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February 1, 2006

VIA FACSIMILE AND FEDERAL EXPRESS

Ms. Florene Davidson
1220 South St. Francis Drive
Santa Fe, New Mexico 87505

RE: Yates Petroleum Corporation comments
Draft 12/28/06 Surface Waste Management Rules (amended January 12, 2006)
19.15.2.51 through 19.15.2.53 NMAC

Dear Oil Conservation Division:

Yates Petroleum Corporation (Yates) appreciates the opportunity to provide written comments on the Oil Conservation Division's (OCD's) December 28, 2005 amendments to the proposed surface waste management regulations, as amended again on January 12, 2006 (where the OCD proposed wording). Yates urges the Division to consider its December 21, 2005 comments as well. Yates has not reincorporated all of its earlier comments to avoid unnecessary repetition.

The proposed revisions to the surface waste management regulations impose many new burdens upon operators. Yates is concerned that many of the proposed regulations do not yet reflect sound science and, as a result, place overly burdensome and unnecessary obligations on New Mexico operators without commensurate environmental benefits. Several experts in the fields of hydrocarbon remediation and soil science have provided written and oral comments regarding these proposed revisions at the OCD stakeholders meeting on January 12-13, 2006 in Santa Fe. These experts are Dr. Kerry L. Sublette, Director of the Integrated Petroleum Environmental Consortium and Sarkeys Professor of Environmental Engineering at the University of Tulsa, a recognized expert in hydrocarbon remediation by landfarming; Dr. Ben Thomas of Exponent (formally with Risk Assessment & Management Group, Inc.), a recognized February 1, 2006 expert in hydrocarbon toxicology and risk assessment; Dr. Daniel Stephens, of Daniel B. Stephens & Associates, Inc. a recognized expert in vadose zone hydrogeology and groundwater quality issues; Mr. Mark Miller, of Daniel B. Stephens & Associated, Inc., an expert in landfill permitting, design, and operations, and Randy Hicks, with R.T. Hicks

Consulting, who has extensive experience implementing the existing OCD regulations. Yates hereby incorporates their submittals and comments into its comments.

Yates' proposed amendments and changes to the proposed rules are attached as Appendix "A" to these comments. The Yates' amendments include the proposals urged by the Industry Committee and its technical experts, plus additional issues of concern to the oil and gas production industry in New Mexico.

I. GENERAL COMMENTS

A. Technical Issues

1. **There is no technical justification for the proposed maximum 1000 mg/kg acceptable chloride concentration for landfarming.**

   Drs. Sublette and Stephens outlined the best current science on the affect of chloride on petroleum hydrocarbon remediation and proposed a flexible approach based on mass loading that protects public health, fresh water and the environment. Yates urges the OCD to move towards this risk-based approach.

2. **The proposed 1000 mg/kg TPH threshold for landfarms does not reflect the best science.**

   Drs. Sublette and Thomas demonstrated that the best indicator that toxic constituents of petroleum hydrocarbon have been degraded in the "bioremediation endpoint"—the point where bioremediation has addressed all accessible hydrocarbons. Both Drs. Sublette and Thomas provided information that the petroleum residual left after the bioremediation endpoint is reached is protective of fresh water, public health and the environment.

3. **The proposed landfill design is not reflective of the most current science.**

   Mr. Miller's comments outlined current landfill design and operations that are protective of fresh water, public health, and the environment and recommended areas where OCD should give more flexibility to consider alternate practices, such as evapotranspiration (ET) covers, reduced groundwater monitoring over deep or highly saline waters, and similar recommendations.

4. **The proposed rules adopt an inflexible, one-size-fits-all approach to regulating surface waste management facilities, regardless of the fact that such facilities vary in size, nature of waste treated, location and timeframe of operation. As a result, the risk presented by the various facilities varies considerably.**

Yates and the The Industry Committee believe that appropriate regulation should be flexible and tailored to science and the degree of risk presented by each type of facility. In summary, Yates supports the position advocated by the Industry Committee, which offers the following approach:

Step 1. High risk facilities should be identified and are appropriately subject to site-specific permitting requirements. Examples of such facilities include commercial landfills and landfarms and large facilities where wastes may be managed over time, increasing the possible threat to drinking water, public health and the environment.

Step 2. Lower risk facilities should be registered and subjected to minimum operational requirements, but should not require site-specific permitting that may interfere with management of oilfield wastes. Examples include spill remediation landfarming efforts and evaporation ponds (which are best regulated as pits).

Step 3. The use of the bioremediation endpoint using TPH-DRO (most facilities) or TPH-GRO (for facilities receiving primarily condensate contaminated materials) presents the best metric for determining when bioremediation is complete and the soils can be removed or another lift added to a landfarm. This monitoring should be supplemented by periodic moisture and nutrition reporting as recommended by Dr. Sublette at the January 12, 2006 meeting. BTEX monitoring three feet below the base of the active treatment zone provides a good indicator of whether constituents are inappropriately mobilized. Chloride concentrations should be evaluated using a tool such as the HYDRUS-1 model or equivalent to calculate a maximum chloride loading in light of the ecological setting and proposed management approach at the facility.

Step 4. An appropriate risk-based hydrocarbon clean up and closure standards or approach should be established by rule for each type of facility. Total petroleum hydrocarbons (TPH) are not the best means of assessing potential threats to fresh water and public health. Instead, NMED Tier 1 hydrocarbon constituents (discussed below) for gasoline range organics, chloride standards based upon successful revegetation and additional risk-based closure standards based upon the NMED RBDM or SSLs or similar risk-based standards for other constituents of concern that may be present, such as metals.

This strong scientifically-based approach will allow the Division's limited resources to be focused on those facilities posing the greatest environmental risk while allowing prompter cleanup at smaller sites that pose no realistic threat to fresh water, public health or the environment. Yates hopes that the Commission will seize this opportunity to create a strong, scientifically-based approach to petroleum remediation that will be a model for other states.

B. Legal Issues

Yates reincorporates its legal objections to the proposed rules set forth in its December 21, 2005 letter.

II. SPECIFIC COMMENTS

In addition to the general comments presented above, Yates provides the following specific comments to the proposed revisions.

Proposed 19.15.1.7 NMAC Definitions.

Yates proposes, consistent with the science based approach advocated by the Industry Committee experts, adoption of a term defining the "bioremediation endpoint," as follows:

> (8) Bioremediation endpoint shall mean, for facilities that receive only soils and materials contaminated with crude oil, drill cuttings and fluids and similar materials, that point in time when the mean concentration of TPH-DRO (i.e., the mean of four samples) does not change significantly between two successive sampling periods, which indicates that biodegradation of the toxic constituents has been completed, regardless of TPH-DRO level. For facilities that receive only soils and materials contaminated by condensate, TPH-GRO shall be used in lieu of TPH-DRO. For facilities that receive a mixture of condensate and other contaminated materials, or which receive tank bottoms, both TPH-DRO and TPH-GRO must achieve the bioremediation endpoint.

Yates also proposes a definition of TPH-DRO and TPH-GRO, as follows:

> TPH-DRO shall mean the C10-C28 fraction of total petroleum hydrocarbons using EPA Method 8015B, using silica gel cleanup if necessary.
>
> TPH-GRO shall mean the C6-C10 fraction of total petroleum hydrocarbons using EPA Method 8015B.

