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U.S. EPA REGION 6
 HAZARDOUS WASTE MANAGEMENT DIVISION
 1445 ROSS AVENUE
 DALLAS, TEXAS 75202-2733

TO:	STEVE PULLEN	
MACHINE NUMBER: (505) 827-4389	VERIFICATION NUMBER: () X.4308	
FROM:	Nancy Rinehart Morlock EPA Region 6 RCRA Permits Branch New Mexico and Federal Facilities Section	
PHONE: (214) 665- 6650	MAIL CODE: 6H-PN	
OFFICE: 10.085		
DATE: 6/7/95	PAGES, INCLUDING COVER SHEET: 7	
PLEASE NUMBER ALL PAGES		
INFORMATION FOR SENDING FACSIMILE MESSAGES		
OUR EQUIPMENT	FACSIMILE NUMBER	
PANAFAX UF-766	(214) 665-6460 or (214) 665-6660	
COMMENTS: Steve: Please review and call with any questions or comments. Thanks, Nancy		
Copies to:		

KAFB1632



Mr. Christopher DeWitt, R.P.G., Chief
Restoration Branch
Environmental Management Branch
377 ABW/EMR
2000 Wyoming Boulevard SE
Kirtland AFB, NM 87117-5659

Dear Mr. DeWitt:

The Environmental Protection Agency (EPA) has reviewed your May 26, 1995 site-specific sampling plan for RW-68, Radium Dump/Slag Piles and has found the plan to be incomplete. Please respond to the attached questions within 30 days of receipt of this letter.

If you have any questions, please contact Nancy Morlock of my staff at (214) 665-6650.

Sincerely yours,

David W. Neleigh, Chief
New Mexico/Federal Facilities Section

cc: Mr. Benito Garcia, NMED
Mr. Steve Pullen, NMED

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EPA Comments
Site-Specific Sampling Plan for the Radium Dump and Slag Piles
Kirtland Air Force Base

Section 3.0. RCRA Facility Investigation (RFI) Sampling Plan

1. Once approved, the investigation at the radium dump/slag piles should follow the approved Stage 2C/Appendix III, unless the Base-Wide Plans, submitted by Kirtland in March 1995, have been approved by EPA and NMED.
2. EPA understands that the Cratering Area is a 42-acre site. Given the size and historical use of the site, more than ten sampling locations may be needed. Please explain the rationale for the proposed sampling locations. Kirtland should submit a map depicting the proposed sampling locations, the background sampling location, and the "other disturbed" sampling locations.

Also, more site information is needed. For example, Kirtland proposes to sample from "the five largest detonation pits on the site." How many detonation pits are located on this site? Copies of site photographs, if available, would be helpful.

3. EPA is requiring that Kirtland complete a stabilization action at the slag piles. Because the piles may be a source for continued contamination of this site, EPA is requiring that the piles be removed and properly disposed of. Kirtland should submit a site-specific plan for this stabilization action.

- What depths were exposed



DEPARTMENT OF THE AIR FORCE

HEADQUARTERS 377TH AIR BASE WING (AFMC)

CERTIFIED MAIL: Z 106 120 481
RETURN RECEIPT REQUESTED

26 May 1995

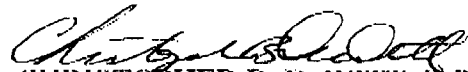
377 ABW/FMR
2000 Wyoming Blvd SE
Kirtland AFB NM 87117-5659Ms. Nancy Morlock, Environmental Engineer
RCRA Permits Branch
U.S. EPA Region 6
1445 Ross Ave, Ste 1200
Dallas TX 75202-7233

Dear Ms. Morlock

As requested in your 27 April 1995 letter, we have attached site-specific sampling plans for RW-68, Radium Dump/Slag Piles, and SS-69, Drum Storage Area.

Please contact Mr. Jerry Sillerud, (505) 846-2773/0053, if you have any questions.

