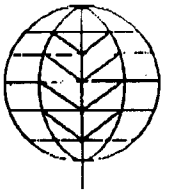
Oil & Gas Accountability Project
a program of EARTHWORKS



April 13, 2006

VIA FACSIMILE AND U.S. MAIL

Ms. Florene Davidson
Commission Clerk
Oil Conservation Commission
New Mexico Department of Energy,
Minerals and Natural Resources
1220 South Saint Francis Drive
Santa Fe, NM 87505

Re: Written comments in OCC Case No. 13586: Application of the Oil Conservation Division for Repeal of Existing Rules 709, 710 and 711 Concerning Surface Waste Management and the Adoption of new Rules Governing Surface Waste Management

Dear Ms. Davidson,

On behalf of the Oil & Gas Accountability Project (OGAP), I would like to submit the following written comments on the Oil Conservation Division's February 26, 2006 draft amended rule, as revised by the Division with its March 31, 2006 Fifth Amended Proposal.

In addition, I have replaced Carolyn Lamb, as the OGAP representative in this matter. Therefore, all future correspondence should be directed to my attention.

Copies of these written comments have been mailed on this date to all parties of record in this case.

Sincerely,

Bruce C. Baizel
Staff Attorney

Enclosure

Cc: David K. Brooks
Gregory D. Huffaker
Bruce A. Gantner
Donald A. Neeper
Aletta Belin
Pete V. Domenici
Dennis L. Newman
Ronald D. Truelove
Lisa Norton
Rebecca G. Percy-Pipin

OGAP Written Comments

OGAP submits the following written comments on the proposed rule.

Comments

Rule 51 Transportation of produced water, drilling fluids and other liquid oil field waste.

1. OGAP is supportive of the rule's comprehensive coverage for all transport of oil field waste. The requirement that both transporters and operators are subject to the requirements will provide uniformity and accountability to the movement of these wastes. In so doing, it will allow the OCD to track the movement of wastes.

The later provision in 19.15.2.52 C. provides the operator flexibility that is necessary by allowing for the between well transport of recovered drilling fluids.

2. We also support the inclusion of the 25% threshhold in **D. (4)**, allowing the Division to deny approval of a Form C-133 if the applicant has a history of bad performance, essentially. In OGAP's view, such an option is very necessary for the Division to be able to ensure that the standard of performance for the industry continues to be upgraded. The inclusion of this language is also consistent with this Commission's recent adoption of the similar requirements in both 19.15.1.40 and 19.15.3.100, and therefore, should be adopted.

Comments

Rule 53 C. Permitting requirements, application, public notice and financial assurance.

C. (5) *Financial Assurance Requirements.*

1. Generally, the financial assurance (FA) requirements proposed are in line with other jurisdictions, e.g., New Mexico's surface waste rule requires that commercial facilities provide FA to cover the cost of closure and post-closure activities; and the FA must be received prior to the issuance of a final permit. The form of the FA is also similar to other jurisdictions (bond, letter of credit, cash account, other).

At the present time, New Mexico requires that centralized facilities provide financial assurance in the amount of $25,000 per facility, or a statewide "blanket" financial assurance in the amount of $50,000 to cover all of that applicant's centralized facilities.

We believe that these numbers underestimate the potential costs involved with cleaning up one or more sites, and could leave the Division with a significant amount of liability in the even that an operator is unable to perform closure at its facilities.

Other states require larger amounts of financial assurance for centralized facilities than New Mexico. For example, the Colorado Oil and Gas Conservation Commission Rule 704, which outlines Colorado's financial assurance for closure of centralized waste facilities, requires that:

> *"An operator which makes application for an offsite, centralized E&P waste management facility shall, upon approval and prior to commencing construction, provide to the Commission financial assurance in the amount of fifty thousand dollars ($50,000) to ensure the proper reclamation, closure and abandonment of such facility."*

Our concern is that some entity, be it the company or the state, must have the financial wherewithal to close these facilities in a manner that does not present a long-term hazard to public health or the environment. Therefore, we encourage the Division to raise the financial assurance requirement, and remove the ability of operators to utilize state-wide blanket financial assurance for these facilities.