Proposed 19.15.2.51 NMAC **Transportation of Produced Water, Drilling Fluids and Other Liquid Oil Field Waste.**

19.15.2.51(C)

Yates supports OCD's revision to the regulations that includes a list of transporters on the OCD website with approved C-133 authorization to transport oil field waste. This should help operators ensure that a transporter has received the proper authorization to move liquid waste. In addition, the rules should affirmatively require a transporter that has lost is C-133 authorization to notify its customers within two business days. In addition, the regulations should provide a safe-harbor for an operator using a transporter whose authorization is suspended or revoked

when the operator has not received notice of the suspension or revocation. Yates proposes a new subsection (F) that addresses operator notification of suspensions and cancellations:

> F. *Notification of cancellations or suspension of authorization to move liquid wastes. A transporter whose C-133 is cancelled or suspended shall notify each of its customers in writing of such cancellation or suspension within two business days and shall provide the division with a copy of the notice and a list of customers receiving such notice. The division shall also post notice of such cancellation or revocation on its website no later than the first business day of the following month. An owner or operator who permits a transporter with a cancelled or suspended C-133 authorization to move liquid waste two business days after the date of receiving the written notice from the transporter or after the third business day of the following month, whichever comes first, shall be in violation of paragraph C of 19.15.2.51 NMAC.*

The proposed language will protect innocent operators if a transporter's authorization is cancelled or suspended. Without these protections, operators would need to verify the transporter's status every time a transporter moves its oil field waste. This is an unrealistic burden given the number and remoteness of the field locations where transport may occur.

Proposed 19.15.2.52 Disposition of Produced Water.

19.15.2.52(A) & (B)

The language of 19.15.2.52(A)(1) and 19.15.2.52(B)(2) contradict themselves. Paragraph (A)(1) forbids disposal in any "pit,", but paragraph (B)(2) authorizes disposal wherever there is a division issued permit. 19.15.2.52(A)(1) should be revised to read:

> **(1)** on the surface of the ground; in any pit *not authorized pursuant to 19.15.2.50 NMAC*; or in any pond, lake, depression or watercourse; or

The italicized rule is needed to preclude the conflict between (A)(1) and (B)(2) and more accurately reflects the division's probable intent.

Yates proposes that OCD add the language "or rule" to paragraph (B)(2). This clarifies that produced water disposed according to the permit by rule provisions in the proposed pit regulations (19.15.2.50 NMAC) is an authorized disposition. Thus, Yates proposes that paragraph (B)(2) be amended to read: "use in accordance with any division-issued use permit *or rule*."

Proposed 19.15.2.53 Surface Waste Management Facilities.

19.15.2.53(A)(1)

Yates supports the recommendations of Drs. Stephens, Sublette, and Thomas that landfarms be split into two classes:

- Class "A" landfarms, which are either (i) commercial facilities or (ii) large centralized facilities expected to manage large volumes of contaminated soils and oil field wastes and are expected to continue in operation for an extended period of time.

- Class "B" landfarms, which are operated for less than three years and are expected to manage smaller volumes of contaminated soil and oil field wastes.

Both commercial and large centralized facilities can be expected to operate for longer periods of time, giving rise to a greater risk that landfarm operation might adversely affect fresh water, public health or the environment. On the other hand, small landfarms (e.g., those than handle less than 8000 cubic yards of material) that may operate for less than three years, typically do not present a realistic threat to fresh water, public health or the environment when using "best management practices." Because these smaller and short-term facilities present less risk, they do not require the degree of site-specific review that larger commercial or centralized facility might.

Therefore, Yates proposes to require landfills and Class A landfarms to obtain a division approved permit and Class B landfarms to register with the division. Conforming changes are made to 19.15.2.53(A)(1) and (2):

(1) No person shall operate a surface waste management facility *other than an evaporation pond or Class B landfarm* except pursuant to and in accordance with the terms and conditions of a division-issued surface waste management facility permit, unless such facility is exempt from permitting pursuant to Paragraph (2) of Subsection A of 19.15.2.53 NMAC.
(2) The following facilities are exempt from the permitting *and registration* requirements of 19.15.2.53 NMAC, but not from the requirements of 19.15.2.50 NMAC regarding pits: [listing]

Yates reiterates that the OCD should amend the surface waste management regulations to exclude pits regulated pursuant to 19.15.2.50 NMAC. If not, pits will be regulated under two different schemes and will require double permitting. Yates proposes the addition of subparagraph (A)(2)(d) that reads:

(d) *pits regulated pursuant to 19.15.2.50 NMAC.*

19.15.2.53(A)(3)

Yates is concerned that the reference to "division-approved corrective action or abatement plan" implies that only actions requiring a plan are authorized. Instead, Yates urges the division to authorize any corrective action or abatement action authorized either "pursuant to" or "consistent with" Rules 19.15.3.116 or 19.15.1.19 NMAC. A division-approved plan should be required for this exemption only where it would otherwise be required pursuant to 19.15.3.116 or 19.15.1.19.

19.15.2.53(B)(1)

In this section, Yates proposes to define the two categories of Class A and Class B landfarms as follows:

(a) Class A landfarm is (i) any commercial facility or (ii) any centralized facility that operates more than 3 years, manages greater than 8000 cubic yards of materials. Class A landfarms require a division-issued site-specific surface waste management facility permit.
(b) Class B landfarm is a centralized facility that operates less than 3 years, manages between 1400 and 8000 cubic yards of material, remediates soils/solids to risk-based clean up standards, and is closed in place or closed by removing soils/solids for beneficial reuse (roads, berms, or other industrial uses). Class B landfarms require a notice of registration with the division.

19.15.2.53(B)(4)

Yates proposes to make the receipt of compensation the criterion for identifying a commercial facility.

19.15.2.53(B)(5)

Yates strongly supports OCD's inclusion of the language "or by an affiliate of such generator" in proposed paragraph (B)(5)(c). This language recognizes that operating entities are sometimes made up of complex mixtures of subsidiary and affiliated entities.

19.15.2.53(B)(6)

Yates reiterates its objection to the definition of "major modification" in paragraph (B)(6) as it relates to treatment processes and to the division's new "catch-all" provision, which is so vague as to provide no meaningful standard for either operators or the division. This definition is too vague to provide guidance to either operators or the division. Yates proposes the following clarification:

(6) A major modification is a modification of a facility that involves an increase in the land area that the permitted facility occupies, a change in the nature of the permitted waste stream or addition of a new treatment *unit or units or a substantial change in the type of treatment process (e.g., the addition of bioremediation or stabilization where not previously used). Adjustment of existing treatment processes to account for variation in incoming materials does not constitute a major modification. The division may specify in a permit those changes that will or will not constitute major modifications.*

This language more clearly defines a major modification by referencing objective factors that can be included in future permits. The proposed revision further clarifies that it is the addition of new treatment units, rather than the shuffling of existing units or minor operational adjustments to achieve better results using existing processes, that triggers the definition of "major modification." This revision is more objective, giving greater certainty. In addition, the proposed definition is too restrictive and prevents operators from improving their treatment processes based on optimization of existing technologies, which is surely not an intended consequence of the division's rule. Finally, if consideration of the division's concerns about "other" changes

19.15.2.53(C)

Yates proposes changes in the initial language of this section to exclude evaporation pits and Class B landfarms from permitting requirements. Evaporation ponds share more in common with pits and are better regulated under that rule, which is specifically designed for the types of wastes typically handled in pits (e.g., liquids). Class B landfarms are best handled under a registration and best management practice approach to encourage use of these facilities to

encourage cleanups, as outlined in Yates General Comments above. Yates therefore proposes that this section be amended to read as follows:

> **C. Permitting requirements *for facilities other than evaporation ponds and Class B landfarms*.** Unless exempt from 19.15.2.53 NMAC, all new *surface waste management facilities other than evaporation ponds and Class B landfarms* shall, prior to commencement of construction, and all *such* existing facilities shall, prior to major modification, be permitted by the division in accordance with the applicable requirements of Subsection C of 19.15.2.53 NMAC.