Sincerely


CHRISTOPHER B. DeWITT, R.P.G.
Chief, Restoration Branch
Environmental Management DivisionAttachments:
Sampling Planscc:
NMED-HRMB (Mr. Pullen)
USACE Omaha (Mr. Janis)
Foster Wheeler Environmental (Mr. Mantooth)

SITE RW-68, RADIUM SLAG PILES

RCRA FACILITY INVESTIGATION SAMPLING PLAN

1.0 LOCATION

Site RW-68 is located in the southeast area of Kirtland AFB, southeast of Albuquerque, New Mexico. This site is composed of two adjacent sub sites: a) an unimproved open area, previously identified as RW-68, that consists of 10 slag piles within an estimated 1.2-acres and b) a 42-acre site known as the Cratering Area South of Schoolhouse Mesa (formerly Sandia National Labs site ER 61B) located about 0.25 mi. northwest of the slag pile site.

2.0 SOURCE CHARACTERIZATION

The Cratering Area site was actively used by the Army Air Force in the 1940s to conduct research on planes to determine weaknesses and other vulnerabilities under combat conditions. In the course of conducting these tests, the planes would be blown up or otherwise severely damaged. Upon completion of the tests, the planes were moved over to what is now the slag pile area, where they were then dismantled and incinerated. A total of 10 distinct slag piles have been identified here. During the approximate period 1957 - 1963, SNL used the Cratering Area for "Operation Plowshares," conducting subsurface explosives tests for the purpose of studying the cratering effects of charges ranging in size from two to eight pounds of trinitrotoluene (TNT). These tests resulted in craters with diameters of less than three feet. Larger charges of up to 256 pounds were reported to have been detonated but it is believed these were conducted at other SNL sites on KAFB and/or the Nevada Test Site (NTS). The overall purpose of the research was to conduct scale-model tests to determine the depth to which a nuclear device would have to be buried so that there would be no crater development at the ground surface.

2.1 PREVIOUS INVESTIGATIONS

a. Radium Slag Piles: The KAFB Bioenvironmental Engineering Squadron performed a radiological survey of the site on May 1992 and collected samples from the slag piles for analysis. The analytical results confirmed the presence of radium 226 at the site. In October 1994, samples were collected from the slag piles and refractory brick at the site for TCLP analysis. The results indicated soluble heavy metals in excess of regulated levels: cadmium 3.37 ppm, lead 709 ppm, selenium 1.58 ppm, and zinc 17.5 ppm (all readings in mg/l of TCLP extract). A Phase I investigation consisting of non-intrusive radiological characterization, an electro-magnetic survey, and slag pile and soil

sampling is currently in progress; the EPA will be furnished with a copy of the results upon completion.

b. Cratering Area: Little information is known about this site except that it was identified by the Department of Energy (DOE) in 1987 as a possible ER site as a result of DoD aircraft vulnerability testing and SNL explosives testing. Additionally, as a result of the site's proximity to the KAFB EOD site (SWMU 6-19), it is believed there is potential for unexploded ordnance to be present at the site.

3.0 RCRA FACILITY INVESTIGATION (RFI) SAMPLING PLAN

The objective of the RFI will be to perform a Phase II study to determine the extent of contamination associated with the slag piles and the Cratering Area. The RFI will be conducted in accordance with the Stage 2C, Appendix III, Health and Safety Plan, Project Management Plan, and Data Collection Quality Assurance Plan, approved on 7 April 1994 by the U.S. EPA or the Base Wide Generic Plan submitted to the EPA March 1995. The site specific sampling plan will consist of the following:

a. Slag Piles: The sampling plan will consist of collecting samples from each of the 10 slag piles and subsurface samples from the 2.5-, 5-, and 10-ft depths directly below each pile. Field screening for VOCs will be done and the 10-foot depth will be extended in 10-ft increments if there are indications that VOC contaminants are present. All samples will be analyzed for metals (Method 6010), gross alpha/beta (Method 9310), and radium 226 (Method 9315). If field screening indicates the presence of VOCs, lab Method 8240 will be performed to quantify the contamination.

b. Cratering Area: The sampling plan will consist of collecting samples from the surface, 5-ft, and 10-ft depths of the five largest detonation pits on the site. In addition, five grab samples will be collected from other disturbed areas on the site as well as one background sample from off-site. If field screening indicates the presence of VOC contaminants, the borcholes will be extended in 10-ft increments until contamination is no longer indicated. All samples will be analyzed for metals (Method 6010), gross alpha/beta (Method 9310), and explosives residue (Method 8330). Analysis for VOCs (Method 8240) will be performed if the field screening indicates VOC contamination is present.

RW-68 SAMPLING AND ANALYSIS PLAN