Recommendations: Increase the centralized facility financial assurance requirement to $50,000, and remove the option of state-wide, blanket financial assurance.

2. We also note that the proposed financial assurance language in C. (5) does not mention any financial assurance for a land farm. OGAP is not aware of any discussion as to the reason for that oversight; however, we believe that a financial assurance should be required for landfarms and would suggest that a bond amount of between $50,000 and $100,000 should be required.

3. OGAP sees no reason for the OCD to limit its ability to initiate a review of a facility's financial assurance requirements. There may be occasions when the OCD will want to review and revise financial assurance requirements within the first five years after a facility being operating.

The rule currently states:

> C. (6) (e) ***Review of adequacy of financial assurance.*** *The division may at any time not less than five years after acceptance of financial assurance for a commercial facility, initiate a review of such financial assurance's adequacy.*

However, other states that have regulations impose much more stringent financial assurance review requirements. For example, Louisiana requires that a company's closure bond or letter of credit amount be reviewed each year.[1]

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[1] Louisiana Department of Natural Resources, Office of Conservation, Injection and Mining Division. November 20, 2001. Amendment to Statewide Order No. 29-B. LAC 43:XIX, Subpart 1, Chapter 5, §567. Closure. A1-4.

We are not suggesting annual reviews, as this might be too onerous for both the OCD and the operators. Rather, we would simply like OCD to keep open the option of reviewing the financial assurance amounts at any time it deems necessary (including within the first five years of operation).

Recommendation: We would like to see the rule enable OCD to review the financial assurance requirements at any time after a facility begins operating (i.e., do not make it so that the OCD has to wait five years before a review can take place).

Comments

Rule 53 E. Siting and operational requirements applicable to all permitted facilities.

1. We are highly supportive of the inclusion of the 50 feet to ground water restriction on facility siting that is included in **E. (1)**. The use of a uniform restriction will help to prevent contamination of ground water and should make administration of the rule easier.

2. The proposed rule states:

> **E. (15)** ***Gas safety management plan.*** *Each operator of a facility that includes a landfill shall have a gas safety management plan that describes in detail procedures and methods that will be used to prevent landfill-generated gases from interfering or conflicting with the landfill's operation and protect fresh water, public health, safety and the environment. The plan shall address anticipated amounts and types of gases that may be generated, an air monitoring plan that includes the vadose zone, and measuring, sampling, analyzing, handling, control and processing methods. The plan shall also include final post closure monitoring and control options.*

OGAP fully supports the requirement for air monitoring, but we would like to see air monitoring required at all facilities (not just those that include a landfill). We encourage the OCD to require comprehensive VOC and other emissions testing during the spreading of wastes, especially during the spreading of tank-bottom-waste.

In 2002, the California Department of Toxic Substances Control studied the hazardous contaminants associated with oil and gas industry wastes. The study noted that "VOC releases into the atmosphere from aerated pits containing oily sludge [production pit residues and tank bottoms] waste are a concern."[2]

Not only should monitoring be required, but OCD should also require an air emissions minimization/prevention plan. An example of this type of requirement can be found in

[2] Nagy, C. 2002. Oil Exploration and Production Wastes Initiative. (Department of Toxic Substances Control, California). p. 42.

the Louisiana regulations. Louisiana requires commercial facilities and transfer stations to submit a waste management and operations plan that includes:

> *. . .specific plans for preventing or minimizing air emissions from sources such as the volatilization of organic materials (e.g., benzene) and/or hydrogen sulfide in E&P Waste, particulate matter (dust) carried by the wind, periodic removal and subsequent handling of free oil, and chemical reactions (e.g., production of H2S from sulfur-bearing E&P wastes).*[3]

Recommendation: Require the monitoring of VOCs and other air emissions (e.g., particulate matter) during the operating phase of all surface waste facilities; and ensure that the Gas Safety Management Plan includes steps to minimize and prevent air emissions.