19.15.2.53(C)(1)

Yates does not believe that it is the best use of Commission, division and operator resources to reproduce the entire application package upon permit renewal. Reduced requirements would be more appropriate. Yates proposes these requirements in new 19.15.2.53(C)(2A). (C)(1) now would apply only to initial applications and major modifications.

> (1) Application requirements for new facilities and major modifications [DELETED MATERIAL]. An application, form C-137, for a permit for a new facility *or to make a major modification* to an existing facility shall be filed with the environmental bureau in the division's Santa Fe office. The application shall include: [list]

Yates proposes that OCD include language in paragraphs (C)(1)(d) and (C)(1)(e) to clarify that these provision only apply to new or modified pits or facilities. The diagram and engineering design requirements of these proposed regulations may not exist for existing pits and facilities and may be impractical to develop. Thus, Yates proposes amending these regulations to read:

> (d) a description of the facility with a diagram indicating the location of fences and cattle guards, and detailed construction/installation diagrams of any *new or modified* pits, liners, dikes, piping, sprayers, tanks, roads, fences, gates, berms, pipelines crossing the facility, buildings and chemical storage areas;

and

> (e) engineering designs *for any new facility or modified part of an existing facility*, certified by a registered professional engineer, including technical data on the design elements of each applicable *new or modified* disposal method and detailed designs of *new or modified* surface impoundments;

Yates proposes that OCD revise paragraph (C)(1)(i) to allow an owner or operator to implement alternative surface treatment if the owner or operator contemplates use of the land for purposes inconsistent with re-vegetation. Yates proposes revising the final sentence of paragraph (C)(1)(i) to read "The closure and post closure plan shall comply with the requirements contained in Paragraphs (3) *or (4)* of Subsection I of 19.15.2.53 NMAC;". This will provide operators and landowners greater flexibility when determining closure and post-closure activities that conform with the future use of the land.

In paragraph (C)(1)(l), Yates proposes to qualify that only existing geological/hydrological data from available information/references or newly acquired site specific data need to provided. Expert experience has shown that detailed hydrogeological data

of the type suggested by the existing rule is not needed for design and development of an operations plan to protection of fresh water, public health and the environment. Yates therefore proposes the following revised paragraph:

> (l) geological/hydrological data *from available information/references or newly acquired site specific data* including:
> (i) depth to and quality of *fresh* ground water beneath the site;
> (ii) [no change]
> (iii) [DELETE]
> (iv) depth to, name of and thickness of the shallowest fresh water aquifer *unless referenced data indicates that fresh ground water is not present beneath the site;*
> (v) [no change]
> (vi) [no change]
> (vii) potentiometric maps for the shallowest fresh water aquifer *unless referenced data indicates that fresh ground water is not present beneath the site;*
> (viii) porosity and permeability [DELETED] for the soil on which the contaminated soils will be placed;
> (m) certification by *the applicant* that information submitted in the application is true, accurate and complete to the best of *its* knowledge; and
> (n) [DELETED MATERIAL] *a demonstration* that the facility's operation will not adversely impact fresh water, public health or the environment and that the facility will comply with division rules and orders.

These proposed revisions reasonably restrict the amount of data needed to that most important for proper permitting of the facility. The revision is consistent with the pit guidelines. The demonstration requirement of proposed 19.15.2.53(C)(1)(n) provides an adequate safety net if additional information is needed.

19.15.2.53(C)(2A)

Yates proposes a new provision 19.15.2.53(C)(2A) to address permit renewals. It is Yates' experience that a complete application is not needed to renew an existing facility permit. Preparation of such an application is wasteful of resources for both the division and the operator. Instead, what the division needs is a clear indication of any changes that may have occurred at the facility that may affect protection of fresh water, public health or the environment. Yates therefore proposes the following provision to balance these considerations:

> (2A) *Application requirements for permit renewals. An existing facility applying for a permit renewal shall file a form C-137 with the environmental bureau in the division's Santa Fe office stating the intention to renew and providing the following information:*
> *(a) a copy of the permit with any corrections necessary to adequately reflect the existing facility;*
> *(b) the information required under paragraphs (a), (c), (d) of section (C)(1) of 19.15.2.53;*
> *(c) current copies of any plans required under paragraphs (f) through (k) of section (C)(1) of 19.15.2.53 that have changed since the permit's issuance;*
> *(d) the certification and demonstration required under paragraphs (m) and (n) of section (C)(1) of 19.15.2.53.*

19.15.2.53(C)(4)

Yates objects to the variable notice requirements. The one mile radius and newspaper publication is adequate. The allowance of discretion merely invites subsequent challenge to

permit actions on the grounds that the division "should have" required more. Yates therefore proposes *deleting* the second to last sentence of 19.15.2.53(C)(4)(a).

19.15.2.53(C)(6)

Yates objects to proposed paragraph (C)(6)(c) because the regulation does not require OCD to provide evidence of a forfeiture prior to removing funds from a cash account. OCD should be required to show that a forfeiture has occurred. Consequently, Yates proposes amending this language to:

> (c) Cash accounts. An applicant may provide financial assurance in the form of a federally insured or equivalently protected cash account or accounts in a financial institution, provided that the operator and the financial institution shall execute as to each such account a collateral assignment of the account to the division, which shall provide that only the division may authorize withdrawals from the account. *In the event of forfeiture under 19.15.2.53(I)(2) NMAC,* the division may direct payment of all or any part of the balance of such account (excluding interest accrued on the account) to itself or its designee *for closure of the facility.*

19.15.2.53(D)

This section should be apply to facilities "other than evaporation ponds and Class B landfarms" consistent with Yates' comments above.

Yates objects to the OCD's use of the discretionary "may" in proposed paragraph (D)(1)(a). Operators who have complied with all applicable regulations for a new facility or major modification should have the assurance that such permit will be issued. In other words, the OCD should not have discretion to deny a permit application when an operator has complied with applicable regulations. Consequently, Yates proposes replacing "may" with "shall" in the first sentence of paragraph (D)(1)(a). Revised paragraph (D)(1)(a) would read as follows:

> **D.** Permit approval, denial, revocation, suspension or modification *for facilities other than evaporation ponds or Class B landfarms.*
> (1) Granting of permit.
> (a) The division *shall* issue a permit for a new facility or major modification upon finding....

Yates objects to the language in paragraph (D)(1)(b) because the division proposes to act inconsistent with New Mexico public policy. The New Mexico Administrative Procedure Act, while not directly binding upon the division, provides that when a permittee has timely filed for a permit renewal, the permit cannot expire before the agency issues a final determination. 12-8-14(A) NMSA. Proposed paragraph (D)(1)(b) states that upon application for a permit renewal, a permit will not expire *unless the operator is in violation of the permit.* This provision allows expiration of a permit even when an application is pending and is inconsistent with State public policy as expressed in the APA. The provision also creates substantial practical difficulties when an operator has legitimate grounds for contesting an alleged violation of a permit.

