD has incorporated additional language that states: “...or other EPA method that the division approves” after each specified method for consistency. FN #37* NMCGA support statement.

(4) If the operator or the division determines that a release has occurred, then the operator shall comply with 19.15.3.116 NMAC and 19.15.1.19 NMAC, as appropriate. The intent of the proposed provision is to instruct operators that if it is determined that a release has occurred, the operator shall address the release pursuant to the provisions for “prevention and abatement of water pollution” and/or “release notification and corrective action,” which ever one may apply. The release and the activities required to address it no longer fall under this part and must be addressed by one or both of the specified provisions.

(5) If the sampling program demonstrates that a release has not occurred or that any release does not exceed the concentrations specified in Paragraph (3) of Subsection C of 19.15.17.13 NMAC, then the operator shall backfill the excavation with compacted, non-waste containing, earthen material; construct a division-prescribed soil cover; and re-vegetate the site. The division-prescribed soil cover and re-vegetation requirements shall comply with Paragraphs (1) and (3) of Subsection G of 19.15.17.13 NMAC and Subsection H of 19.15.17.13 NMAC. The intent

of the propose language is to inform operators of the actions or steps required to complete the closure of a permanent pit if the delineation testing demonstrates a release has not occurred. The proposed backfilling, soil cover, and re-vegetation specifications provide instructions to the operators to complete the closure. The current rule only recommends that "the operator shall contour the surface where the pit was located to prevent erosion and ponding of rainwater." **FN #38** *During the Task Force meetings, only one soil cover design was discussed and presented. The limitation of the application of the soil cover was not a topic of discussion. The OCD has considered the application of the Task Force consensus soil cover and has determined that due to its evapotranspiration qualities it is best suited for deep trench burial. OCD is proposing a simpler, less complicated soil cover for closures of excavations.*

D. Closure methods for closed-loop systems. An operator of a closed-loop system that uses a temporary pit, in lieu of a drying pad, shall comply with the closure requirements for temporary pits specified in Subsection B of 19.15.17.13 NMAC. The operator of a closed-loop system shall close the system by one of the following methods. As you can see, the proposed methods for closure of closed-loop systems that utilize drying pads are very similar to those for the closure of temporary pits. The intent of the proposed provision is to remind operators of a closed-loop system that uses a temporary pit, in lieu of a drying pad, shall comply with the closure requirements for temporary pits. There is some confusion, based upon a certain party's (Energen) recommendation to proposed new regulations. Based upon their format to make direct changes to the OCD propose version and to delete certain provisions, their proposal recommends the deletion of the provision of closure methods for closed-looped systems. The only option in their submittal for closed-looped systems is deep trench burial.

(1) Waste removal. The method of waste removal is appropriate for operators of closed-loop systems that use a drying pad. Such operations centrifuge the drill cuttings to extract and remove liquids from the solids. The solids are placed on the drying pad to allow for further drying. Since drying pads are not designed to hold liquids and fluids, there is less of a risk for a release and contamination beneath the pad. Therefore, the intent is not to require the undue burden of testing beneath the pads for the additional effort by the operator to utilize a method that reduces the risk. Another benefit of the design and utilization of a drying pad is the minimal impact to the area of use. Backfilling and the installation of a prescribe soil cover is not required because the pad does not have to be excavated.

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

(b) The operator shall substantially restore and re-vegetate the impacted area's surface.

(2) On-site deep trench burial. The operator shall demonstrate and comply with the closure requirements and standards of Subsection F of 19.15.17.13 NMAC if the proposed closure method of a drying pad associated with a closed-loop system involves on-site deep trench burial. The intent of the proposed provision is to allow operators to implement a closure method that is currently used, with a few additional requirements and modifications. The details of this will be discussed later, as we moved further down.

(3) Alternative closure methods. If the environmental bureau in the division's Santa Fe office grants an exception approving a closure method for a specific closed-loop system other than as specified in Paragraphs (1) or (2) of Subsection D of 19.15.17.13 NMAC, then the operator shall close that drying pad associated with a closed-loop system by the method the environmental bureau in the division's Santa Fe office approves. The intent of the proposed provision is to allow operators to propose an alternative to waste excavation and removal or on-site deep trench burial. If the operator wishes to request an exception to any of the requirements of either of the two specified closure methods, the request for exception would be a request for a general exception, not one made under this provision. A request for an alternative closure method would be a request to something other than the two specified closure methods. A possible example would include utilizing the solidified pit contents to construct a tank battery pad. OCD intent is not to limit the imagination of the applicant by listing which alternatives are approvable. In order to pursue a request for an alternative, the operator must seek an exception and comply with the provisions of Subsection B of 19.15.17.15 NMAC.

E. Closure method for below-grade tanks. Much like permanent pits, below-grade tanks have one method of closure. The intent of this provision is to inform operators of all of the steps required to complete the closure method.

(1) The operator shall remove all liquids and sludge from a below-grade tank prior to implementing a closure method and shall dispose of the liquids and sludge in a division-approved facility. The intent of the proposed language is to inform operators of their responsibilities. The removal of all liquids and sludge from a below-grade tank prior the implementation of the closure method provides instruction to the operator in order to prevent or reduce the risk of a release

(2) The operator shall remove the below-grade tank and dispose of it in a division-approved facility or recycle, reuse, or reclaim it in a manner that the appropriate division district office approves. The intent of the proposed provision is to encourage and allow operators to recycle, reuse, or reclaim the below-grade tank, if possible.

(3) If there is any on-site equipment associated with a below-grade tank, then the operator shall remove the equipment, unless the equipment is required for some other purpose. The proposed provision is provided to instruct and inform operators to what extent equipment should be addressed for closure.