Comments

Rule 53 G. Specific requirements applicable to landfarms.

1. The current rule states:

> **G. (1)** ***Waste acceptance criteria.*** *Only soils and drill cuttings predominantly contaminated by petroleum hydrocarbons may be placed in a landfarm. The division may approve placement of tank bottoms in a landfarm if the operator demonstrates that the tank bottoms do not contain economically recoverable petroleum hydrocarbons or that no treatment plant capable of extracting any recoverable petroleum hydrocarbons exists within reasonable proximity.*

OGAP believes that the recent addition of tank bottoms to the list of acceptable wastes at landfarms warrants more stringent monitoring requirements, because tank bottoms tend to have higher concentrations of almost every type of contaminant.

In 2002, the California Department of Toxic Substances Control examined four categories of wastes: produced water, drilling wastes, foam treatment wastes and oily sludges (i.e., production pit residues and tank bottoms). In addition to finding that ten out of a total of thirty-six oily sludge samples displayed hazardous characteristics,[4] the

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[3] Louisiana Department of Natural Resources, Office of Conservation, Injection and Mining Division. November 20, 2001. Amendment to Statewide Order No. 29-B. LAC 43:XIX, Subpart 1, Chapter 5, §515. E&P Waste Management and Operations Plan. F. 4 (b).

[4] Nagy, C. 2002. Oil Exploration and Production Wastes Initiative. (Department of Toxic Substances Control, California). pp. 37-40. http://www.dtsc.ca.gov/HazardousWaste/ upload/HWMP_REP_OilWastes.pdf

following constituents were found in the various types of waste:

Metals: Out of 16 metals, there were 14 detected in oily sludges; 6 detected in produced water; 5 detected in foam treatment wastes; and 3 detected in drilling muds.

BTEX: All BTEX (benzene, toluene, ethyl benzene and xylenes) components were found in oily sludge and produced water, while only xylenes were found in drilling waste, and no BTEX components were found in foam wastes.

Volatile organic compounds (VOCs): 60 VOCs were measured in the wastes. There were 18 VOCs found in oily sludge; 14 in produced water; 1 in drilling waste; and none in foam treatment waste.

Semi-volatile organic compounds (SVOC): Out of 66 SVOCs, 7 were found in oily sludge, and none were found in any of the other waste types.

From the California data, it is clear that tank bottoms contain a much broader array of contaminants than other types of oil and gas exploration and production (E&P) wastes.

Tanks bottoms are treated as a unique type of waste by other jurisdictions. In is rule governing the offsite treatment of E&P wastes, Louisiana requires a plan to address short-term and long-term distribution of "Waste Type 06" (i.e., storage tank sludge from production operations, saltwater disposal facilities, salvage oil facilities and sludges generated by waste water systems) on land treatment cells **to prevent excessive 'same cell' loading of this E&P waste type.**[5]

Recommendation: OCD should require the operator to include a plan to address the short and long-term distribution of tank bottom wastes to prevent excessive contaminant loadings from these wastes.

2. OGAP agrees with the approach being taken by the OCD regarding the requirement of treatment zone monitoring and the use of performance standards that must be met prior to the application of additional contaminated soil (or prior to closure of the operation). We believe that this advances the central rationale for many of the changes in this proposed rule: to avoid buildup of harmful constituents at surface waste facilities.

The proposed rule currently states:

> **G. (4)** ***Treatment zone monitoring.*** *. . . The operator shall conduct treatment zone monitoring to ensure that the TPH concentration of each lift. . . does not exceed*

[5] Louisiana Department of Natural Resources, Office of Conservation, Injection and Mining Division. November 20, 2001. Amendment to Statewide Order No. 29-B. LAC 43:XIX, Subpart 1, Chapter 5, §515. E&P Waste Management and Operations Plan. F. 4 (c).