In addition, Yates objects to the requirement in proposed paragraph (D)(1)(b) that requires operators to re-submit all the information from an original permit when seeking a permit renewal. Instead, the regulations should only require an operator to submit information that has

changed since the previous application. The reference to (C)(1) should be replaced by (C)(2A). See Yates comments on 19.15.2.53(C)(2A) above.

In paragraph (D)(1)(c), OCD should replace "list" with "least".

19.15.2.53(D)(2)

In paragraph (D)(2), Yates opposes this language as a "good standing" requirement. Yates reiterates its objection in the general comments. In addition, Yates objects to this paragraph because it applies to affiliates that Yates may not control. If OCD wants to include "affiliates" in paragraph (D)(2), it should amend the definition of "affiliate" for this paragraph to only include entities in which an operator has at least 51% control. An operator with less than 51% interest may not effectively be able to control the affiliate. Everything after the first two sentence should be *deleted.*

19.15.2.53(D)(3)

In paragraph (D)(3), if the division seeks to impose "additional requirements" the division should have the burden of showing that the requirements are necessary to protect fresh water, public health or the environment. The permit requirements of 19.15.2.53 NMAC were developed to protect soil and groundwater from contamination resulting from surface waste management facilities. Consequently, any permit issued pursuant to these regulations should not require any "additional requirements." Yates proposes that if additional requirements are needed, they should be imposed after notice and an opportunity for hearing to provide an evidentiary basis for those requirements. Yates recommends amending this paragraph to read:

> (3) Additional requirements. The division may impose additional conditions or requirements, in addition to the operational requirements set forth in 19.15.2.53 NMAC that it determines, *after notice and an opportunity for hearing,* are necessary and proper for the protection of fresh water, public health or the environment. Any such additional conditions or requirements shall be incorporated into the permit.

19.15.2.53(D)(4)

Yates objects to the requirement that it provide notice of the division's intent to reopen the permit. A reopening in this context is a variant of an enforcement action and the division should bear the burden of noticing the interested parties.

19.15.2.53(E)(1)

Consistent with its comments throughout, this section should be titled "Operational requirements applicable to permitted facilities other than evaporation ponds and Class B landfarms."

Yates objects to the proposed limitation on facilities with groundwater less than 50 feet below ground surface. Based on the environmental setting, a properly engineered and operated facility poses little substantial risk to groundwater in such a situation. Yates recommends that this provision should be *deleted.*

19.15.2.53(E)(2)

Yates proposes that OCD adopt the definition of "watercourse" as provided by Burlington Resources. The "watercourse" definition is under consideration as part of the OCD's revisions of its pit regulations. Burlington Resources recently developed this definition for OCD. The definition, as provided by Burlington resources, is:

> *Watercourse shall mean any lake bed or gully, draw, stream bed, wash, arroyo or channel that is delineated on a USGS Quadrangle map having a scale factor of 1:24,000 or which clearly has a hydraulic connection to rivers, streams, or lakes. Watercourses under this definition do not include human-made channels, ephemeral washes, or arroyos which are not delineated on a USGS Quadrangle map having a scale factor of 1:24,000 or which clearly are not connected hydraulically to rivers, streams, or lakes.*

In addition, Yates proposes that OCD provide a definition of "lakebed" for proposed paragraph (E)(2). Only in this manner can an operator be assured that it is not locating a surface waste management facility in a prohibited area. Yates proposes OCD adopt the language "For purposes of this paragraph, a 'lakebed" is any portion of a navigable lake" to proposed paragraph (E)(2).

Consistent with the comments of Mr. Miller at the January 13, 2006 stakeholders meeting, Yates recommends that the mandatory minimum distances be reduced if division-approved engineering measures are put in place. In addition, Yates does not see a logical or legal basis for imposing a 200 foot separation for watercourses, but a 500 foot separation for wetlands. The separation should be 200 feet for both, subject to the caveat of further reduction using division-approved engineering measures. Finally, the restrictions based on wellhead protection areas and 100-year flood plains should be limited to "wellhead protection areas in effect at the time of the initial application" to prevent a facility from being forced to close due to some other entity's decision to install a well. Facilities should be allowed to be constructed in 100-year floodplain areas with adequately engineered protections. The revised provision would read as follows:

> **(2)** No surface waste management facility shall be located:
> **(a)** within 200 feet of any watercourse, lakebed, sinkhole or playa lake;
> **(b)** within a wellhead protection area *which is in existence at the time of initial application*; or *within a 100-year flood plain area without adequately engineered protections.*
> **(c)** or within *200* feet of any wetland;
> **(d)** within the area overlying any subsurface mine registered with the department of energy, minerals and natural resources, as listed on the mines, mills and quarries map;
> **(e)** within 500 feet from the nearest permanent residence, school, hospital, institution or church in existence at the time of initial application;
> **(g)** within any seismic impact zone, unless the operator demonstrates that all containment structures, including liners, leachate collection systems and surface water control systems, are designed to resist the maximum horizontal acceleration in lithified earth material for the site; or
> **(h)** within any unstable area, unless the operator demonstrates that engineering measures have been incorporated into the facility design to ensure that the integrity of the facility will not be compromised. Facilities located adjacent to any watercourse or lakebed shall have a division approved plan for handling storm water runoff.

The revised language moves the engineering measures provision to the end of the provision to make it applicable to all of the conditions, not just the unstable area provision.

19.15.2.53(E)(5)

Yates has no objection to the use of the paint filter test as the touchstone for when a waste is sufficiently liquid that it should not be disposed in the landfill or landfarm. Yates objects, however, if the division's intent is to *require* every load to undergo the paint filter test. The paint filter test is difficult to administer correctly, is time consuming when done properly, and is, frankly, unnecessary for the vast majority of obviously dry or passing materials. The test should be applied only when necessary to properly characterize a material. If an operator handles material that fails the paint filter test, subject to the exception discussed below, that failure should constitute a violation and the operator should not be able to raise the failure to complete the test as a defense.

Yates recommends that the division reserve the ability to approve the disposal of appropriate quantities of such waste in the landfill or landfarm permit to avoid the problem of "orphan" wastes that cannot readily be disposed or which would require excessive solidification and hence consumption of limited landfill or landfarm capacity. Based on the stakeholders' meeting, Yates agrees with the division that no *per se* rule applicable to all facilities is possible, but a permit provision tailored to the specific facility and waste streams in question may well be possible. Yates therefore recommends that this provision be revised as follows:

> **(5)** *Except as provided in a division-approved permit or plan,* no waste containing free liquids shall be placed in any landfill or landfarm cell. *Waste contains free liquids if it fails the* paint filter test, as prescribed by the federal Environmental Protection Agency (EPA SW846, Method 9095).

19.15.2.53(E)(6)

Yates is studying the proposed NORM condition, but has not fully determined the ramifications of the proposed language.

19.15.2.53(E)(9)

The netting provision should be limited to exposed pits and ponds "*that may contain floating hydrocarbons.*" Storm water ponds, which may be required by these regulations, should not require netting because there is virtually no chance of harm to birds.

