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Refer to: EM/WM:98-121



Dr. Robert Dinwiddie
Hazardous and Radioactive Materials Bureau
New Mexico Environment Department
P.O. Box 26110
Santa Fe, New Mexico 87502

Dear Dr. Dinwiddie

**SUBJECT: DRAFT HAZARDOUS WASTE STORAGE AND DISPOSAL PERMIT
FOR THE WASTE ISOLATION PILOT PLANT (WIPP)**

Enclosed with this letter are comments from the Los Alamos National Laboratory on the subject draft permit. Thank you in advance for your consideration of these comments. Please contact us if you have questions regarding the comments or desire additional information.

Sincerely,

Kenneth M. Hargis
Program Manager
Waste Management Program
Environmental Management Division

D. Bruce LeBrun
Radioactive Waste Manager
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Los Alamos Area Office

Attachment: a/s



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**Los Alamos National Laboratory (LANL) Comments on Draft Waste Isolation Pilot Plant (WIPP)
Resource Conservation and Recovery Act (RCRA) Permit**

General Comments

Comment 1. The permit is overly prescriptive.

Justification

The draft permit is overly prescriptive concerning how analyses or operations are to be done. Rather than specifying these details, e.g., what size tubing should be used for analyses, the outcomes should be specified. Changes in analytical methods or operations procedures might require frequent, expensive permit modifications. Comments provided by analytical chemists clearly illustrate that there are better methods for analysis than those contained in the draft permit.

Proposed change to the permit

Make the permit outcome (performance) based rather than making it overly prescriptive. This will ensure that best procedures can be used to obtain the desired outcome.

Comment 2. Certification by New Mexico Environment Department (NMED) is an unnecessary, redundant step.

Justification

The draft permit states that even after WIPP receives its final RCRA permit, no site may ship its Mixed transuranic (TRU) waste to WIPP until after (a) NMED has certified that the individual site has the capability to meet the Waste Acceptance Plan (WAP) in the permit, and (b) the WIPP RCRA permit has been modified to allow the site to ship. Since the WIPP must certify the sites and then the waste must meet the WIPP Waste Acceptance Criteria (WAC), adequate protection is already built into the process of waste certification.

Proposed change to the permit

Delete the requirement for NMED certification of a site and also that the WIPP RCRA permit be modified prior to allowing a site to ship to WIPP.

Comment 3. Mixed Remote-Handled (RH) TRU Waste is not allowed to be disposed of at WIPP.

Justification

The draft permit only manages contact-handled (CH) TRU waste. It specifies that no Mixed RH TRU will be allowed to be disposed of at WIPP. This will create an orphan waste of high specific activity that has no disposition option. The WIPP compliance certification application approved by the EPA contained performance assessment information that demonstrated that the waste could be safely disposed at WIPP. Not disposing of this high specific activity waste at WIPP will increase radiation exposures to personnel at the storage sites.

Proposed change to the permit

Delete the restriction on RH TRU disposal at WIPP.

Comment 4. Sampling and Analysis to confirm Acceptable Knowledge (AK)

Justification

The draft permit requires that AK documentation be confirmed through sampling and analysis. This defeats the EPA preference for use of AK to characterize heterogeneous and radioactive waste. EPA states that use of AK is appropriate in situations in which (1) wastes have physical properties that are not conducive to taking a representative sample or performing analysis, or (2) increased radiation exposures are a concern. If these two conditions are met, then proper documentation via acceptable knowledge without sampling should be acceptable.

Proposed change to the permit

Delete the requirement that AK documentation be confirmed through sampling and analysis.

Comment 5. Waste Must be Treated to Land-Disposal Restrictions (LDR)

Justification

Section II.C.2.1 of the draft permit on "Treatment Standard" seems to suggest that any mixed TRU waste restricted from land disposal must first be treated to LDR before it can be disposed at WIPP. The WIPP Land Withdrawal Act (LWA) states that any waste designated for disposal for WIPP is exempt from the

land disposal restrictions. Section B-4b(2)(ii) of the draft permit seems to say that the LDR treatment is unnecessary because of the LWA.

Proposed change to the permit

Delete the apparent requirement in section II.C.2.1 for treatment prior to disposal.

Comment 6. Invasive Headspace Gas Sampling

Justification

The draft permit's WAP requires invasive sampling via insertion of a needle through the carbon composite filter to obtain a headspace gas sample. This destroys the filter and makes its replacement necessary. Drawing a gas sample through the filter should be allowed if and when it is documented that it produces equivalent results.

Proposed change to the permit

The NMED should require that a representative headspace gas sample be obtained for analysis, but should not dictate the manner in which the sample is to be obtained. This is another example of the draft permit being overly prescriptive.

Comment 7. Sampling innermost bags

Justification

Sampling innermost bags should not be required by the permit. Modeling by the U.S. Department of Energy (DOE) (Connolly, 1995) has shown that volatile organic compound (VOC) transport does occur from within the inner-most bags to the headspace of the container. Page B1-1 of the draft NMED permit acknowledges that VOC equilibrium is achieved within 142 days for debris waste and 225 days for homogeneous waste.

Proposed change to the permit

Delete the requirement for sampling innermost bags.

Specific Comments

Page B1-2, Lines 30-32: The resolution requirement of 0.005 mm Hg @ 0.05 mm Hg should be reduced to 0.05 mm Hg @ 0.01 mm Hg.

Page B1-3, Lines 6,7: These lines should be modified to allow use of SilcoSteel (trademark) passivated sample canisters. This fuse silica surface coating is superior to Summa passivation and is widely available commercially. Any reference to Summa canisters within the hazardous waste permit should also include SilcoSteel.

Page B1-3, Line 24-31: Delete the requirement for an organic vapor analyzer (OVA) with 0.1 ppm limits of detection. This detection limit is 100 x lower than the program-required quantitation limit (PRQL). Flushing the manifold with dry nitrogen or zero air and evacuating the manifold to the required vacuum will clean the system adequately. This can be confirmed with collection of the required equipment blank. The addition of the OVA increases the complexity of the sampling manifold with little if any improvement in data quality.

Page B1-4, Line 10-18: Eliminate the requirement for use of a humidifier. This addition only complicates the gas sampling manifold without providing much if any benefit. In fact addition of water to the manifold will only reduce the rate of evacuation. If a humidifier is not required for the Fourier Transform Infrared Spectroscopy (FTIR) it should not be required for other methods. Suggestion – recommend the elimination of a humidifier.

Page B1-7, Line 33-34: Delete the requirement that samples for containers subject to visual examination be collected in the inner most non-rigid polyliner layer that has a minimum of 1 liter of headspace. This requirement will dramatically inflate the cost of characterization and reduce throughput without significantly improving information obtained from visual examination. It is questionable if there is any added value to performing these additional analyses if the container was sampled prior to repackaging. Further, the vapor source term may not always be within the inner most layer of confinement.