(4) The operator shall test the soils beneath the below-grade tank to determine whether a release has occurred. The operator shall collect, at a minimum, a five point, composite sample; collect individual grab samples from any hot spot; and analyze for BTEX, TPH and chlorides to demonstrate that the benzene concentration, as determined by EPA SW-846 methods 8021B or 8260B or other EPA method that the division approves, does not exceed 0.2 mg/kg; total BTEX concentration, as determined by EPA SW-846 methods 8021B or 8260B or other EPA method that the division approves, does not exceed 50 mg/kg; the TPH concentration, as determined by EPA method 418.1 or other EPA method that the division approves, does not exceed 100 mg/kg; and the chloride concentration, as determined by EPA method 300.1 or other EPA method that the division approves, does not exceed 250 mg/kg, or the background concentration, whichever is greater. The operator shall notify the division of its results on form C-141. The division may require additional delineation upon review of the results. The intent of the proposed language and specified constituent limits for the provision requiring testing beneath the excavation is not a closure standard, as interpreted by many parties. The specified constituent limits are limits for delineation. An operator would be required to continue to sample until the specified limits are obtained, at which point the delineation would be complete. Such methods of sampling may include the use of a geoprobe, trachoe, or backhoe to obtain the samples. A method that some operators have recently started to implement is to obtain background samples of the soil prior to the installation or the temporary pit. If an operators obtains such samples, then their delineation would have to be to background concentrations or the specified limit, which ever is greater. The testing beneath a below-grade tank is essential since that rule allows for the retrofitting of existing tanks.

(5) If the operator or the division determines that a release has occurred, then the operator shall comply with 19.15.3.116 NMAC and 19.15.1.19 NMAC, as appropriate. The intent of the proposed provision is to instruct operators that if it is determined that a release has occurred, the operator shall address the release pursuant to the provisions for "prevention and abatement of water pollution" and/or "release notification and corrective action," which ever one may apply. The release and the activities required to address it no longer fall under this part and must be addressed by one or both of the specified provisions.

(6) If the sampling program demonstrates that a release has not occurred or that any release does not exceed the concentrations specified in Paragraph (4) of Subsection E of 19.15.17.13 NMAC, then the operator shall backfill the excavation with compacted, non-waste containing, earthen material; construct a division-prescribed soil cover; and re-vegetate the site. The division-prescribed soil cover and re-vegetation requirements shall comply with Paragraphs (1) and (3) of Subsection G of 19.15.17.13 NMAC and Subsection H of 19.15.17.13 NMAC. The intent of the propose language is to inform operators of the actions or steps required to complete the closure of a below-grade tank if the delineation testing demonstrates a release has not occurred. The proposed backfilling, soil cover, and re-vegetation specifications provide instructions to the operators to complete the closure. The current rule only recommends that "the operator shall contour the surface where the pit was located to prevent erosion and ponding of rainwater."

F. On-site closure methods. The following closure requirements and standards apply if the operator proposes a closure method for a drying pad associated with a closed-loop system or a temporary pit pursuant to Paragraph (2) of Subsection D of 19.15.17.13 NMAC or Paragraph (2) of Subsection B of 19.15.17.13 NMAC that involves on-site deep trench burial, or an alternative closure method pursuant to Paragraph (3) of Subsection D of 19.15.17.13 NMAC or Paragraph (3) of Subsection B of 19.15.17.13 NMAC and Subsection B of 19.15.17.15 NMAC. The intent of this provision is to establish specific general requirements for on-site closure and to identify an approvable method that may not require an exception.

(1) General requirements. The intent of this provision is to identify to applicants and operators of the general provisions required if an on-site closure method is pursued.

(a) The operator shall demonstrate, at the time of initial application for the permit, that the site where the operator proposes to implement an on-site closure method is not located within a 100 mile radius of a division-approved facility or an out-of-state waste management facility. If the operator demonstrates that neither a division-approved facility nor an out-of-state waste management facility is available within the prescribed distance, then the operator may pursue the on-site closure method. The intent of the 100 mile radius provision is to reduce the cumulative effect of multiple burials of drilling waste and properly manage waste when a viable option for disposal

is within distance of disposal facility that is capable of accepting such waste. Generators of hazardous and solid waste are required to properly dispose of their waste, especially if a viable option is available. The intent of this provision is based upon the same concept, proper waste management. Certain parties (Industry Committee/Yates Petroleum Corporation/Energen) have requested that this provision be omitted from the rule.

(b) Any proposed on-site closure method shall comply with the siting criteria specified in Subsection C of 19.15.17.10 NMAC. The intent to establish siting criteria for an on-site closure method is based upon the permanence or duration of the application of the closure. The siting criteria provide an additional level of protection over time. The siting criteria are the same as those for the construction of a temporary pit or below-grade tank. The conceptual idea is that an operator should not bury or leave waste material in a location that a temporary pit cannot be constructed, operated, or permitted.

(c) The operator shall obtain the surface owner's written consent to the operator's proposal of an on-site closure method. The operator shall attach the original, signed consent to the permit application. This provision is proposed to protect the OCD from approving an activity that may contradict an agreement between the operator and the surface owner. During the Task Force meeting, representatives from industry clearly expressed their unwillingness to share any information regarding the agreements with surface owners under the Surface Owner Protection Act. In order for OCD to protect itself from legal ramifications from surface owners, written consent must be provided for OCD to approve on-site closure. Certain parties (Industry Committee/Yates Petroleum Corporation) have requested that this provision be replaced by language that would only require the operator to "notify the surface owner of the temporary pit and, if applicable, the on-site closure or deep trench burial." Even though their proposed language is not clear, it would suggest that some type of demonstration of notice would be provided. Such a change would provide OCD the appropriate information to determine if approval would contradict the agreement between industry and the surface owner. Energen has recommended that this provision be omitted from the rule.