19.15.2.53(E)(12)

Yates objects to the language in proposed paragraphs (E)(12)(c) and (d) as it requires inspections to be performed after "any" rainfall and an inspection of berms after "any" windstorm. This language is overbroad (0.001 inch of rain cannot damage berms) and vague (what constitutes a "windstorm?"), so these regulations should be amended to read as follows:

> **(c)** inspections and maintenance of berms in such a manner as to prevent excessive erosion; and
> **(d)** inspections and maintenance of outside walls of all levees in such a manner as to prevent *excessive* erosion.

19.15.2.53(E)(13)

Yates objects to the requirement to control the 100-year storm event. A storm event of this size is rare and the quantity of water involved is significant. Yates recommends that OCD follow the U.S. Environmental Protection Agency's standard practice of requiring protection for up to a 25-year, 24-hour storm event. This provides an adequate measure of protection without excessive surface disturbance or unnecessary increase in the size of the facilities. Yates adopts the comments of Mr. Miller on this matter.

19.15.2.53(E)(14)

Yates objects to proposed paragraph (14)(h) because the contingency plan cannot be amended "immediately." While Yates appreciates the need to amend the contingency plan when circumstances change, some time must be granted to the facility to effectuate required amendments. Consequently, Yates proposes that OCD amend this paragraph to read:

> (h) indicate when the contingency plan will be amended, which s*hall be within 30 days of any event (i) through (v)*:

Yates also recommends that the following provision be added to make it clear that the facility emergency coordinator may deviate from the plan as needed during an emergency response to protect fresh water, public health or the environment:

> *The facility emergency coordinator may deviate from the plan as necessary to protect fresh water, public health or the environment during an emergency.*

19.15.2.53(F)(6)

Yates recommends that the "typical" daily cover should be presented in the landfill's operational plan approved by the division in the initial permit proceeding. Addressing the daily cover requirement in the plan will lessen the possibility of future disputes. Yates recommends adding: "The landfill operation plan shall describe the typical daily cover and the criteria for any variation in the daily cover."

19.15.2.53(F)(9)

Groundwater monitoring should only be required where necessary. If there is not fresh water under the landfill, groundwater monitoring is inappropriate and should not be required. The variance procedure imposes too much additional burden on the division, the commission and the applicant. Because the absence of fresh water is not uncommon in parts of New Mexico, that situation should be addressed directly by the rules. Yates there proposes adding the following phrase to the proposed rule: "*If necessary to protect fresh ground water, a...*" Yates also recommends a new subparagraph (F)(9)(c), which would provide as follows:

> *(c) The Division may suspend part of all groundwater monitoring requirements based on an applicant's demonstration that fresh ground water will not be adversely impacted during the active life of the landfill and post-closure care period.*

19.15.2.53(F)(10)-(11)

Yates adopts the comments of Mr. Miller concerning the desirability of preserving engineering flexibility in landfill design. In particular, Yates adopts Mr. Miller's comments that a hazardous waste triple liner design is unnecessary for oil field wastes. Yates also supports Mr. Miller's comments on the desirability of evapotranspiration covers in New Mexico.

19.15.2.53(G)

Yates believes that the conditions set forth in this section are appropriate for Class A landfarms, but more stringent than necessary or desirable for smaller facilities basically used for a short time to address a specific remedial problem or to consolidate several small spills as part of a Rule 116 or 19 response. Yates proposes to address such small, temporary facilities as Class B landfarms in a new section (K). 19.15.2.53(G) should be amended to limit it to operation requirements for "Class A landfarms."

As stated by Mr. Hicks at the January 13, 2006 stakeholders meeting, if the division determines that small spill cleanups could be consolidated into a single facility for purposes of Rule 116 or Rule 19, then the need for this provision is diminished. Yates respectfully requests that the division consider giving guidance to the industry on whether Rules 116 or 19 allow such consolidation.

19.15.2.53(G)(1)

Yates believes that the best approach for larger Class A landfarms is to require the development of a landfarm operational plan that lays out the technical approach that the operator will use to bioremediate oilfield wastes. Yates proposes the following condition:

> *(1) The operator shall submit for division approval a landfarm operations plan. The plan shall be based on the environmental setting and landfarm design, and address waste acceptance procedures, representative waste sampling and analysis, cell operations, salt management program, waste placement plan, storm water management, bioremediation program (depth placement, moisture management, tilling schedule, bioremediation end-point [e.g., using TPH DRO], treatment zone and below treatment zone sampling and analysis program, and annual reporting and certification.*

The submissions and testimony of Drs. Sublette, Thomas, and Stephens lay out the benefits of this approach. The proposed landfarm operations plan addresses the bioremediation mechanisms, the desired bioremediation end-point with measurement criteria, management of chlorides, and provides for a site-specific approach to ensuring appropriate landfarm operation.

Yates objects to the prohibition in proposed paragraph (G)(1) [renumbered (G)(2) in the Industry Revisions] that does not allow soils and soil-like materials with a chloride concentration greater than 1000 mg/kg from being placed in a landfarm.[1] Dr. Sublette testified at the January 12, 2006 stakeholders meeting that soil remediation may occur in soils with chloride concentrations in excess of 1000 mg/kg. Dr Stephens testified at the same stakeholders meeting

[1] In the initial version of these regulations, OCD allowed salt-contaminated waste of up to 2000 mg/kg to be placed in landfarms. *See* previous proposed 19.15.2.53(G)(12) NMAC. It is unclear why OCD reduced the allowable chloride concentration.

that higher chlorides can be placed on the landfarm and managed to protect fresh water, the public and environment. Yates proposes that this condition be substantially revised as follows:

> *Except for liquids used to control dust or moisture content, only soils and soil like material such as drill cuttings or tank bottoms shall be placed in landfarm. The person tendering waste for treatment at a landfarm shall provide an analysis of representative samples of the waste for chloride content.*

19.15.2.53(G)(2) and (3)

Paragraphs (G)(2) and (3) need grandfathering as they relate to existing facilities and there is no basis for restricting distance from a pipeline crossing if it is appropriately protected and included in the facilities plan. Yates proposes that (G)(3) be revised as follows and (G)(4) be deleted.

> (2) *At new or modified facilities*, no contaminated soils shall be placed within 100 feet of the boundary of the facility;

19.15.2.53(G)(8)

The industry committee addressed initial monitoring as part of the general integrity and closure monitoring process (see comment on 19.15.2.53(G)(12) below. With respect to the proposed (G)(8) provision, Yates recommends that it be revised as follows:

> **(8)** The operator shall take, at a minimum, four background soil samples from each *new or modified* landfarm cell, three feet below the original ground surface, prior to beginning operations, to establish background concentrations. The operator shall analyze the background soil samples for chlorides, metals and other inorganics listed in Subsections A and B of 20.6.2.3103 NMAC, using approved United States Environmental Protection Agency (EPA) methods.

First, Yates objects to OCD's proposed paragraph (G)(8) because, by its terms, it can only apply to new landfarm facilities. In other words, it is impossible for an existing facility to obtain a background sample. Consequently, Yates proposes that OCD include a sentence within this paragraph that specifies that it only applies to new or modified landfarms.

Second, Yates does not believe it is generally necessary to monitor for TPH-Total, which, as Dr. Sublette and Thomas pointed out, is of minimal value in assessing environmental conditions. In addition, it is typically safe to assume that any TPH and/or BTEX that may be present is the result of site operations, as these constituents are not typically present in uncontaminated soils.