2500 mg/kg and that chloride concentration. . . does not exceed 1000 mg/kg prior to adding an additional lift.

We note that Louisiana uses a similar approach to New Mexico, requiring companies to ensure that concentrations of various components are biodegraded to an acceptable level before more wastes are added to a treatment cell. This shows that the industry can work with such an approach.

In addition to TPH and salts, however, Louisiana requires metals monitoring.

> *Throughout the operational life of a land treatment cell, in order to end the treatment phase and re-enter the application phase, a cell must be shown to comply with the following criteria:*[6]

Parameter	*Limitation*
PH	*6.5 - 9*
EC	*10 mmhos/cm*
SAR	*12*
ESP	*15%*
TPH	*3% (by weight)*
Metals (ppm)	
Arsenic	*40*
Total barium	*100,000*
Cadmium	*10*
Chromium	*1,000*
Copper	*1,500*
Lead	*300*
Molybdenum	*18*
Nickel	*420*
Mercury	*10*
Selenium	*10*
Silver	*200*
Zinc	*500*

We believe that these additional monitoring requirements would positively strengthen OCD's proposed rule, and therefore, we strongly suggest adding metals to the list of constituents to be monitored prior to adding additional lifts. We realize, however, that this may place a burden on operators. Given the results of the California study on E&P wastes, cited above, and the fact that the oily sludges were the most problematic in terms of metals content, OGAP would suggest, as a starting point, that the Division only require metals monitoring for lifts that include tank bottom wastes.

Recommendation: In Section G (4) add in a requirement to sample for metals when lifts including tank bottom wastes are applied.

3. OGAP believes that the GRO/DRO closure standards in Rule 53.G.(6) are too high.

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[6] LAC 43:XIX, §549. Land Treatment Facility Requirements. C.3.

The rule currently states:

G. (6) *Treatment zone closure performance standards.* *After a landfarm cell has been filled to the maximum thickness of two feet, the operator shall continue treatment until the contaminated soil has been remediated to the higher of the background concentrations or the following closure performance standards. . . (c) The gasoline range organics (GRO) and diesel range organics (DRO) combined fraction, as determined by EPA SW-846 Method 8015M, shall not exceed 500 mg/kg. The total extractable petroleum hydrocarbon fractions, as determined by EPA Method 418.1, shall not exceed 1000 mg/kg.*

When it comes to site closure requirements, OGAP is most concerned that the final concentrations of constituents in the soils should be such that the remediated wastes not only do not pose a long-term risk to human health, but also that the soils are capable of supporting a healthy, viable ecosystem.

OGAP recognizes that the clean-up of soils contaminated with hydrocarbons has long been a controversial issue for many states. Often, the parameters used (e.g., TPH) are so general that it is impossible to really understand the toxicity of the compounds that remain in the soil. Consequently, OGAP supports the Division's utilization of gasoline-range-organic (GRO) and diesel-range-organic (DRO) fractions of the total petroleum hydrocarbons (TPH).

OGAP is comfortable with the numerical limits set for the majority of constituents. We are not convinced, however, that a TPH-GRO and TPH-DRO standard of 500 mg/kg is sufficient to protect human health and the environment. In reviewing what other states require, we uniformly find more stringent standards, shown below:

	TPH-GRO	TPH-DRO	Total TPH
Kansas[7]	Residential: 39 mg/kg if there is a soil to groundwater pathway, otherwise 220 mg/kg. Non-residential: 150 mg/kg if a soil to groundwater pathway, otherwise 450 mg/kg.		
Louisiana[8]	Non-industrial: less than 65 mg/kg, or else further evaluation and possible cleanup must occur.	Non-industrial: less than 65 mg/kg, or else further evaluation and possible cleanup must occur.	
Nevada and	100 mg/kg	100 mg/kg	