(d) The operator shall comply with the closure requirements and standards of Paragraph (2) of Subsection F of 19.15.17.13 NMAC if the proposed closure method for a drying pad associated with a closed-loop system or a temporary pit pursuant to Paragraph (2) of Subsection D of 19.15.17.13 NMAC or Paragraph (2) of Subsection B of 19.15.17.13 NMAC involves on-site deep trench burial, or an alternative closure method pursuant to Paragraph (3) of Subsection D of 19.15.17.13 NMAC or Paragraph (3) of Subsection B of 19.15.17.13 NMAC and Subsection B of 19.15.17.15 NMAC. The intent of the proposed language is to instruct applicants and operators which additional provisions apply if on-site deep trench burial is pursued. Energen has recommended that this provision be omitted from the rule.

(e) The operator shall test the soils beneath the drying pad associated with a closed-loop system or temporary pit after excavation to determine whether a release has occurred. The operator shall collect, at a minimum, a five point, composite sample; collect individual grab samples from any hot spot; and analyze for BTEX, TPH and chlorides to demonstrate that the benzene concentration, as determined by EPA SW-846 methods 8021B or 8260B or other EPA method that the division approves, does not exceed 0.2 mg/kg; total BTEX concentration, as determined by EPA SW-846 methods 8021B or 8260B or other EPA method that the division approves, does not exceed 50 mg/kg; the TPH concentration, as determined by EPA method 418.1 or other EPA method that the division approves, does not exceed 100 mg/kg; and the chloride concentration, as determined by EPA method 300.1 or other EPA method that the division approves, does not exceed 250 mg/kg, or the background concentration, whichever is greater. The operator shall notify the division of its results on form C-141. The division may require additional delineation upon review of the results. Since on-site closure is an identified method for temporary pits, the delineation and/or determination of a release is prudent since there is the potential to address contamination as part of the closure activity. During our preparation for the hearing, OCD realized that we left drying pad associated with a closed-loop system in this provision. It was not your intent to include them. As previously discussed in the closure requirements for closed-looped systems, we have explained how such systems operate and why we have chosen not to require the testing beneath a drying pad associated with a closed-loop system. At this time, we wish to request that "drying pad associated with a closed-loop system or" be removed from the provision. **FN #39** *OCD has incorporated additional language that states: "...or other EPA method that the division approves" after each specified method for consistency.* **FN #40** NMCGA support statement. Energen has recommended that this provision be omitted from the rule.

(f) If the sampling program demonstrates that a release has not occurred or that any release does not exceed the concentrations specified in Subparagraph (e) of Paragraph (1) of Subsection F of 19.15.17.13 NMAC, then the operator shall backfill the excavation with compacted, non-waste containing earthen material; construct a division-prescribed soil cover; and re-vegetate the site. The division-prescribed soil cover and re-vegetation shall comply with Paragraphs (1) and (3) of Subsection G of 19.15.17.13 NMAC and Subsection H of

19.15.17.13 NMAC. Much like the provisions above, the intent of the proposed language is to inform operators of the actions or steps required to complete the closure if the delineation testing demonstrates a release has not occurred. The proposed backfilling, soil cover, and re-vegetation specifications provide instructions to the operators to complete the closure. Energen has recommended that this provision be omitted from the rule.

(g) If the operator or the division determines that a release has occurred, then the operator shall comply with 19.15.3.116 NMAC and 19.15.1.19 NMAC, as appropriate. Once again, the intent of the proposed provision is to instruct operators that if it is determined that a release has occurred, the operator shall address the release pursuant to the provisions for "prevention and abatement of water pollution" and/or "release notification and corrective action," whichever one may apply. The release and the activities required to address it no longer fall under this part and must be addressed by one or both of the specified provisions.

(2) On-site deep trench burial. **FN #41** *OCD considered the comments provided by the Task Force and decided that by integrating on-site closure (deep trench burial) into the Rule would prevent confusion among applicants. In the draft version provided to the Task Force, on-site closure including deep trench burial was originally proposed as an exception.*

(a) The operator shall demonstrate and comply with the provisions of Paragraph (1) of Subsection F of 19.15.17.13 NMAC. The intent of the proposed language is to remind applicants and operators that the provisions under Paragraph (1) of this subsection must be demonstrated if deep trench burial is pursued.

(b) The operator shall use a separate on-site deep trench for closure of each drying pad associated with a closed-loop system or temporary pit. The intent of this provision is to prevent the development of an un-permitted surface waste management facility. Certain parties (Industry Committee/Yates Petroleum Corporation) requested that this provision be removed from the rule. Such a change would allow operators to consolidate multiple closures in one location which would possibly be considered as a un-permitted surface waste management facility and conflict with the provisions of Part 36.

(c) Unless the contents of the drying pad associated with a closed-loop system or temporary pit and associated waste meet the closure standards of Subparagraph (d) of Paragraph (2) of Subsection F of 19.15.17.13 NMAC, the operator shall propose a method to treat the contents and associated waste. Any proposed treatment method shall optimize waste minimization and reduce contaminant concentrations in order to protect fresh water, public health and the environment. Proposed treatment methods shall stabilize or solidify the contents to a bearing capacity sufficient to support the final cover. The intent of the proposed provision is to provide operators with an opportunity and option to propose a method to treat the waste material. The proposed language is goal oriented in order not place any restrictions on the proposals and are promote the P2 (pollution prevention) concept. **FN #42&43** *In the draft version provided to the Task Force, OCD originally proposed a 100 % volume increase limit for any proposed treatment method. OCD received a variety of comments from Task Force members. Citizen group member expressed there should be no increase in volume. Industry expressed that in order to remove or excavate the waste material it can require as much as a 4 to 6 times increase in volume. OCD recognizes that there are limitations to extracting free liquids, especially with temporary pits. The remaining contents (drill cuttings, muds, and additives) usually have a consistency of pudding. The most cases a form of treatment is required to stabilize the remaining contents for extraction. To resolve the issue, OCD decided to propose performance based standards. Liquids must be removed, waste contents must pass the paint filter test, treatment shall optimize waste minimization and reduce contaminant concentrations, and treatment shall stabilize or solidify the contents to a bearing capacity sufficient to support the final cover. OCD believes that any increase in the original volume equates to an increase in expense for closure, such as more man hours for treatment, more material to excavate, a larger deep trench, more liner material, etc., therefore it becomes counter productive. **FN #44&45** OCD decided that a definition for "treatment method" would make it finite and place restrictions on operators that would not allow for implementation of new ideas and technology.*

