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**NEW MEXICO CITIZENS FOR CLEAN AIR & WATER, INC.**

**Suggested modifications to the draft surface waste facility rules as revised by OCD on 2/28/06.**

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We appreciate the general excellence of the propose rules. We submit suggested detailed modifications here, and we may subsequently submit other comments.

Modifications are presented as strikeout and underline text: ~~Deleted language.~~ New or revised language.

**Rule 53 E (1)**

Proposed modified language:

(1) Except for small landfarms, nNo surface waste management facility shall be located where ground water is less than ~~50~~ 100 feet below the lowest elevation at which waste will be placed at the facility, unless it is demonstrated that an impermeable layer exists within the vadose zone. No small landfarm shall be located where groundwater is less than 50 feet below ground surface.

Discussion:

Due to infiltration through preferential pathways, infiltration from large landfarms may contaminate groundwater an unpredictable depths. Because landfills are permanent disposal units for all future time, it would seem wise to apply increased protection to the inevitable eventual diffusion from these units. Rule 53 F (3), as currently proposed to specify landfill design, allows the operator to use a modified base layer if the "depth to ground water" is greater than 100 feet. "Depth to ground water" would usually be interpreted as depth below ground surface. If the depth to ground water is to be at least 100 feet beneath the lowest wastes for all facilities except small landfarms, as we suggest, then 53 F (3) should also be modified, as shown below. Again, we suggest that the demonstrated presence of an impermeable layer in the vadose zone should allow a less stringent design.

**Rule 53 F (3)**

Proposed modified language:

In areas where the depth to ground water is greater than ~~100~~ 150 feet, or where an impermeable layer is demonstrated to exist in the vadose zone beneath the landfill, or where no ground water is present, the operator may propose an alternative base layer design, subject to division approval.

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## Rule 53 G (5) (a)

Proposed modified language:

... vadose zone samples shall be taken from soils ~~between three and four~~ at a depth not to exceed two feet below a cell's original surface.

Discussion:

To monitor the possible movement of contaminants into the vadose zone, the samples should be obtained as close to the treatment zone as possible without mixing treated material into the sample. If contaminants were first detected at four feet, a much larger volume of soil would be contaminated and potentially a larger remediation effort would be required. Certainly, detection would occur too late for the operator to simply correct his procedures. Sampling at an unnecessarily great depth simply delays the time at which contaminant movement is detected if it occurs. It therefore may avoid detection of a release before the landfarm is closed.

## Rule 53 G (6)

Proposed typographical correction:

...the higher of the background concentrations or the following closure performance ...

## Rule 53 G (6) (d)

Proposed modified language:

Chlorides, as determined by EPA Method 300.1, shall not exceed ~~1000~~ 500 mg/kg.

Discussion:

Rule 53 G (6) specifies closure conditions for landfarms. Although plant damage is better correlated with saturated paste EC and SAR measurements, if a soil chloride specification is to be used, it should be protective of seed germination. For many species, the chloride threshold for seed germination is well below 1000 mg/kg.

## Rule 53 G (6) (e)

Proposed modified language:

(vii) Lead	<del>400</del> <u>56</u>
(xxxiii) Chloride	<del>1000</del> <u>500</u>

Discussion:

The EPA soil screening level for mammals is 56 mg/kg. The current limit of 400 would preclude grazing on a closed landfarm by mammals, whether livestock or wildlife. The screening level for birds is even smaller. The 1000 mg/kg limit for chloride is not protective of seed germination.

## Rule 53 G (8)

Proposed modified language:

Delete all of 53 G (8).

Discussion:

53 G (8) would establish a bioremediation endpoint, and exempt a landfarm using this method from the closure limits of 53 G (6) (a) through (e). At first glance, it would appear reasonable to allow a landfarm to close when the remediation rate approaches

zero. However, a zero remediation rate does not necessarily indicate that the land is suitably clean for all future uses. One reason for a near-zero remediation rate is that only heavy hydrocarbons remain. The fact that most (not all) heavy hydrocarbons are not toxic to humans should not be an excuse to discard those hydrocarbons widely on the landscape. Other reasons for a low remediation rate may be the presence of excess salts or other compounds that inhibit bacteria, or insufficient moisture, or insufficient nutrients. Regardless of the reason why hydrocarbon wastes cannot be remediated, we find it improper to discard those wastes on the landscape. Similarly, old tanks and unwanted equipment may not be toxic, but the rules do not permit those waste items to be abandoned in place when a site is closed. A landfarm is a remediation facility, not a permanent dump for wastes.

Rule 53 H (5) (a) (iv)

Chlorides, as determined by EPA SW-846 method 418.1 shall not exceed ~~4000~~ 500 mg/kg.

Discussion:

As discussed above, the chloride limit for small landfarms, as for large landfarms, should be protective of seed germination.

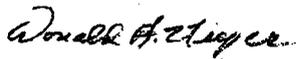
Rule 53 H (5) (b) (iv)

... collect one vadose zone soil sample from ~~three to five~~ not more than two feet below the middle of the treatment zone ...

Discussion:

As for closure of large landfarms, the vadose zone sample at a small landfarm should be acquired as close to the treatment zone as possible without accidentally mixing treated material into the sample. A deeper sample would simply allow more of the vadose zone to be contaminated before detection.

For NMCCA&W, Inc.



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