19.15.2.53(G)(9)

The disking requirement is issue is now addressed by proposed (G)(1)'s landfarm operation plan. The recordkeeping requirement is retained.

19.15.2.53(G)(10)

Yates proposes that the regulations establish a default monitoring and beneficial reuse standard for Class A landfarms as follows:

> (10) *Unless otherwise provided in the landfarm operations plan approved by the division, the treatment zone shall be sampled and analyzed for TPH-DRO semiannually. The operator shall plot the TPH-DRO results to determine the bioremediation endpoint of the treatment zone. If material contaminated by condensate are present, the treatment zone shall also be sampled and analyzed for TPH-GRO semiannually and the operator shall plot the TPH-GRO results to determine the bioremediation endpoint of the treatment zone. Once the bioremediation endpoint is reached, the soil may be beneficially reused or another lift may be added.*

As Drs. Sublette and Thomas testified at the January 12-13, 2006 stakeholders meeting, the TPH-DRO test is a good indicator of the success of bioremediation for most oil field wastes. If the TPH-DRO level does not differ substantially between two tests, that indicates that bioremediation has reached its endpoint and that the toxicity has been addressed and the cell is either ready to have the soil removed for beneficial reuse or that another lift can be added. If condensate contaminated materials are present, then TPH-GRO should be added as an additional indicator of the bioremediation endpoint using the same testing methodology.

BTEX is adequately addressed by the TPH-DRO/GRO testing methodology (it is the "candy" that is first bioremediated, in the words of Dr. Sublette). Chloride and metals are not particularly issues for the success of bioremediation, but are important at closure and are addressed as part of the process integrity and closure standards in 19.15.2.53(G)(12).

Yates objects to the revised requirement in the division's proposed paragraph (G)(10) that the TPH concentration be reduced to 2500 mg/kg prior to adding an additional lift. Yates incorporates the argument of Dr. Sublette that a 100 mg/kg level is arbitrary and does not reflect current scientific literature. Adoption of a numerical standard is arbitrary and capricious if it is not technically achievable. *See Tenneco Oil Co.*, 760 P.2d at 167. EPA has determined that a reduction in TPH concentrations greater than 95% are very difficult to achieve because of "recalcitrant" or nondegradable species that are included in the TPH analysis. *See* EPA, *How to Evaluate Alternative Cleanup Technologies for Underground Storage Tank Sites: A Guide for Corrective Action Plan Reviewers* (EPA 510-B-95-007) V-15 (Oct. 1994). In this case, a soil sample with an initial TPH concentration of 2000 mg/kg would be very difficult to landfarm to a level less than 100 mg/kg. Consequently, the 100 mg/kg TPH concentration requirement makes it functionally impossible for a facility to landfarm.

19.15.2.53(G)(12)

Yates proposes substantial revisions to paragraph (G)(12):

> (12) Unless otherwise provided in the landfarm operations plan approved by the division, the soils below the treatment zone in each new or modified landfarm cell shall be monitored to ensure that hydrocarbons or chlorides are not transferred to the underlying native soil at a rate that would endanger fresh ground water. A treatment zone shall not exceed three feet in depth from the ground surface. Semi-annually, a minimum of four representative samples shall be taken from different locations within each landfarm cell after the first contaminated soils are received. The samples shall be taken from three feet below the cell's original surface. The samples shall be analyzed, using EPA approved methods, for chloride, and benzene, toluene, ethyl benzene and xylenes (BTEX), a subset of the NMED Tier I constituents, all major cations and anions and selected metals, annually. If the chlorides exceed [DB STEPHENS MODEL NUMBER] or BTEX exceeds ten times the NMED Tier I constituent levels, the next semiannual sampling event shall be

> completed at five feet below the cell's original surface and shall include all of the NMED Tier I constituents, plus all major cations, anions and selected metals (if conducted in conjunction with the annual sampling). Reports showing the results of the analyses shall be submitted to the environmental bureau in the division's Santa Fe office no later than 45 days after completion of the sampling. If the semi-annual or annual sampling results at five feet below the cell's original surface show chloride concentrations above the [DB STPEHENS MODEL NUMBER] or NMED Tier I constituent concentrations at or above ten times the NMED Tier I constituents levels, and that would endanger fresh water, a remediation plan shall be required.

Proposed paragraph (G)(12) achieves two goals. First, it provides a method if assuring the integrity of the landfarm cell by assessing the possibility of unintended constituent migration through sampling under the active treatment zone. Second, it provides a trigger for corrective action if those levels exceed risk-based criteria. Yates recommends that remediation proceed if a second semi-annual or annual sampling result shows that the concentration of BTEX/NMED Tier I constituents exceeds the NMED Tier I constituent levels by ten times or if chloride concentrations exceeds either the site-specific value (set forth in the landfarm operational plan) or the default value [FROM THE DB STEPHENS MODEL]. These limits have been carefully reviewed by NMED (for the Tier I standards) and Dr. Thomas and are protective of fresh water, public health and the environment while also being simple and straight-forward to administer.

19.15.2.53(G)(15)

Finally, Yates notes that the requirement in proposed paragraph (G)(15) as unachievable unless a time frame is given. With large rainfall events it is impossible to prevent pooling and there will be freestanding water no matter what actions the operator takes. Thus, Yates proposes that this paragraph be amended to read:

> (15) Pooling of liquids in the landfarm is prohibited. Freestanding water shall be removed *within 72 hours of a precipitation event.*

19.15.2.53(G)(14)-(16)

Yates therefore supports a risk based approach similar to that taken by the New Mexico Environment Department (NMED) and other States. The Petroleum Storage Tank Bureau of NMED has promulgated regulations concerning the remediation of soils contaminated by a leaking underground storage tanks. *See generally* 20.5 NMAC. These regulations, and their associated Guidelines for Corrective Action incorporated by reference into the regulations, include sections governing the remediation of contaminated soil. *See* 20.5.12.1208, 20.5.12.1233 NMAC. Briefly, owners or operators initially must perform a "tier 1" evaluation to determine whether soil concentration poses a threat to groundwater. *See* 20.5.12.1213(A) NMAC. Concentrations of contaminants of concern are compared to "risk based screening levels" (BRSLs) developed by NMED. 20.5.12.1213(B) NMAC. The RBSLs are not one-size-fits-all and instead depend upon the soil configuration. *See* NMED, Petroleum Storage Tank Bureau, *Guidelines for Corrective Action* § 4.11. If concentrations are less than RBSLs, the area qualifies for "no further action status." 20.5.12.1213(D) NMAC. If a contaminant of concern exceeds a RBSL, the owner or operator must perform a "tier 2" evaluation to determine a site specific target level (SSTL) for the soil. 20.5.12.1215(A) NMAC. If the contaminants of concern exceed the SSTL for the soil, the owner or operator must remediate the soils to the SSTL

or, if directed by NMED, perform an additional, "tier 3" evaluation.[2] 20.5.12.1215(B) NMAC. In addition, NMED regulations and guidance do not contain a TPH soil remediation standard. TPH contamination in soil only requires remediation when NMED determines that TPH in the soil adversely affects public health safety and welfare or the environment. 20.5.12.1219 NMAC. Thus, the petroleum Storage Tank Bureau has determined that soil remediation or TPH and individual contaminants depends upon the soil characteristics of the area.