(d) The operator shall collect at a minimum, a five point, composite sample of the contents of the drying pad associated with a closed-loop system or temporary pit after treatment, if treatment is required, to demonstrate that the TPH concentration, as determined by EPA method 418.1 or other EPA method that the division approves, does not exceed 2500 mg/kg. Using EPA SW-846 method 1312 or other EPA leaching procedure that the division approves, the operator shall demonstrate that the chloride concentration, as determined by EPA method 300.1 or other EPA method that the division approves, does not exceed 5,000 mg/l and that the concentrations of the water contaminants specified in Subsections A and B of 20.6.2.3103 NMAC as determined by appropriate EPA methods do not exceed the standards specified in Subsections A and B of 20.6.2.3103 NMAC, unless otherwise specified above. The intent of the proposed provision is to ensure that the waste material which is buried on-site have reduced constituent concentration levels in order to prevent it from becoming an endless source of contamination if the deep trench liner fails. Mr. Price has discussed the laboratory analytical methods for the

constituents and what it represents. Mr. Von Gonten has summarized the results and identified constituents detected during the OCD pit sampling event. Mr. Hansen has discussed his modeling results and the impact of higher concentrations when buried. All of the previous testimony demonstrate and support the need to establish standards for deep trench burial. **FN #46** *OCD has incorporated additional language that states: "...or other EPA method that the division approves" after each specified method for consistency.* **FN #47, 48, & 49** *In the draft version provided to the Task Force, OCD originally proposed the landfarm closure standards for deep trench burial. It is true that landfarms do not have liners, but landfarms are required to monitor the vadose zone quarterly to determine potential treats to ground water. OCD considers the geomembrane liner trench and cover in association with the modified standards to provide an equivalent or better level of protection as the stricter landfarm closure standards and the quarterly vadose monitoring.* Certain parties (Industry Committee/Yates Petroleum Corporation) have recommended that to increase the TPH concentration to 5000 mg/kg, decrease the chloride concentration to 3500 mg/l, and omit the testing requires for the WQCC 3103 constituents. No justification was provided for the recommended changes. Mr. Von Gonten's testimony identified a multitude of constituents that were detected during the sampling event. The sampling results shown during his presentation illustrate that TPH and chlorides may be absent while other constituents were detected. To omit the 3103 constituents would limit OCD assessment of the buried waste. Energen has recommended that this provision be omitted from the rule.

(e) The operator shall construct a trench lined with a geomembrane liner located within 100 feet of the drying pad associated with a closed-loop system or temporary pit, unless the appropriate division district office approves an alternative distance and location. The operator shall design and construct the lined trench in accordance with the design and construction requirements specified in Paragraphs (1) through (8) of Subsection J of 19.15.17.11 NMAC. The intent of the proposed provision is to serve two purposes. The first is to locate the deep trench within an appropriate distance of the drying pad or temporary pit. This prevents the accumulation of multiple pit or pads being buried together and allows the surface owner or future owners to determine the proximity of the buried waste material after closure. This will also prevent surface owners from digging into the buried waste material and/or possibly building on top of it. The second is to inform applicants and operators of the design and construction requirements for the lined deep trench.

(f) The operator shall close each drying pad associated with a closed-loop system or temporary pit by excavating and transferring all contents and synthetic pit liners or liner material associated with a closed-loop system or temporary pit to a lined trench. The excavated materials shall pass the paint filter liquids test (EPA SW-846, method 9095) and the closure standards specified in Subparagraph (d) of Paragraph (2) of Subsection F of 19.15.17.13 NMAC. The intent of the proposed language is to inform operators of the standards and conditions in which the excavated material must satisfy for placement in the lined trench.

(g) If the operator or the division determines that a release has occurred, then the operator shall comply with 19.15.3.116 NMAC and 19.15.1.19 NMAC, as appropriate. The operator may propose to transfer the excavated, contaminated soil into the lined trench. The intent of the proposed provision is to instruct operators that if it is determined that a release has occurred, the operator shall address the release pursuant to the provisions for "prevention and abatement of water pollution" and/or "release notification and corrective action," whichever one may apply. The release and the activities required to address it no longer fall under this part and must be addressed by one or both of the specified provisions. The proposed language does allow the operator the opportunity to address contaminated soils generated during the abatement and/or corrective action activities. Such soils would be subject to same standards and conditions as the excavated material placed in the lined trench.

(h) The operator shall install a geomembrane cover over the excavated material in the lined trench. The operator shall design and construct the geomembrane cover in accordance with the requirements specified in Paragraphs (9) and (10) of Subsection J of 19.15.17.11 NMAC. The intent of the proposed language is to inform applicants and operators of the design, construction, and installation requirements for the geomembrane cover. The installation of the geomembrane cover ensures that waste material is completely enveloped and infiltration or rain water will not come in contact with the waste material. By requiring the operator to install the geomembrane cover in a manner that prevents collection, water should not accumulate and penetrate the geomembrane cover and be diverted around the enveloped waste material.

(i) The operator shall cover the geomembrane lined and covered, filled, deep trench with compacted, non-waste containing, earthen material; construct a division-prescribed soil cover; and re-vegetate the site. The division-prescribed soil cover and re-vegetation shall comply with Paragraphs (2) and (3) of Subsection G of 19.15.17.13 NMAC and Subsection H of 19.15.17.13 NMAC. The intent of the proposed language is to ensure that the waste material is properly enclosed, backfilled with uncontaminated soil, the operator installs the appropriate soil cover, and the disturbed area is re-vegetated. The intent is to prevent or restrict the contact of

moisture with the buried waste material. This reduces the risk of contaminants from leaching out of the waste material.

