

MEMORANDUM

Date: September 1, 2006

TO: Mark Fesmire, OCD Director

FROM: Daniel Sanchez, Stakeholders Task Force Facilitator

Re: NMOCD Rules 51, 52 & 53 Stakeholders Task Force Recommended Changes

I. HISTORICAL SUMMARY

In accordance with the June 23, 2006 memorandum from Cabinet Secretary Prukop, the first meeting of the Surface Waste Management Stakeholder Task Force was held on June 28, 2006. The objective of the Stakeholder Task Force was to review the June 8, 2006 NMOCD proposed Rules 51, 52 & 53, and attempt to reach consensus on how parts of the rules could possibly be treated or revised. Members of the Stakeholder Task Force consisted of the following individuals:

Alan Alexander – Burlington Resources/ConocoPhillips

John Byrom – D.J. Simmons, Inc.

Carl Chavez – OCD Staff

Bill Marley – Gandy Marley

Raye Miller – Marbob Energy Corp.

Donald Neeper (John Bartlit) – New Mexico Citizens for Clean Air & Water

Dennis Newman – Occidental Permian Ltd.

Terry Riley – Theodore Roosevelt Conservation Partnership

Glenn Von Gonten – OCD Staff

Subsequent meetings were held on July 11, August 1-2, August 15-16, and August 29, 2006.

A subcommittee, consisting of Bill Marley, Dennis Newman, Don Neeper, and Terry Riley was formed to identify a list of issues to be discussed by the task force. The subcommittee decided initially on the first ten issues however issue eleven was also identified and amended during the August 29 meeting:

1. Vadose zone monitoring *
2. Closure standards for re-vegetation *
3. Bioremediation endpoint – no 80% reduction and 1% TPH residual *
- ✓ 4. Size of landfarm cell *
- ✓ 5. Chloride limits for landfarm waste loading – tiered approach
6. Financial assurance of landfarms *
7. Small landfarms *

- ✓ 8. Closure standards for landfarm wastes and vadose zone – selection of appropriate constituents of concern
- ✓ 9. Risk based decision making regulatory approach
- 10. Review of Section K – exceptions *
- 11. Grandfather Clause –Section L *

The asterisks * above indicate that the Stakeholder Task Force reached consensus on the issue.

II. GENERAL COMMENTS

The Stakeholder Task Force endorses only the suggested specific changes in wording of Rule 53 presented below. The reasoning for each suggested change is presented with each change. For ease of review, attached is a redline/strikeout document of the Stakeholder Task Force suggested changes to Rule 53.

In addition, the Stakeholder Task Force agreed on the following statement pertaining to **Section G (6)**:

In some areas of the state of New Mexico, the natural soil concentrations of some of the proposed regulated constituents, such as arsenic and other inorganics, may exceed the proposed closure standards. If such naturally occurring high-background soils were contaminated with petroleum hydrocarbons, and the waste-bearing soils were brought to a landfarm having a lower background concentration, it is likely that the final concentrations of these constituents in the landfarm treatment zone could exceed the proposed closure limits established by the original background soil concentrations of the landfarm.

This could be a significant problem for current and future landfarm operators, who may not meet the proposed closure limits, and who would need to apply for an exception or waiver or dispose of the waste-bearing soil that failed to meet closure limits at a landfill. This raises the serious question of whether petroleum-contaminated soils exceeding the closure limits of a landfarm should be transported to that landfarm.

All participants of the Stakeholder Task Force recognize this potential-problem. Determination of the extent of this problem will require more data and study regarding the appearance of arsenic and other inorganics in petroleum-contaminated soils.

III. SUGGESTED SPECIFIC CHANGES IN REGULATORY LANGUAGE

The Stakeholder Task Force reached consensus on the following language changes and/or amendments: The changes are shown in bold type.

CHANGE 1: The Stakeholder Task Force believes that a small landfarm should be restricted to a maximum area, and that the volume of treated waste should be consistent with that area. Therefore, the following changes in **A.(1)(e)** are recommended:

***A.(1)(e)** A small landfarm is a centralized landfarm of two acres or less that has a total capacity of 2000 cubic yards or less, remains active for a maximum of three years from the date of its registration, and that receives only petroleum hydrocarbon-contaminated soils (excluding drill cuttings) that are exempt or non-hazardous waste.*

CHANGE 2: The Stakeholder Task Force believes that the rule should define the maximum size of a cell. Otherwise, in principle, a single cell could be the entire permitted area, which would lead to difficulty in regulating sampling and closure.

***A.(2)(f)** A landfarm cell is a bermed area of ten acres or less within a landfarm.*

CHANGE 3: The Stakeholder Task Force believes that the rule should assure notification of the public when exceptions, waivers or alternatives are considered in an application: The Stakeholder Task Force recommends that a new sub-paragraph be inserted at **C.(4)(f)(vi)**, and that sub-paragraphs (vi) and (vii) be renumbered to **(vii)** and **(viii)**, respectively.