The overly stringent levels in the division's proposal are also exemplified in a review of soil TPH landfarming and remediation regulations from sister states. For example, Colorado's regulations applicable to "land treatment"[3] require that an operator prepare a site investigation and remediation workplan. 2 Colo. Code Regs. § 909(c). If soil concentrations exceed certain limits, an operator must remediate the soils to those levels. 2 Colo. Code Regs. § 910(b); Table 910. As stated, the Colorado TPH soil remediation levels are 1000 mg/kg for sensitive areas and 10,000 mg/kg for non-sensitive areas. 2 Colo. Code Regs. § 905(b); Table 910. In a similar way, the allowable benzene concentration under the Colorado regulations is 0.5 mg/kg. *Id.*

At this time, Texas does not have standard TPH remediation levels for landfarms for oil and gas waste. *See* Railroad Comm'n of Tex., Surface Waste Management Manual, Application Information for Landtreatment Permit at http://www.rrc.state.tx.us/divisions/og/publications/SurfaceWasteManagementManual/index.htm l. Instead, Texas establishes target remediation levels on a case-by-case basis. *Id.* However, the Texas regulations for the cleanup of crude oil spills associated with the exploration, development, and production in non-sensitive areas require an operator to achieve a level of 1.0% by weight (10,000 mg/kg) of total petroleum hydrocarbons. 16 Tex. Admin. Code § 3.91. Other states have similar soil remediation standards. For example, Nebraska requires oil spill cleanup remediation to achieve TPH concentrations of 1% by weight (10,000 mg/kg). 3 NOGCC Reg. 022.04. Finally, Arizona promulgated soil remediation standards for hydrocarbons with chains of 10 to 32 carbon atoms of 4100 mg/kg for residential areas and 18,000 mg/kg for non-residential areas. *See* A.A.C. § 18-7-203, 205 App. A. As these sister-state regulations demonstrate, OCD's proposed TPH soil remediation requirement of 100 mg/kg is unreasonably low. Other states have stated, either explicitly or implicitly, that public health and the environment are protected by a TPH concentration well in excess of 100 mg/kg. As a result, it is unreasonable that OCD would propose a level much lower than is required to protect public health and the environment.

As previously stated, regulations that are so stringent that they cannot be met are arbitrary and capricious. *Tenneco Oil Co.*, 760 P.2d at 165. In this case, the 100 mg/kg TPH concentration is so stringent that it effectively does not allow landfarming to occur. As stated in the comments to paragraph (G)(8) above, EPA has determined that a reduction in TPH

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[2] These cases often involve complex hydrogeology or sensitive ecological receptors. 20.5.12.1217(A) NMAC.
[3] "Land treatment" is defined as "treatment method by which [exploration and production] waste is applied to soils and treated to result in a reduction of hydrocarbon concentration by biodegradation and other natural attenuation processes. Land treatment may be enhanced by tilling, disking, aerating, composting and the addition of nutrients or microbes." 2 Colo. Code Regs. § 100.

concentration greater than 95% is very difficult to achieve because of "recalcitrant" or nondegradable species that are included in the TPH analysis. *See* EPA, *How to Evaluate Alternative Cleanup Technologies for Underground Storage Tank Sites: A Guide for Corrective Action Plan Reviewers* (EPA 510-B-95-007) V-15 (Oct. 1994). Consequently, any sample with an initial TPH concentration greater than 2000 mg/kg will be effectively excluded from landfarming.

In addition, Dr. Sublette's comments showed that a TPH remediation level should depend upon the hydrocarbons and soil type of the landfarm. Dr. Sublette noted that if hydrocarbons deposited at the site are properly remediated, there will be no residual toxicity even if the TPH concentration exceeds 100 mg/kg.

Dr. Thomas noted that the more toxic and soluble constituents of petroleum are the small aromatic compounds (e.g., BTEX) and small naphthenic acids. He notes further that soil microorganisms degrade these small compounds preferentially, thereby reducing the toxicity of the mixture. As a result, Dr. Thomas recommends that BTEX (i.e., surrogates for the gasoline-range organics that are lost by volatilization and/or biodegradation) and TPH-DRO (i.e., a measure of the other fraction of petroleum that is degraded by soil microbes) be used by operators to monitor the effectiveness of biorediation. Treatment is considered to be complete when the concentration of TPH-DRO (i.e., the mean of four samples) "plateaus" (i.e., when biodegradation of the toxic constituents has been completed, regardless of TPH-DRO level.

Yates respectfully requests that the division adopt the risk based approaches outlined above.

19.15.2.53(H)

Evaporation ponds handle liquids and are fundamentally different in operation than the landfills and landfarms that are the focus of proposed 19.15.2.53. Evaporation ponds have much more in common with pits. Yates therefore proposes that evaporation ponds be permitted as pits pursuant to 19.15.2.50 NMAC.

19.15.2.53(I)(1)

Consistent with the nomenclature changes throughout, this section should be titled "Closure and post-closure requirements for facilities other than evaporation ponds and Class B landfarms."

Yates has several proposals related to proposed paragraph (I)(1). Initially, the paragraph should contain time frames for division action. If the division does not act within a given time frame, the operator should be allowed to move forward with closure. In this way, the operator may close the facility in a reasonable time based on the approved closure plan submitted during the permitting process. Yates also believes that OCD should bear the burden of proof for any changes to the closure plan at the time of closure because OCD has already approved a closure plan in the facility's operating permit. *See* proposed 19.15.2.53(C)(1)(i) NMAC. The paragraph should also specify that the closure plan will proceed in accordance with the result of any appeal.

Finally, the paragraph does not allow an operator the option of cleaning up any contamination found to avoid forfeiting its financial assurance. Finally, an operator should have the option to remedy any contamination that may occur. In total, Yates proposes that this paragraph be amended to read:

> **(1)** Facility closure by operator. The operator shall notify the division's environmental bureau at least *90* days prior to cessation of operations at the facility and provide a proposed schedule for closure. Upon receipt of such notice and proposed schedule, the division shall inspect the facility and review the current closure plan for adequacy. *The notice is deemed received five days after postmarked by United States mail or date of actual receipt as evidence by commercial carrier or other means. Within 30 days of receipt of notice and proposed schedule, t*he division shall notify the operator when it has completed its review and inspection and shall specify in such notice any modifications of the closure plan and proposed schedule or additional requirements that it determines are necessary for the protection of fresh water, public health or the environment. *If the division does not notify the operator within 30 days of receipt of the notice and proposed schedule, the schedule and plan are deemed accepted as written without modifications or additional requirements.* The operator shall be entitled to a hearing concerning any modification or additional requirement the division seeks to impose if it files an application for a hearing within 10 days after receipt of written notice of the proposed modifications or additional requirements. Closure shall proceed in accordance with the approved closure plan and schedule and any modifications or additional requirements imposed by the division *and upheld by the commission, if applicable.* During closure operations the operator shall maintain the facility to protect fresh water, public health and the environment. If it is determined that closure is complete, the division shall release the financial assurance, except for the amount needed to maintain and sample a proposed post-closure monitoring system for the post-closure period *identified in the closure plan*, and to re-vegetate the site. Prior to the partial release of the financial assurance covering the facility, the division will inspect the site to determine that closure is complete. After the *closure period* has expired, the division shall release the remainder of the financial assurance if the monitoring system shows that fresh water is protected and the re-vegetation is successful. If the *monitoring systems* reveal a threat to fresh water, human health or the environment during the *post-closure period specified in the facility's closure plan*, the division shall not release the financial assurance *unless the contamination is remediated by the owner or operator.*

19.15.2.53(I)(2)

Yates objects to the six month requirement in (I)(2)(b) as it is unnecessary and unworkable, particularly for facilities that are primarily used to respond to spill events. Facilities otherwise meeting permit requirements should not be forced to close just because there is no contaminated soil for a period of time. Keeping well managed and designed existing facilities in place is better than requiring them to shut down and then having to reopen them at short notice if they are needed for future remedial work.