G. Soil cover designs. The concept of the soil cover originates from suggested language recommended by the Task Force. The Task Force only recommended one design. Upon our development of the proposed rule, the OCD realized that the recommended design from the Task Force would be excessive if required for all applications. Therefore, the OCD created two different soil cover design, each for a different application.

(1) The soil cover for closures where the operator has removed or remediated the contaminated soil to the division's satisfaction shall consist of the background thickness of topsoil or one foot of suitable material to establish vegetation at the site, whichever is greater. The intent of this provision is to establish minimal standards for soils covers utilized when restoring areas in which the operator has removed or remediated the contaminated soil. The goal is to ensure that enough topsoil or suitable material is present to establish vegetation.

(2) The soil cover for on-site deep trench burial shall consist of a minimum of four feet of compacted, non-waste containing, earthen material. The soil cover shall include either the background thickness of topsoil or one foot of suitable material to establish vegetation at the site, whichever is greater. The intent of this provision is to establish more specific standards for soils covers utilized for deep trench burial. The primary goal is to ensure that the soil cover is structurally sound and the secondary goal is to ensure that enough topsoil or suitable material is present to establish vegetation. The compaction of the soil is crucial to ensure that soil cover does not settle and collects water. This is important because the collection of water above the buried waste increase the likelihood of increased infiltration of water and increased risk of water coming in contact with the enclosed waste.

(3) The operator shall construct the soil cover to the site's existing grade and prevent ponding of water and erosion of the cover material. The intent of the proposed language is to establish general finishing construction specifications for all covers in order to prevent ponding and erosion of the cover material. IPANM has recommended that this provision be omitted or deleted from the proposed rule. Such a change would allow for the ponding or collection of water over the buried waste material and allow for erosion which could impact surface water and have a negative impact on the re-vegetation efforts by allowing the erosion of topsoil or suitable material. IPANM stated they would "rely on industry committee comments for proposed reasons." For clarification purposes, the industry committee did not request that this option be omitted, deleted, or modified.

H. Re-vegetation requirements:

(1) Upon completion of closure, the operator shall substantially restore the impacted surface area to the condition that existed prior to oil and gas operations, by placement of the soil cover and re-vegetation of the site, and maintain the cover established by re-vegetation, which shall not include noxious weeds, through two successive growing seasons. The intent of the provision is to create a practical standard of re-vegetation that can be established within a specified time frame. **FN #50** *The language provided is consensus language from the Task Force. The Task Force proposed the statement "substantially restore" because it properly reflects the best an operator would be capable of achieving in only two successive growing seasons. OCD agreed with the Task Force assessment and incorporated the proposed language.* Certain parties from industry have recommended that the re-vegetation standard be consistent with the surface waste management rule. Their modifications to our proposed language do not coincide with their written recommendation. The Surface Waste Management Facilities Rule (Part 36) requires "Upon completion of closure, the operator shall re-vegetate the site unless the division has approved an alternative site use plan as provided in Subsection G of 19.15.36.18 NMAC. Re-vegetation, except for landfill cells, shall consist of establishment of a vegetative cover equal to 70 percent of the native perennial vegetative cover (un-impacted by overgrazing, fire or other intrusion damaging to native vegetation) or scientifically documented ecological description consisting of at least three native plant species, including at least one grass, but not including noxious weeds, and maintenance of that cover through two successive growing seasons." Industries recommended language and interpretation of Part 36 as "Upon completion of closure, the operator shall substantially restore the impacted surface area to a similar condition to that the existing prior to oil and gas operations, by placement of the soil cover and re-vegetation of the site." Such a recommendation provides no specifications to allow OCD to determine if the operator has satisfied the requirement.

(2) The operator may propose an alternative to the re-vegetation requirement if the operator demonstrates that the proposed alternative effectively prevents erosion, and protects fresh water, human health and the environment. The proposed alternative shall be agreed upon by the surface owner. The operator shall submit the proposed alternative, with written documentation that the surface owner agrees to the alternative, to the division for approval. **FN #51** *The original language proposed by the Task Force to the OCD stated that "if the landowner contemplates use of the land where a pit is located for purposes inconsistent with re-vegetation, the landowner may, with the division approval, implement an alternative treatment appropriate for the contemplated use, provided that the alternative treatment will effectively prevent erosion." The intent of the language was to allow a surface owner*

an opportunity to utilize the disturbed area for an alternative use (such as a concrete foundation of a storage shed) rather than mandate that the area must be re-vegetated. OCD agrees that the surface owner should be able to propose an alternative, but the issue OCD had to resolve was the permitting and approval. The majority of the permits are issued to operators that are not surface owners. Therefore if the surface owner wishes to utilize the disturbed areas for an alternatives use, the permittee or applicant (the operator) would have the present the request on the behalf of the surface owner. The intent of the language was not created for the discretion of the operator to decide how the surface of the property is to be used. FN #52 The source of the wording "effectively prevents erosion" originates from consensus language from the Task Force. OCD agrees that the wording is appropriate when addressing proposed alternatives to re-vegetation. A potential alternative may include the construction of a structure, stable, corral, storage area. To utilize language which would mandate that the alternative "prevent erosion" would place a restriction on how the surface owner can use their own property, which is not our intent.

I. Closure notice. The concept of the closure notice originates from a recommendation provided by the Task Force. OCD expanded upon their recommended language in order to instruct operators on the how, when, and where of satisfying the requirements.