***C.(4)(f)(vi)** a description of any alternatives, exceptions or waivers that may be under consideration in accordance with Paragraph (5) of Subsection J or with Subsection K of 19.15.2.53 NMAC.*

CHANGE 4: The Stakeholder Task Force believes that the OCD should be able to review the financial assurance of an operator whose landfarm contains one or more cells that do not meet the 5-year closure conditions. The Stakeholder Task Force recommends that the following language be inserted after the first sentence of **C.(6)(e)**:

***C.(6)(e)**Additionally, the division may review the adequacy of an operator's financial assurance, without regard to the date of its last review, whenever the division determines that the operator has not achieved the closure standards specified in Subparagraph (b) of Paragraph (7) of Subsection G of 19.15.2.53.*

CHANGE 5: The Stakeholder Task Force believes that the existing language in **G.(2)** was insufficiently precise. Although there was extensive discussion on setting the number of background samples per cell to be equal to the number of samples for comparison at closure, the Stakeholder Task Force believes that this might require sampling far in excess of what might be needed to establish a reasonable background value. An operator who felt that the background concentration might vary across his facility would be free to establish more refined background concentrations if he wished. The Stakeholder Task Force recommends the following language as a replacement for the first sentence of **G.(2)**:

***G.(2)** Background testing. Prior to beginning operation of a new landfarm or to opening a new cell at an existing landfarm at which the operator has not already established background, the operator shall take, at a minimum, 12 composite background soil samples, with*

each consisting of 16 discrete samples, from areas that have not been impacted by previous operations at least six inches below the original ground surface, to establish background soil concentrations for the entire facility. The operator shall analyze the background soil samples for total petroleum hydrocarbons (TPH), as determined by EPA Method 418.1 or other EPA method approved by the division, benzene, toluene, ethyl benzene and xylenes (BTEX), as determined by EPA SW-846 Method 8021B or 8260B, chlorides, and other constituents listed in Subsections A and B of 20.6.2.3103 NMAC, using approved United States Environmental Protection Agency (EPA) methods.

CHANGE 6: The Stakeholder Task Force believes that periodic TPH and chloride monitoring should be on a cell-by-cell basis, which is not currently required by the draft language of Rule 53. Because the periodic monitoring serves mainly as an indicator of progress to the operator, the Stakeholder Task Force believes that one single composite sample per cell would be adequate. Accordingly, it is recommended that the third sentence in **G.(4)** be revised as follows:

G.(4)*The operator shall collect and analyze at least one composite soil sample per cell, consisting of four discrete samples, from the treatment zone at least semi-annually using the methods specified below for TPH and chlorides.*

CHANGE 7: The Stakeholder Task Force believes that the semi-annual monitoring program should require operators to test for TPH, BTEX and chlorides with a comparison against the analytical method PQL, to determine when a release has occurred. In addition, the annual monitoring program should be changed to 5 years and would include testing for the 3103 list of constituents, and the language changed from “Corrective action for releases” to “Release response.” Language was deleted from G.(5)(a) because the rule specifies what must be done but not necessarily why it must be done. The Stakeholder Task Force recommends that the following changes occur in sections G.(5)(a), (b), (c), and (e), respectively:

G.(5)(a) *Sampling. The operator shall monitor the vadose zone beneath the treatment zone in each landfarm cell. The vadose zone samples shall be taken from soils between three and four feet below the cell’s original surface.*

G.(5)(b) *The operator shall collect and analyze a minimum of four randomly selected, independent samples from the vadose zone at least semi-annually using the methods specified below, for TPH, BTEX and chlorides and shall compare each result to the higher of the Practical Quantitation Limit (PQL) or the background soil concentrations to determine whether release has occurred.*

G.(5)(c) *Five-year monitoring program. The operator shall collect and analyze a minimum of four randomly selected, independent samples from the vadose zone, using the methods specified below, for TPH, BTEX, chlorides, and the constituents listed in Subsections A and B of 20.6.2.3103 NMAC at least every five years and shall compare each result to the*

higher of the PQL or the background soil concentrations to determine whether release has occurred.

G.(5)(e) Release response. *If any vadose zone sampling results show that the concentrations of TPH, BTEX, or chlorides exceed the **higher of the PQL or the background soil concentrations**, then the operator shall notify the division's environmental bureau of the exceedance, and shall immediately collect and analyze a minimum of four randomly selected, independent samples for TPH, BTEX, chlorides, and the constituents listed in Subsections A and B of 20.6.2.3103 NMAC. The operator shall submit the results of the resampling event and a response action plan for the division's approval within 45 days of the initial notification. The response action plan shall address changes in the operation of the landfarm to prevent further contamination and, if necessary, a plan for remediating any existing contamination.*

CHANGE 8: The Stakeholder Task Force believes that one composite, including four samples from various locations, will accomplish the same objective as four discrete samples and at a lower analytical cost. In addition, the total extractable hydrocarbons (TPH) as measured by EPA 418.1 could be 2500 mg/kg for treatment zone closure, because the TPH-GRO and TPH-DRO concentrations were limited by separate specifications. Accordingly, the Stakeholder Task Force recommends changes to language in G.(6) and that the 1000 mg/kg TPH limit in G.(6)(c) be revised to 2500 mg/kg as follows:

G.(6) Treatment zone closure performance standards. *After a landfarm cell has been filled to the maximum thickness of two feet or approximately 3000 cubic yards per acre, 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. The operator shall demonstrate compliance with the closure performance standards by collecting and analyzing a minimum of **one composite soil sample, consisting of four discrete samples**.*

G.(6)(c) *.....The total extractable petroleum hydrocarbon fractions, as determined by EPA Method 418.1 or other EPA method approved by the division, shall not exceed **2500 mg/kg**.*

CHANGE 9: The Stakeholder Task Force believes that all references to achievement of closure standards and financial assurance should be clearly consistent. Accordingly, the Stakeholder Task Force recommends insertion of a new paragraph, G.(7)(c):

G.(7)(c) *If the operator cannot achieve the closure performance standards specified in Paragraph (6) of Subsection G of 19.15.2.53 NMAC within five years or as extended by the division, then the division may review the adequacy of the operator's financial assurance, as provided in Subparagraph (e) of Paragraph (6) of Subsection C of 19.15.2.53 NMAC. In that event, the division may require that the operator modify its financial assurance to adequately provide for the appropriate disposition of all contaminated soil in a manner acceptable to the division.*

CHANGE 10: The Stakeholder Task Force believes that the meaning of "TPH" in the bioremediation endpoint be more clearly specified by inserting a phrase in the second sentence of **G.(8)(a)**.

G.(8)(a)*The bioremediation endpoint in soil occurs when TPH, as determined by EPA Method 418.1 or other EPA method approved by the division, has been reduced to a minimal concentration as a result of bioremediation and is dependent upon the bioavailability of residual hydrocarbons.*

CHANGE 11: The Stakeholder Task Force believes that the same numerical limit for TPH should apply to small landfarms, as would apply to registered landfarms in **G.(6)(c)**, above.

H.(5)(iii) *TPH, as determined by EPA SW-846 method 418.1 or other EPA method approved by the division, shall not exceed 2500 mg/kg....*

CHANGE 12: The Stakeholder Task Force believes that the specification of re-vegetation could be strengthened, by requiring comparison with native perennial cover. Because an example of the native condition might not be available in the vicinity of the landfarm, the Stakeholder Task Force also believes that an established scientific description of the appropriate native condition would suffice. Language would also be added regarding chloride concentrations and EC and SAR testing. Accordingly, the Stakeholder Task Force recommends that the following changes be made to **J.(1)** and **J.(4)(d)(viii)**:

J.(1)*Re-vegetation, except for landfill cells, shall consist of establishment of a vegetative cover equal to 70% of native **perennial** vegetative cover (unimpacted by overgrazing, fire or other intrusion damaging to native vegetation) or scientifically documented ecological site description consisting of at least **three** native plant species, including at least one grass, but not including noxious weeds, and maintenance of that cover through two successive growing seasons.*

J.(4)(d)(viii) *For operators who choose to utilize the landfarm methods specified Paragraph (8) of Subsection G of 19.15.3.53 NMAC, the operator shall ensure that the soil has an electrical conductivity (EC_s) of less than or equal to 4.0 mmhos/cm (dS/m) and a sodium adsorption ratio (SAR) of less than or equal to 13.0.*

CHANGE 13: The Stakeholder Task Force believes that the inclusion of a "Grandfather Clause" is necessary to ensure that operators, complying with their current permits, and are given sufficient time to come into compliance with the closure standards of **19.15.3.53 NMAC**. Therefore, the Stakeholder Task Force recommends the following changes be made to **L(1)**, **(2)**, **(3)** & **(4)**:

L. Transitional provisions. Existing permitted facilities. Surface waste management facilities in operation prior to the effective date of 19.15.2.53 NMAC pursuant to permits or orders of the division may continue to operate in accordance with such permits or orders, subject to the following provisions.

(1) Except as provided in Paragraph (2) of Subsection L of 19.15.2.53 NMAC or as otherwise 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, all existing facilities shall comply with the operational, waste acceptance and closure requirements provided in 19.15.2.53 NMAC.

(2) Landfarm cells existing as of May 18, 2006, shall either be closed within ten years after the effective date of 19.15.2.53 NMAC in accordance with the closure standards of its existing permit, or comply with the requirements provided in 19.15.2.53 NMAC. When an existing landfarm cell has been filled to capacity, no additional waste shall be placed in that landfarm cell. Any landfarm cell that the operator intends to reuse is subject to the requirements provided in 19.15.2.53 NMAC.

(3) Any major modification of an existing facility, and any new landfarm cells constructed at an existing facility, shall comply with all requirements of 19.15.2.53 NMAC.

(4) Any application for a surface waste management facility permit filed prior to May 18, 2006, shall be processed in accordance with 19.15.9.711 NMAC, and any application filed after May 18, 2006, shall be processed in accordance with 19.15.3.53 NMAC.