Similarly, in (I)(2)(b)(ii), the proposed rule should recognize that an agreement to reopen the facility and operate in accordance with its permit may be an appropriate resolution. Yates proposes that (I)(2)(b)(ii) be revised as follows:

> **(ii)** advise the operator and surety of the conditions under which the forfeiture may be avoided. Such conditions may include but are not limited to an agreement by the operator or another party *to resume operations in accordance with permit conditions, or* perform closure and post closure operations in accordance with the permit conditions, the closure plan (including any modifications or additional requirements imposed by the division *and upheld by the commission*) and division rules, and satisfactory demonstration that such party has the ability to perform such agreement.

19.15.2.53(I)(3) general

Yates is generally in agreement with the closure standards if they are revised as discussed above.

Yates proposes to caveat paragraph (I)(3)(e)(i) that it applies only when necessary to protect fresh ground water. In addition, the fixed post-closure period references should be deleted because the post-closure period should be specified in the closure plan. The revised condition would read as follows:

> (e) Landfarm post closure. If necessary to protect fresh ground water, the post-closure care period for a landfarm shall be approved by the Division. The operator or other responsible entity shall ensure that:
> (i) water monitoring, if required because of a threat to fresh water, is maintained to detect possible migration of contaminants; and
> (ii) any cover material is inspected and maintained.

In general, Yates does not believe that groundwater monitoring should be required after landfarm closure because the proposed regulations require that all soil not meeting the contaminant standards be removed. Thus, there will be little chance of contamination and no reason to monitor groundwater.

Proposed (I)(3)(f) should be deleted as evaporation ponds are best handled under the pit rule.

19.15.2.53(J)

Yates supports the exemption approach outlined in new section (J).

19.15.2.53(K)

Yates proposes that paragraph (K)(1) specify those requirements that are applicable to existing facilities. As written, the proposed regulation purports that all operational, waste acceptance and closure requirements are applicable unless granted a specific waiver. However, several of these requirements are impossible or nearly impossible for existing facilities to implement. As a result, Yates proposes amending this language to the following:

> (1) All existing facilities shall comply with the operational, waste acceptance and closure requirements provided in 19.15.2.53 NMAC, except as otherwise *exempted in this paragraph* or as specifically provided in the applicable permit or order, or in any specific waiver, exception or agreement that the division has granted in writing to the particular facility. Existing facilities need not comply with the paragraphs (E)(1) through (3), (F)(11) and (12), and (G)(2) and (8) of 19.15.2.53 NMAC.

Industry Proposed 19.15.2.53(K) Class B landfarms

Yates supports the recommendations of the technical experts Stephens, Sublette and Thomas that a more flexible system is preferable for small, site-specific remediation oriented landfarms, denominated "Class B" landfarms by those experts. A new section (K) is proposed be adopted to create a more flexible, notice and best management practice regime for these units, as follows:

K. Notice of Registration and Requirements for Class B Landfarms
(1) A Notice of Registration shall be filed with the division for each Class B landfarm. The notice shall include:
(a) the names and addresses of the applicant;
(b) a topographic map showing the facility's location in relation to governmental surveys (quarter-quarter section, township and range), highways or roads giving access to the facility site, watercourses, and surface water sources;
(c) depth to fresh ground water from available references
(d) the types of wastes to be bioremediated and schedule for closure (less than three years from date of first waste receipt) including maximum chloride mass
(e) a closure plan including treatment zone sampling and analysis for TPH-DRO.
(2) By submitting the Notice of Registration, the Registrant agrees to follow the operational requirements applicable to Class B Landfarms listed below:
(a) No landfarm shall be located in any watercourse or lakebed as defined in 19.15.2.53(E)(2);
(b) No landfarm shall exceed 5 acres.
No wastes with water content greater than 80 percent shall be placed in the facility.
(c) Landfarms shall accept only oil field related wastes, except as provided in Subparagraph (c) of Paragraph (5) of Subsection E of 19.15.2.53 NMAC. No non-exempt wastes, which are RCRA subtitle C hazardous wastes by either listing or characteristic testing, shall be accepted at a permitted facility.
(d) Except for liquids to control dust and maintain optimal moisture content to enhance bioremediation, only soils and soil like material such as drill cuttings or tank bottoms shall be placed in landfarm.
(e) Landfarm operations shall be conducted in accordance with industry practices for piling, spreading, disking, moisture content management, and microbe enhancement.
(f) The application of microbes for the purposes of enhancing bioremediation requires prior division approval.
(3) Class B Landfarm Closure
(a) The operator shall notify the division's environmental bureau at least 60 days prior to cessation of operations and if necessary submit a revised closure plan and schedule. The closure plan shall include treatment zone sampling results for hydrocarbon constituents and chlorides and a comparison to risk based clean up standards (REF).
(b) If the remediated soils TPH-DRO has reached the TPH-DRO bioremediation endpoint and the chloride concentrations are below [DB STEPHENS MODEL NUMBER], the operator may close in place, or remove the soils and reuse as backfill, road construction/maintenance, berm construction, etc.
(c) If the upon receipt of such notice and plan, the treatment zone sampling results are above the TPH-DRO bioremediation endpoint or the chloride concentrations are above the [DB STEPHENS MODEL NUMBER], the division shall require an additional closure plan within 30 days outlining additional requirements necessary for the protection of fresh water, public health or the environment. The division may impose additional requirements necessary to protect fresh water public health or the environment if, after notice and an opportunity for hearing, the division demonstrates that such requirements are necessary to protect fresh water, public health and the environment. The operator shall implement the division approved revised closure plan and schedule.

Yates believes that the proposed Class B landfarm provisions represents an important enhancement to the proposed surface waste management facility rules. The Class B landfarm allows prompt and effective management of spills. Because of the small scale and short duration of Class B landfarms (they are limited to less than 8000 cubic yards and three years), they do not pose a threat to fresh water, public health or the environment if properly sited and operated. The provisions set forth above provide for proper siting and operation of the Class B landfarm. The closure provisions provide a further assurance to the division that the landfarms will achieve appropriate closure standards: numeric risk-based standards for gasoline range organics (such as BTEX) and a bioremediation endpoint for other constitutents of concern. Closure remains

subject to division notice and supervision, with the division having the right to require additional measures for closure to ensure protection of fresh water, public health and the environment.

* * * *

Yates appreciates the opportunity to comment on the proposed rules. Please feel free to contact Lisa Norton, at (505) 748-4185 or our legal counsel, Eric Hiser, at (480) 505-3927, if you have any questions or concerns about these comments.

Sincerely,

Lisa Norton
Environmental Coordinator

Cc: Mark E. Fesmire, Director, OCD