(1) The operator shall notify the surface owner by certified mail, return receipt requested, that the operator plans to close a temporary pit, a permanent pit, a below-grade tank or where the operator has approval for on-site closure. Evidence of mailing of the notice to the address of the surface owner shown in the county tax records is sufficient to demonstrate compliance with this requirement. The intent of proposed language is to inform and instruct operators how or the method required (certified mail, return receipt requested) to provide notice, which closures require notice, and what is required for a demonstration of compliance.

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

(3) An operator of a permanent pit shall notify the environmental bureau in the division's Santa Fe office at least 60 days prior to cessation of operations and provide a proposed schedule for closure. If there is no closure plan on file with the environmental bureau in the division's Santa Fe office applicable to the permanent pit, the operator shall provide a closure plan with this notice. Upon receipt of the notice and proposed schedule, the environmental bureau in the division's Santa Fe office shall review the current closure plan for adequacy and inspect the site. The intent of proposed language is to inform and instruct operators when are required to notify OCD for the closure of a permanent pit and what information should be submitted when providing notice. The proposed language also provides instructions to operators that are closing an existing permanent pit that does not have closure plan on file or approved.

J. Closure report. Within 60 days of closure completion, the operator shall submit a closure report on form C-144, with necessary attachments to document all closure activities including sampling results; information required by 19.15.17 NMAC; a plot plan; and details on back-filling, capping and covering, where applicable. In the closure report, the operator shall certify that all information in the report and attachments is correct and that the operator has complied with all applicable closure requirements and conditions specified in the approved closure plan. The intent of the proposed provision is to standardize the format (C-144 form) in which a closure report is submitted and to inform operators of the information required in order for the operator to submit a complete closure report. If accepted by the Commission, the C-144 form will have to be modified to include possible check-off list, as a reminder of required attachments and the inclusion of a certification statement. [19.15.17.13 NMAC - Rp, 19.15.2.50 NMAC, / /07]

19.15.17.14 EMERGENCY ACTIONS: The basis of this provision originates from the current Rule 50. The Task Force recommended that the existing language be incorporated into the proposed rule. OCD reviewed the existing language in Rule 50 to determine which modifications would be required and appropriate in order to integrate the existing language into the proposed rule. Only four changes have been proposed to the original language.

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

B. Construction standards. The operator shall construct a pit during an emergency, to the extent possible given the emergency, in a manner that is consistent with the requirements for a temporary pit specified in

19.15.17 NMAC and that prevents the contamination of fresh water and protect public health and the environment. The first modification is identifying the operator's responsibilities when constructing an emergency pit. The second change is the modification of the regulatory reference and its intent as it applies to the new proposed rule.

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

D. Use and duration. A pit constructed in an emergency may be used only for the emergency's duration. If the emergency lasts more than 48 hours, then the operator shall seek the appropriate division district office's approval for the pit's continued use. The operator shall remove all fluids, solids or wastes within 48 hours after cessation of use unless the appropriate division district office extends that time period. The third modification is the change to the time required to remove all fluids, solids, or wastes (from 24 hours to 48 hours). The intent is to provide operators ample time to make the necessary arrangements.

E. Emergency pits. 19.15.17.14 NMAC does not authorize construction or use of a so-called "emergency pit". Construction or use of any such pit requires a permit issued pursuant to 19.15.17 NMAC, unless the pit is described in a spill prevention, control and countermeasure plan the EPA requires, the operator removes all fluids from the pit within 48 hours and the operator has filed a notice of the pit's location with the appropriate division district office. The fourth modification is the change to the time required to remove all fluids and provide notice (from 24 hours to 48 hours). Once again, the intent is to provide operators ample time to make the necessary arrangements for the removal and contact the appropriate district office.

[19.15.17.14 NMAC - Rp, 19.15.2.50 NMAC, / /07]

19.15.17.15 EXCEPTIONS: FN #53 *The OCD considered the comments from Task Force members and did incorporate the on-site closure method of deep trench burial into the rest of the rule. OCD decided to leave alternative closure methods in exceptions because such methods would be constituent proposals and options not commonly practiced or utilized by industry. The OCD also did not want to create such definitive regulatory language that would restrict the application of viable unknown alternatives. The intent of the proposed provision is to allow industry to evolve beyond their current practices, but to provide oversight for the proper handling of the waste material. The majority of the provisions and requirements of the Rule, except those identified in Paragraph (1) of Subsection A of 19.15.17.15 NMAC, are open to an exception because most provisions specify a standard in which the operator must demonstrate that the proposed exception provides equivalent or better protection than the specified standard.*

A. General exceptions. The proposed language for general exceptions is designed to identify to the applicant or operator which provisions are open to exceptions and the process or protocol in which the applicant must pursue an exception. The OCD is proposing to protect certain provisions from exceptions, such as the provision for permitting, the surface owner written consent for on-site closure, exceptions, and/or permit approval, condition, denial, revocation, suspension, modification or transfer requirements. The intent is to prevent the request of unreasonable exceptions such as operating a pit without a permit, requesting an exception for a hearing or public notice, or requesting an exception that prohibits OCD from denying or revoking a permit. This may seem silly to have to include such language, but parties tried to utilize current and existing rules and provisions to make such requests. Our intent is to make the intent of the proposed language and provision as clear as possible. **FN #54** *In the draft version provided to the Task Force, OCD originally restricted an exception to any of the closure requirements, because Section 13 specified which exceptions could be pursued. OCD's intent was to prevent an operator from requesting an exception to an exception. Since OCD has reorganized and reformatted the Rule, the comment is no longer applicable. FN #55* *The Rule does specify and identify where the district office has the authority and upon what grounds it can grant an administrative approval. Where the Rule is silent and exception is pursued, the applicant or operator must apply to the Santa Fe office for consideration. Having one office consider approval for exception will allow for consistency and uniform responses throughout the state regarding enforcement of the Rule.*

