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VI

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CERTIFIED MAIL - RETURN RECEIPT REQUESTED

January 6, 1994

Brigadier General, William M. Guth, Commander
Cannon Air Force Base
100 S DL Ingram Blvd, Suite 100
Cannon AFB, NM 88103-5214

**RE: Notice of Deficiency (NOD) - Technical Adequacy Review of
the Melrose Air Force Range (AFR), Open Detonation Unit,
RCRA Part B Permit Application
EPA I.D. Number NM5572124456**

The New Mexico Environment Department (NMED) has reviewed, for technical adequacy, the September 17, 1993, Part B, Permit application for the Melrose AFR, Open Detonation treatment unit required by the Resource Recovery and Conservation Act (RCRA).

After reviewing the permit application, NMED has found the application to be technically deficient. The attached enclosure lists the requested information necessary for NMED to begin preparation of a draft permit.

The information listed in the enclosed appendix must be submitted to NMED within thirty (30) days after receipt of this NOD. Failure to submit the requested information, within this designated time, may result in the issuance of a Letter of Violation or a Compliance Order with associated fines.

If you have any questions about the NOD, please contact Tom Tatkin at 827-4308.

Sincerely,

Barbara Hoditschek
Barbara Hoditschek, Manager
RCRA Permits Program
Hazardous & Radioactive Materials Bureau

cc: Benito Garcia, NMED
David Neleigh, EPA Region 6

Received 94

Enclosure - Comments & Information Request

P: 369 892 966



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PS Form 3800

**Melrose Air Force Range Open Detonation Unit - Technical Review
Notice of Deficiency**

January 6, 1993

Environmental Media Monitoring - Soil Sampling and Analysis
(HWMR-7, Part V, §264.601(a), (Subsurface Environment), (b) (Soil Surface))

- 1a. Describe the problems associated with analytical detection of explosive residues, toxic metals and hazardous waste constituents in ambient soils, resulting from incomplete combustion of reactive waste (e.g., mechanical transport from wind or runoff drainage after detonation, and prior to sampling; dilution of contaminated soils mixing with uncontaminated soils).
- 1b. Discuss what precautions will be considered for the collection of soil samples that might counteract the escape of hazardous waste and waste constituents from being detected in laboratory analysis. Consider the use of fall-out fans, crater analysis and other field screening methods to decide where to collect valid samples.
2. Provide the methodology and calculations used to determine the number of samples needed to help detect contaminant releases. Document the methodology with published matter and specific references (sections and paragraphs). The change from composite to discrete sampling may be a cause to reconsider the sampling strategy. Historical data must not be considered conclusive in determination of the appropriate number of samples needed, since the historical work was of a limited nature.
3. Previous site characterization sampling conducted by the USGS did not contain substantial information to adequately evaluate the presence of soil contamination. Propose additional subsurface sampling that can be done to validate historical data, especially in and below previously buried detonation pits. Incorporate HWMR-7, Part V, §261, Appendix VIII into vadose zone sampling since historic hazardous waste records are unavailable. Any newly identified hazardous waste constituents should be used to expand the list of target constituents that will be tested for during routine analysis. If a modified Appendix VIII list is proposed for use, justify the deletion of any hazardous constituents.
4. Explain how the EPA analytical method 8330 will be used as an indicator for tracing the occurrence of hazardous waste constituents other than those parameters for which the analysis targets.
5. Explain how the sampling and analysis plan will be used to test for the migration potential of hazardous waste constituents associated with the MAFR OD treatment.

Migration Potential for Contaminants to Reach Groundwater
(HWMR-7, Part V, §264.601(a), (Subsurface Environment), (b) (Soil Surface))

6. Provide additional information, to that material presented in Section E-1f, that more strongly supports the applicant's hypothesis for an extremely low potential for contaminant migration. Section E-1f bases the migration potential on water quality data from a single well that has no demonstrated connection with the uppermost aquifer, and ground water flow directions do not appear to be conclusive. A suggested approach is to base migration potential on a strong soil sampling and analysis plan.

