

**U.S. Department of Energy-Carlsbad Field Office (DOE-CBFO) Comments  
on Draft Hazardous Waste Facility Permit for the Waste Isolation Pilot Plant  
(EPA ID No. NM4890139088-TSDF)  
Incorporating a Class 3 Modification Establishing New Drum Age Criteria (DAC)**

### **Current DAC Approach**

The Hazardous Waste Facility Permit (Permit)<sup>1</sup> currently specifies Drum Age Criteria (DAC) that must be met prior to sampling the headspace gas of waste containers. The purpose of the DAC is to ensure that the volatile organic compounds that are being sampled have reached a minimum of 90% of their steady-state concentrations so that a representative sample may be collected. The existing Permit DAC requirements are based on default packaging conditions (i.e., number of confinement layers and rigid liner vent hole diameter) that result in DAC that are a minimum of 142 days for debris waste and a minimum of 225 days for homogeneous solid and soil/gravel waste. The current DAC do not distinguish between various sampling scenarios, such as “sampling at the time of venting,” and are based on the DAC required to satisfy the most restrictive sampling scenario.

### **Permit Modification Request to Establish Revised DAC**

The Permittees submitted the Permit Modification Request in lieu of the original default DAC when the information necessary to determine packaging-specific DAC was known. The methodology for calculating DAC presented in the Permit Modification Request was identical to that in the original Permit application. The Permit Modification Request specified DAC for each of the sampling scenarios rather than single default DAC.

### **Summary of Comments**

The following summarizes the DOE-CBFO comments on the Draft Permit issued by the New Mexico Environment Department (NMED) on May 13, 2002. These comments are primarily aimed at clarifying the requirements in the Draft Permit and the application of the DAC modification to the contact-handled transuranic (CH-TRU) waste inventory. Attachment 1 contains a crosswalk between the Draft Permit language and the proposed revisions and associated justifications.

### **Newly-Generated Waste and Repackaged Waste**

The existing Permit provides specific confirmation requirements for newly-generated waste and repackaged waste (Attachment B, Section B-3d(1)). The required visual verification (visual examination [VE] technique) of acceptable knowledge (AK) is conducted at the time of packaging. The visual verification methodology can be expanded to also include the information necessary to determine the DAC for these wastes. For example, procurement records combined with the packaging process may be used to document the rigid liner vent hole diameter, the number of layers of packaging, and the filter type for newly-generated waste

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<sup>1</sup>New Mexico Environment Department (NMED), WIPP Hazardous Waste Facility Permit, NM4890139088-TSDF, Current revision dated February 25, 2002.

or repackaged waste. Relevant data will be documented at the time the container and rigid liner are procured and/or waste is packaged (e.g., on the packaging data sheets).

This approach is consistent with the existing requirements in Attachment B, Section B-3d(1). However, the requirement to document the information is not included in Draft Permit Attachment B, Section B-3d(1); therefore, documenting the rigid liner vent hole presence and diameter and number of layers of packaging at the time of packaging is proposed for addition to this section.

### **Waste Vented by Lid Punching**

When containers are vented following the requirements of Draft Permit Attachment B1, Section B1-1a(6)(ii), the diameter of the rigid liner vent hole can be documented based on the size of the punch used. The punching process must provide documented traceability for the punch diameter. Revisions to the Draft Permit are proposed to clarify that the information collected during the punching operation may be used for determining the presence and diameter of the rigid liner vent hole without requiring subsequent verification. This discussion applies to the use of Scenario 2, in which the DAC are based on default packaging configurations.

### **Use of Default DAC Values**

Clarifications to the Draft Permit are proposed with respect to the use of default conditions for the DAC determination. Containers that are not newly generated or repackaged (i.e., Attachment B, Section B-3d(1)) and/or are not vented by lid punching (i.e., Draft Permit Attachment B1, Section B1-1a(6)(ii)) must be assigned a default DAC.

A set of default DAC conditions for the sampling scenarios was proposed assuming bounding parameter values. The default conditions for rigid liner vent hole diameter (0.3 inch) and packaging configurations (e.g., six confinement layers for debris waste as specified in Table B1-8) are bounding for the CH-TRU waste inventory authorized for TRUPACT-II shipment. The default condition for the rigid liner vent hole diameter is included in the Draft Permit as Footnote B on Tables B1-7, B1-9, and B1-10. The default conditions for packaging configurations are included in the Draft Permit as Footnote A on Table B1-8. Comments are proposed to modify the default conditions of the Draft Permit to allow their use without the requirement for verification beyond what is required by the existing Permit. Similar defaults are given for homogeneous solid and soil/gravel wastes.

### **Other Comments**

The Draft Permit includes language requiring the use of radiography and/or VE in conjunction with AK information to determine and verify waste packaging configuration and rigid liner vent hole presence and diameter. Information to determine the DAC will be documented for newly-generated or repackaged waste containers (i.e., Attachment B, Section B-3d(1)), or waste containers vented by lid punching (i.e., Draft Permit Attachment B1, Section B1-1a(6)(ii)); otherwise, the waste container must be assigned a default DAC. Therefore, the comments propose revisions to clarify that determination and verification of the packaging configuration and rigid liner vent hole presence and diameter by radiography and/or VE are not applicable. The use of the default DAC does not require verification, which is consistent with the implementation of the default DAC in the existing Permit.

The comments propose the deletion of the references to determination of sampling scenario by operators. The operators will not have the information necessary to make the sampling scenario determination. This determination is made at the site project level and verified during data validation. For example, a container with an unvented rigid liner may qualify for sampling scenario 1, 2, or 3 (Draft Permit Table B1-5) based on whether the drum is sampled at the time of venting and the time elapsed between packaging and venting. The operator would not know when the sampling is scheduled to take place or if the sampling would take place at the time of venting. Therefore, the operator would not be able to determine the appropriate sampling scenario. To ensure that the sampling scenario is verified, the requirement that the sampling scenario be verified during the project level data validation is retained.

The comments propose to modify terminology in the Draft Permit to ensure internal consistency. As the Draft Permit uses a variety of terms for the “rigid liner vent hole diameter,” the comments include revisions to use this term consistently. In addition, the Draft Permit language uses the terms “polyliner” and “liner” interchangeably; therefore, the comments include revisions to use “liner” consistently.