(1) The operator may apply to the environmental bureau in the division's Santa Fe office for an exception to a requirement or provision of 19.15.17 NMAC other than the permit requirements of 19.15.17.8 NMAC; the closure requirement of Subparagraph (c) of Paragraph (1) of Subsection F of 19.15.17.13 NMAC; the exception requirements of 19.15.17.15 NMAC; or the permit approval, condition, denial, revocation, suspension, modification or transfer requirements of 19.15.17.16 NMAC. The environmental bureau in the division's Santa Fe office may grant an exception from a requirement or provision of 19.15.17 NMAC, if the operator demonstrates to the satisfaction of the environmental bureau in the division's Santa Fe office that the granting of the exception provides equivalent or better protection of fresh water, public health and the environment. The environmental bureau in the division's Santa Fe office may revoke an exception after notice to the operator of the pit, closed-loop

system, below-grade tank or other proposed alternative and to the surface owner, and opportunity for a hearing, or without notice and hearing in event of an emergency involving imminent danger to fresh water, public health or the environment, subject to the provisions of NMSA 1978, Section 70-2-23, if the environmental bureau in the division's Santa Fe office determines that such action is necessary to prevent the contamination of fresh water, or to protect public health or the environment. **FN #56** *The OCD did consider comments from Task Force members regarding the use of "equivalent." OCD considers and understands "equivalent" to mean "equal", as defined as such in Merriam-Webster's Eleventh Edition Collegiate Dictionary. OCD did modify the reference to state "equivalent or better" for clarification.* **FN #56, 57, & 58** *In the draft version provided to the Task Force, OCD utilized the phrase "for the foreseeable future." The phrase was commonly used in conjunction with the "protection of fresh water, public health and the environment." OCD chose to remove the phrase because it only relates to fresh water and would be repetitious because of its use in the definition of fresh water.* **FN #59** *The OCD titled Subsection A of this section "General Exceptions" and Subsection B of this section "Alternative closure methods" to instruct applicants how to pursue their exception. For further clarification, Subsection B of this section "Alternative closure methods" requires applicants to also comply with the general exception requirements of Subsection A.*

(2) The operator shall give written notice by certified mail, return receipt requested, to the surface owner of record where the pit, closed-loop system, below-grade tank or other proposed alternative is, or will be, located, and to such other persons as the environmental bureau in the division's Santa Fe office may direct by certified mail, return receipt requested, and issue public notice. The operator shall issue public notice by publication one time in a newspaper of general circulation in the county where the pit, closed-loop system, below-grade tank or other proposed alternative will be located. Required written and public notices require the environmental bureau in the division's Santa Fe office's approval. The environmental bureau in the division's Santa Fe office may grant the exception administratively if either the operator files with the environmental bureau in the division's Santa Fe office written waivers from all persons to whom notice is required or the environmental bureau in the division's Santa Fe office receives no objection within 30 days of the time the applicant gives notice. If the environmental bureau in the division's Santa Fe office receives an objection and the director determines that the objection has technical merit or that there is significant public interest, then the director may set the application for hearing. The director, however, may set any application for hearing. If the environmental bureau in the division's Santa Fe office schedules a hearing on an application, the hearing shall be conducted according to 19.15.14.1206 through 19.15.14.1215 NMAC. The intent of the proposed language is to comply the Governor's executive order 2005-056, Environmental Justice Executive Order (November, 2005) regarding public notice and involvement and also to instruct applicant and/or operators of the protocols required to pursue an exception. Certain parties (Industry Committee/Yates Petroleum Corporation) have recommended that Paragraphs (2) and (3) be eliminated from the proposed rule. Allowing such a change would force the OCD to defy the Governor's executive order. **FN #60** *The OCD did consider comments from Task Force members regarding the placement of language providing instruction for hearings. The OCD accepted the Task Force member proposal and modified the draft language to include the regulatory reference for hearing procedures.* **FN #61** *The OCD has modified the Rule, by creating Paragraph (1) of Subsection C of 19.15.17.9 NMAC, to instruct applicants requesting approval for on-site closure to submit a closure plan that proposes other methods if the initial closure method does not satisfy the specified or approved standards. This allows the operator to have an approved backup plan. It will be the choice of the operator to restrict their options and place the requirement of additional notices and approvals upon themselves.* **FN #62** *As stated earlier the closure plan should include provisions for anticipated or unanticipated conditions. Since the closure plan is submitted and approved as part of the application and permit, public notice for an exception is required prior to approval and implementation of the closure plan. This comment suggests that public notice should not be required for an exception. This is contrary to Task Force consensus language and the Governor's executive order (2005-056) (November, 2005) regarding public notice.*

(3) If the director does not determine that a hearing is necessary due to an objection's technical merit, significant public interest or otherwise, then the environmental bureau in the division's Santa Fe office may grant the exception without a hearing notwithstanding the filing of an objection. If, however, the environmental bureau in the division's Santa Fe office determines to deny the exception, then it shall notify the operator of its determination by certified mail, return receipt requested, and if the operator requests a hearing within 10 days after receipt of such notice shall set the matter for hearing, with notice to the operator and to any party who has filed an objection to the proposed exception. The intent of the proposed language is to instruct and inform applicant and/or operators of the procedural protocols for an exception.

B. Alternative closure methods. The operator of a temporary pit or a closed-loop system may apply to the environmental bureau in the division's Santa Fe office for an exception to the closure methods specified in

Paragraphs (1) and (2) of Subsection B of 19.15.17.13 NMAC or Paragraphs (1) and (2) of Subsection D of 19.15.17.13 NMAC. The environmental bureau in the division's Santa Fe office may grant the proposed exception if all of the following requirements are met. The intent of the proposed provision is to allow operators to propose an alternative closure method to waste excavation and removal or on-site deep trench burial. If the operator wishes to request an exception to any of the requirements of either of the two specified closure methods, the request for exception would be a request for a general exception, not one made under this provision. A request for an alternative closure method would be a request to something other than the two specified closure methods. A possible example would include utilizing the solidified pit contents to construct a tank battery pad. OCD intent is not to limit the imagination of the applicant by listing which alternatives are approvable. **FN #63, 64, 65, 66, 67& 68** *In the draft version provided to the Task Force, OCD originally proposed an economic demonstration as part of the consideration for on-site closure. OCD received several comments from Task Force members regarding the assessment of such a demonstration. OCD reviewed the information available on the IPPA website and determined that the information is outdated. The most recent available information is from 12/31/03. The average price of crude oil in 2003 was \$29.52/bbl. The current price is more than double the 2003 average. OCD chose to forgo the economic demonstration and chose to require a demonstration of viable disposal options.*

(1) The operator demonstrates that the proposed alternative method provides equivalent or better protection of fresh water, public health and the environment.