Appropriate Treatment Relative To Environmental Protection
(HWMR, Part V, §264.13(a)(1))

7a. Explain why propellant, and pyrotechnic wastes are appropriate for treatment by detonation when as a product they were designed to deflagrate. Provide documentation that will support a reasonable explanation. In order to minimize environmental impact from the waste stream intended to be permitted, it is important for the facility's environmental managers to differentiate between treatment generated residues, particulates, and gases that are different from those resulting from product use.

7b. Explain what contaminants and associated by-products would be expected to result from incomplete treatment of propellants and pyrotechnic compositions (e.g., DNT and/or nitrocellulose from whole propellants grains dispersed after a detonation event).

Waste Characterization (HWMR-7, Part V, §264.13(a)(2))

8. Provide the source(s) of information used to compile Tables C-1 through C-3 and Tables C1-1 through C1-3 (process knowledge for the anticipated waste stream).

Remedial Action Level Clean-Up Standard (HWMR-7, Part V, §264.272)

9a. Provide calculated, health-based, screening action levels for all target constituents or proposed background concentrations for naturally occurring metals that will be monitored in ambient soils throughout operation of the OD unit. These calculated concentrations will be the health and environmental protection standard for which remedial action, prior to closure, will be required if they are exceeded. Use Subpart S proposed rule of 40 CFR "Corrective Action for Solid Waste Management Units at Hazardous Waste Management Facilities" for guidance, or another

NMED approved method. Closure standards would likely be based on a health-based risk assessment, determined at the time of closure. Provide end results, methodology and calculations used in the assessment.

9b. Explain how and when a health and environmental protection standard, acceptable to NMED, will be used to require implementation of remedial action prior to closing the OD unit.

Training Plan (HWMR-7, Part V, §264.16)

10a. Present job title information that reflect current reclassifications (e.g., Team chief and technician are now Craftsman and Journeyman respectively).

10b. There is no discussion for the training or the qualifications of personnel that will be involved with soil sampling or other environmental management personnel. Include the sampler position and any other environmental positions in the list along with course matter required for appropriate training (§264.16(d)(1), Personnel Training-Job titles). Application to a health and safety plan should be one of the subjects with which environmental personnel is familiarized.

Contingency Plan (HWMR-7, Part V, §264, Subpart D)

11. Provide a Contingency Plan that is specific to only the Melrose Range.

Location Standards (HWMR-7, Part V, §264.18(b))

12. Explain the apparent conflict in delineation of the 100-year flood plain boundary presented in the plan view sketch from February 1993 USGS Flood Plain Study report, and the 1993 Radian Corporation flood plain topographic map (Appendix B, Figure B1-2)

Accuracy of Information (HWMR-7, Part IX, §270.1(a)(3))

13. Correct the following items found in the Part B application or provide further explanations to clear-up any misunderstandings:

13a. Section E-1b states that the regional gradient (flow direction) is to the southeast, whereas Section E-1d states that the regional flow direction is to the northeast. Appendix E1-1 supports a northeast regional flow direction. Specify which flow direction is correct.

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13b. Provide the correct quantities of waste explosives that are intended for treatment during individual treatment events and on an annual basis. Information provided in Section I (Closure Plan) appears to be in conflict with Section E. (Environmental Performance Standard) and Part A of the permit application.

13c. The relationship between potential contaminant releases at the OD unit and chemical analysis from a potable water supply well located in excess of 10,000 feet due east of the OD unit is not clear with respect to "the low potential for contaminant migration". If the well is completed in the Ogallala and the regional flow direction is to the northeast, it is not certain that potential OD contaminants would ever pass through that well. Existing ground water well data for demonstrating contaminant migration potential does not provide a substantial defense. An acceptable soil sampling and analysis program could supply more direct information. Provide additional information necessary to defend the hypothesis for low migration potential.