[7] Kansas Bureau Of Environmental Remediation. December 28, 2000. *Clean-Up Levels For Total Petroleum Hydrocarbons.* BER Policy # BER-RS-041. http://www.kdheks.gov/ber/policies/BER_RS_041.pdf

[8] Louisiana Department of Environmental Quality. Oct. 2003. *Risk Evaluation/Corrective Action Program (RECAP).* Table 1, Screening Standards for Soil and Groundwater. http://www.deq.louisiana.gov/portal/Default.aspx?tabid=1569

Alabama[9]			
Oklahoma[10]			Residential : **50 mg/kg** in top two feet of soil; **500 mg/kg** below 2 feet. (and in industrial areas)
Washington[11]	**100 mg/kg** (for mixtures that do not contain benzene and that have a total of ethylbenzene, toluene and xylene of less than 1%); and **30 mg/kg** for all other gasoline-range mixtures		

The industry has suggested at stakeholder meetings that it is technically impossible to meet a standard similar to these. However, the industry has not explained, then, how it continues to operate in these other states that have standards of 100 mg/kg and lower. Therefore, OGAP believes that the burden is on the industry to show that a lower standard cannot be met.

Recommendation: Lower the TPH-GRO and DRO levels to 100 mg/kg at closure to ensure adequate protection of human health, safety and the environment.

4. OGAP has strong concerns with the bioremediation endpoint as a justification for leaving excess amounts of TPH in the soils. The rule currently states:

> **G. (8) *Environmentally acceptable bioremediation endpoint approach.*** *. . . An environmentally acceptable bioremediation endpoint occurs when the TPH concentration has been reduced by at least 80% by a combination of physical, biological and chemical processes and the rate of reduction in TPH concentration is essentially zero.*

However, a study by Lee et al. (2002), which examined the bioremediation and resultant eco-toxicity of drilling fluids, found that "Although hydrocarbon loss from the diesel was extensive as a result of volatilization and microbial action [more than 70% loss], it was still extremely toxic to the earthworms after a treatability endpoint of 4,176 ug TEH/g dwt soil had been achieved." [12] In this example, the treatment endpoint signalled the exhaustion of easily available hydrocarbons and the initiation of the slow decay phase.

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[9] Information from AEHS.

[10] Oklahoma Department of Environmental Quality. 2004. Risk-Based Cleanup Levels for Total Petroleum Hydrocarbons (TPH). Fact sheet. http://www.deq.state.ok.us/factsheets/land/TPH.pdf

[11] Washington Administrative Code. 173-340-900. *Method A Soil Cleanup Levels for Unrestricted Land Uses.* (Table 740-1) http://apps.leg.wa.gov/WAC/default.aspx?cite=173-340-900

[12] Lee, B., Visser, S., Fleece, T., and Krieger, D. 2002. "Bioremediation and Ecotoxicity of Drilling Fluids Used for Land-Based Drilling." *American Association of Drilling*

This is the crux of OGAP's concern regarding bioremediation endpoints. Even though the easily degradable hydrocarbons have disappeared, it does not mean that the remaining wastes are non-toxic or that, as a policy matter, they should be allowed to simply remain as visible reminders of the use of an area as a landfarm. OGAP strongly believes that if wastes cannot be treated to acceptable levels, they should simply be removed from the site.

5. OGAP believes that, under G. (8) (b), the operations plan for a bioremediation endpoint approach must include demonstrated water rights and demonstrated physical availability of water for 9 months out of a year. These demonstrations are essential because G. (8) (c) (iii) then requires, among other things, that the operator must "monitor, apply and maintain moisture to 60-80% of field capacity". Without an assured water supply, it is unlikely that an operator will be able to consistently meet this operating requirement. Therefore, the OCD should require as part of the detailed landfarm operation plan proof of available water to carry out the landfarm operation.

Engineers. Proceedings from the 2002 Technology Conference - Drilling & Completion Fluids and Waste Management. (Houston, TX. April 2-3, 2002) AADE-02-DFWM-HO-15. - 10 -p. 4.