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

(3) The operator demonstrates to the satisfaction of the environmental bureau in the division's Santa Fe office that any proposed alternative closure method will implement one or more of the following practices as approved by the environmental bureau in the division's Santa Fe office: waste minimization; treatment using best demonstrated available technology; reclamation; reuse; recycling; or reduction in available contaminant concentration; and such conditions as the environmental bureau in the division's Santa Fe office deems relevant in order to protect fresh water, public health and the environment. **FN #69** *The basis for alternative closure methods is to support operators that implement pollution prevention concepts. The factors inform the operator on what basis the review will be considered. These factors assist in ensuring that the proposed alternative closure method will protect fresh water, public health and the environment.*

(4) The provisions of Subsection A of 19.15.17.15 NMAC shall apply to applications for exceptions pursuant to Subsection B of 19.15.17.15 NMAC.

[19.15.17.15 NMAC - Rp, 19.15.2.50 NMAC, 1/07]

19.15.17.16 PERMIT APPROVALS, CONDITIONS, DENIALS, REVOCATIONS, SUSPENSIONS, MODIFICATIONS OR TRANSFERS: FN #70 *The OCD did not propose time limits for approval due to the notice requirements and potential hearings based upon the requests for exceptions. The review and response time of an application is usually based on the quality of the information provided in the application. If an applicant does not provide the level of information for OCD to properly assess it, the review period is extended while OCD educates the applicant and instructs them of the type of information required for a proper submittal. Historically I have witnessed the result of agencies mandated to respond within a specified timeframe. The result is instant denial upon the first observation that the application is incomplete. A mandated review and response time leaves no time or opportunity for the agency to work with the applicant toward a proper submittal. OCD has observed that once the applicant works through the first application with the agency, the quality of subsequent improves and review periods reduce. (Industry Committee/Yates Petroleum Corporation)*

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

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

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

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

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

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

G. Division approvals. The division shall grant or confirm any division approval authorized by a provision of 19.15.17 NMAC by written statement.
[19.15.17.16 NMAC - Rp, 19.15.2.50 NMAC, //07]

19.15.17.17 TRANSITIONAL PROVISIONS: The Pit Rule Task Force requested that OCD provide transitional provisions to the proposed Rule. Instead of integrating individual transitional provisions into the Rule, the OCD decided to set them apart in order to assist operators in identifying them. The proposed transitional provisions are pretty straight forward. **FN #71** *Current regulations exist that allow OCD the authority to grant the disposal of certain non-domestic waste at solid waste facilities, such as 19.15.9.712 NMAC. The NMED Solid Waste Bureau also has regulations, the Solid Waste Act 74-9-43 NMSA, that allow solid waste facilities permitted under the Solid Waste Management Regulations to accept waste approved by OCD under 19.15.9.712 NMAC. The OCD and the NMED Environmental Protection Division has established a memorandum of understanding (MOU) identifying the rules and regulations that allow for a temporary disposal option until a permanent OCD surface waste management facility is established. Industry and operators are knowledgeable and have known OCD's intent to encourage proper waste management of oilfield waste.*

A. After _____, 200_ [effective date], unlined temporary pits are prohibited.

B. An operator of an existing operation that is required to close pursuant to Paragraphs (1), (2), (3) or (4) of Subsection A of 19.15.17.13 NMAC shall submit a closure plan pursuant to Subsection C of 19.15.17.9 NMAC to the division not later than 30 days after _____, 200_ [effective date].

C. An operator of an existing lined, permitted or registered, permanent pit shall comply with the construction requirements of 19.15.17 NMAC within two years after _____, 200_ [effective date]. Prior to complying with the construction requirements of 19.15.17 NMAC, an operator of an existing lined, permitted, permanent pit shall request a modification pursuant to Subsection E of 19.15.17.16 NMAC; and an operator of an existing lined, registered, permanent pit shall apply to the division for a permit pursuant to 19.15.17 NMAC.

D. An operator of an existing below-grade tank shall comply with the permitting requirements of 19.15.17 NMAC within 90 days after _____, 200_ [effective date]. Prior to complying with the construction requirements of 19.15.17 NMAC, an operator of an existing below-grade tank shall request a permit modification pursuant to Subsection E of 19.15.17.16 NMAC.

E. An operator of an existing pit or below-grade tank permitted prior to _____, 200_, [effective date of 19.15.17 NMAC] may continue to operate in accordance with such permits or orders, subject to the following provisions.

(1) An operator of an existing lined, permitted or registered, permanent pit shall comply with the operational and closure requirements of 19.15.17 NMAC.

(2) An operator of an existing permitted or registered, temporary pit shall comply with the operational and closure requirements of 19.15.17 NMAC.

(3) An operator of an existing below-grade tank shall comply with the operational and closure requirements of 19.15.17 NMAC.

(4) The operator shall bring an existing below-grade tank that does not comply with the design and construction requirements of 19.15.17 NMAC into compliance with those requirements or close it within five years after _____, 200_ [effective date].

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

G. An operator of an existing sump shall comply with the operational requirements of 19.15.17 NMAC.

[19.15.17.17 NMAC - Rp, 19.15.2.50 NMAC, //07]