



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

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SEP 27 2001

OFFICE OF
AIR AND RADIATION

Mr. Steve Zappe
New Mexico Environment Department
1190 St. Francis Drive
Santa Fe, New Mexico 87502-6110

SEP 27 2001
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Dear Mr. Zappe:

The Environmental Protection Agency (EPA) welcomes the opportunity to submit comments on the Class 3 Permit Modification Request (PMR) that the Department of Energy (DOE) submitted to the New Mexico Environment Department (NMED) on June 6, 2001. We want to thank the NMED for extending the original 60-day comment period (announced in the DOE's public notice dated June 16) by an additional 45 days, closing September 27, 2001.

We reviewed the DOE PMR and are providing our comments in the enclosed summary. We want to highlight the following two points:

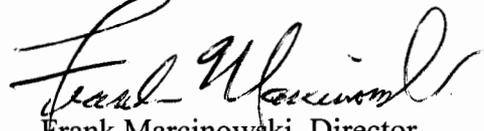
1. If NMED approves the PMR, DOE may not proceed with waste characterization at the Waste Isolation Pilot Project (WIPP) facility until EPA has approved relevant activities under the terms of our 1998 Certification Decision (63 FR 27354-27406, May 18, 1998); and
2. The PMR does not appear to provide adequate technical rationale for deviating from the NMED's generator requirements for characterizing mixed TRU waste onsite before manifesting it for disposal at the NMED-permitted WIPP facility.

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If you have any questions about our comments, please call Ms. Rajani D. Joglekar of my staff at 202-564-7734.

Sincerely,

A handwritten signature in black ink, appearing to read "Frank Marcinowski". The signature is fluid and cursive, with a large initial "F" and "M".

Frank Marcinowski, Director
Radiation Protection Division

Enclosure

cc: Nick Stone, EPA Region 6
Dr. Ines Triay, DOE Carlsbad Field Office

Enclosure

EPA Comments on DOE's Class 3 Permit Modification Request to NMED

Background

On June 6, 2001, the Department of Energy (DOE) submitted to the New Mexico Environment Department (NMED) a Class 3 permit modification request (PMR) to the NMED-issued Hazardous Waste Facility Permit to the Waste Isolation Plant (WIPP). DOE's request applies to only one TRU waste stream (Summary Category Group S5000 – debris). In the PMR, DOE makes a case for approving the following four proposed changes.

- Item 1 - Waste Confirmation at the WIPP Facility of headspace gas sampling and analysis and nondestructive examination of TRU debris waste.
- Item 2 - Storage Capacity to Increase and Additional Storage Areas to accommodate TRU waste drums staged for confirmatory testing and/or repackaging before moving to the repository.
- Item 3 - Increase Storage Time to provide additional time for storing TRU waste on site prior to disposal in the repository.
- Item 4 - Prohibited Items handling activity.

DOE states that approval of the PMR by NMED would improve operational efficiency by allowing the WIPP site to complete certain waste characterization activities, including identification and management of prohibited items, currently performed by generator sites. DOE also requests additional storage space and time to accommodate the proposed changes in the WIPP's function.

EPA Regulations

DOE TRU waste must be characterized in accordance with the terms of EPA's 1998 Certification Decision (63 FR 27354 -27406, May 18, 1998). Condition 3 of the WIPP certification states that TRU waste may not be shipped offsite for disposal at the WIPP until EPA approves the processes used to characterize waste. The TRU waste characterization required under 40 CFR 194.24 and the Certification Decision must be based on acceptable knowledge (process knowledge and other information) and controls such as measurements to confirm or establish quantities of limited waste components. In addition, according to Condition 2 of the WIPP Certification Decision, waste characterization activities must comply with the quality assurance requirements of §194.22 to assure that the data from waste characterization are of sufficient quality and quantity to support decisions whether or not to allow placement of waste containers within the WIPP. According to §194.8, DOE sites must seek our approval prior to the shipment of fully characterized TRU waste for disposal at WIPP. The EPA approval process ensures that the waste destined for disposal meets Conditions 2 and 3 of the WIPP compliance certification criteria.

EPA Comments

In DOE's Compliance Certification Application (CCA), DOE made the following commitments.

- “The WAC (waste acceptance criteria) is a compilation of criteria that restrict the physical, chemical, and radiological properties of the waste to mitigate conditions that will have adverse impacts on human health and the environment.” (DOE/CAO 1996-2184, October 1996, pp 4-30)
- “The WAC requires that the generator prepare a waste certification program that lists the methods and techniques used to determine compliance with criteria that are applied to the generator's waste certification program.” (DOE/CAO 1996-2184, October 1996, pp 4-30)
- “The process of waste characterization (by a generator) identifies including acceptable knowledge, headspace gas sampling and analysis, serves to demonstrate compliance with the limits imposed by transportation requirements (DOT) and operational safety requirements (DOE).” (DOE/CAO 1996-2184, October 1996, pp 4-44)

The CCA is the basis for EPA's 1998 Certification Decision where we incorporated certain CCA provisions as the regulatory conditions for permitting the WIPP site to dispose of TRU waste. The Condition 3 of the Certification Decision binds TRU waste generator sites to meet regulatory requirements of EPA.

Given the above-referenced TRU waste characterization requirements, DOE must continue to characterize TRU waste at the generator/storage sites - as opposed to at the WIPP facility, which is a disposal facility - until such time as DOE submits a change to the WIPP Compliance Certification Application to EPA (as required under §194.4) and EPA approves the change. Until then, according to the 40 CFR 194 requirements, a TRU waste site must complete waste characterization and be subject to EPA inspection before the waste can be shipped for disposal at WIPP.

DOE proposes that NMED audit the Central Characterization Project (CCP)-developed acceptable knowledge (AK) procedure, which the sites would implement when characterizing the TRU waste. DOE contends that the proposed approach thus would obviate the need for site audits for verifying AK. DOE further proposes that actual analysis (e.g., radiography and visual examination) would take place separately at WIPP, which could be audited by NMED. However, the TRU waste generator's process knowledge alone may not be sufficient to certify that the waste does not contain prohibited items. The existing WIPP waste acceptance criteria require radiographic examination of all drums on site by a generator to identify prohibited items before waste shipment. Thus, the PMR-proposed waste confirmation by radiography at

WIPP is unnecessary, since the radiographic examination of the drums by a generator site to show compliance with the 40 CFR 194.24 requirements provides an adequate opportunity to determine the waste form and verify the absence of prohibited items.

Similar to the §194.24 TRU waste characterization requirements, the NMED requires that DOE mixed TRU waste generators comply with the hazardous waste determination requirements onsite before manifesting the waste for disposal at WIPP. The WIPP, an NMED-permitted hazardous waste disposal facility, may not be able to fulfill the obligations of a mixed TRU waste generator. According to the permit, the generator must show that the concentration of the volatile organic constituents (VOCs) in each waste container is below the VOC limit established by the permit. Using process knowledge, a generator can determine whether or not the VOCs are present in the waste. However, the process knowledge alone generally may not be sufficient to show that the waste container meets the NMED-established limits, when the waste is contaminated with certain organic constituents. For this reason, the NMED specifically requires that the TRU waste generator conducts the headspace gas analysis to show compliance with the VOC limit before moving the waste for offsite disposal at the WIPP.

The PMR-proposed confirmatory testing of headspace gas sampling and analysis is practicable but the proposal does not appear to provide sufficient technical rationale. For example, the PMR does not fully explain how the TRU waste sites would use process knowledge to certify that each TRU waste drum meets the NMED-established the headspace gas limit. The DOE-proposed headspace gas sampling and analysis at WIPP can potentially minimize radiation exposure of workers at TRU waste generator sites. The PMR, however, does not use this rationale to support the request. In addition, under the Resource Conservation and Recovery Act, hazardous waste (including mixed waste) generators are subject to State hazardous waste regulations; therefore, the approval of States with TRU waste generator sites would be necessary. The PMR does not discuss DOE's consultation with the State hazardous waste agencies, State concerns, and how DOE addressed State concerns.

The PMR implies that the NMED's approval of the permit modification would obviate the need for site-specific audits. However, both EPA and NMED use the site-specific audit/inspection as an enforcement tool and verify compliance with the respective permit and regulatory requirements.

In conclusion, the DOE TRU waste generator/storage sites must continue to meet the current 40 CFR 194 requirements and the WIPP waste acceptance criteria.