



State of New Mexico

ENVIRONMENT DEPARTMENT

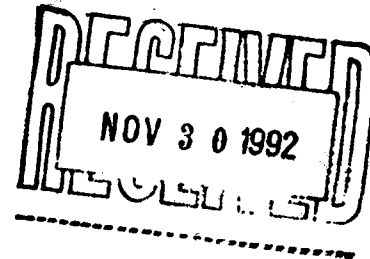
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SECRETARY

RON CURRY
DEPUTY SECRETARY

November 19, 1992

DATE



Joseph C. Vozella, Acting Chief
Environment, Safety and Health Branch
U.S. Department of Energy, Los Alamos Area Office
Los Alamos, New Mexico 87544

Dear Mr. Vozella:

On November 4, 1992, this Bureau received the Sampling and Remediation Plan (SRP) for Solid Waste Management Unit (SWMU) Number 3-010 located at Technical Area (TA) 3-30. This SRP was submitted in response to our September 15, 1992, request for a corrective action report pursuant to Section 1-203.A of the New Mexico Water Quality Control Commission Regulations. Since the accelerated characterization and remediation of SWMU 3-010 involves the interests of both the Surface Water Quality Bureau and the New Mexico Hazardous and Radioactive Materials Bureau, these sections have respectively reviewed the plan and coordinated their concerns and comments in the following text. Both sections have determined that the SRP contains several inadequacies which must be addressed prior to the initiation of activities at the site. These comments address both general and specific concerns.

General Comments

1. The Department will require a schedule for completion of the SRP with specific milestones for all phases of the plan's implementation. My letter of 9/10/92 specifically requested that a schedule be included as part of any corrective action report submitted to the Department.
2. A Health and Safety Plan is required by the New Mexico Environment Department before staff can plan for, or conduct, independent investigations at the site. No such plan was provided in the SRP.
3. A sampling grid should be established for radionuclide sampling. This grid could reasonably have wider spacing than that for the mercury grid (e.g. 3-meter spacing). Samples collected specifically for radionuclides should target the silt and clay sized portion of the sediment/soil.



Harold Runnels Building • 1190 St. Francis Drive • P.O. Box 26110 • S
(505) 827-2850 FAX (505) 827-



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It would probably be more cost and time efficient to characterize and remediate the site of both RCRA constituents and radionuclides with a single effort.

4. The TCLP method should not be used for any of the sample analyses proposed in the SRP.
5. The NMED accepts the SRP's conclusion in Section 3.3.5 that excavation of contaminated soils is the only technology that would be effective in meeting all remedial objectives. It is our understanding that this is the remedial technology that you have selected for remediation of the contamination at SWMU 3-010. If this is not the case, please inform this Bureau of the technology which has been chosen.

Specific Comments

These comments and questions reference specific sections and subsections of the SRP; "\$" refers to the subsection referenced and "p" represents the paragraph number within a subsection.

\$ 2.2 p3 What were the concentrations of volatile organic compounds and PCBs found in the initial sampling effort? What are the ER Program action levels?

\$ 2.2 p1 How deep is the sediment/tuff interface in the channel?

Samples that were collected from 0-3 inches on the slope, can not be compared with samples taken at the sediment/ tuff interface along the stream channel. In order for samples to be valid for comparison with each other and to analyze trends, they should be collected in the same manner and at the same depth.

Samples that are intended to target mercury contamination in the stream channel should also be collected at and/or near the surface in addition to samples at the sediment/tuff interface.

\$ 3.1 p4 Volatilization may not be reduced by covering the site. The cover may prevent vapors from escaping to the atmosphere and reduce worker exposure, but the "greenhouse warming" effect may actually be produced by the translucent cover, enhancing volatilization.

§ 3.2 p2 The cleanup level for mercury in Subpart S is 20 mg/kg and not 80 mg/kg. Remediation at SWMU 3-010 should attain health-based action levels that are derived from the assumption of direct ingestion and not on a residential use scenario. Conservative cleanup levels are justified for SWMU 3-010, in part, because of the close proximity of the water course.

§ 3.3.1 Additional sampling should also consider volatile organic compounds.

§ 3.3.4 Soil Washing

In situ soil washing should not be considered as a remediation option because of the close proximity to the stream channel.

Thermal Treatment

The date and title of the "recent EPA study" referenced here should be included.

§ 4.1 p3 The conceptual model that, in part, forms the basis for "identification of data needs" is not based on a proper or adequate initial investigation. The conceptual model is based on too few data points and on inconsistent sampling methodology.

§ 4.2 p2 Composites are not an acceptable method for characterizing the degree and extent of contamination at SWMU 3-010. Compositing samples within rows or columns would effectively dilute the concentrations of constituents that may be present in the sediment/soil above Subpart S cleanup levels. In addition, the "cleanup levels" that are proposed for use as triggers for further investigation (i.e. analysis of discrete samples) are significantly above health-based action levels from Subpart S that assume a direct ingestion scenario. A wider grid spacing than the one proposed in the Plan would be acceptable if discrete samples are taken instead of composites. The three sampling points immediately below the "hot spot" (column 3, rows 3-5) should still be locations of samples at discrete intervals

at depth. A map showing distribution of contamination could be produced. This would greatly aid in understanding the mechanism by which mercury (and other contaminants found at the site) have migrated from the original disposal location.

It is recommended that sampling and analysis start in the "hot spot" and move progressively downslope in order to delineate the area of contamination. This may require the use of a mobile lab so that real-time results can be used to assist in determination of next-phase objectives.

- § 4.2 p4 One sample does not define the boundaries of a hot spot; therefore, additional samples should be collected in order to adequately define the hot spot.
- § 4.2 p6 Samples from rows 6 through 10 should also be analyzed for lead and TPH, as well as for radionuclides.
- § 4.2 p7 It is unlikely that the soil/sediment on the hillslope is 2 meters thick, sample intervals should be shortened to 0.25 m thick intervals. This would result in a composite from 0-0.25 m, 0.25-0.5 m, 0.5-0.75 m, etc. If contamination is still present in the deepest sample, next phase sampling could address this issue.
- § 4.2 p8 Composites of more than one sampling site should not be used in the stream channel sampling plan. Discrete samples should be collected from no more than 5-m spacing for the first five sampling points. Remaining sample locations could be spaced at wider intervals and should extend further down the stream channel than the proposed fifty meters. A sampling point should be located at the junction of the stream channel and Twomile Canyon.

We have been informed that LANL has documentation regarding mercury levels in the Pajarito wetlands located downstream from the site of contamination after Twomile Canyon enters Pajarito Canyon. This data should have been included in the SRP and must be provided to the NMED. If no such documentation exists, or if the data is found to be inconclusive, further sampling of the wetlands may be necessary.

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Stream sediment samples should be collected from both the surface of the streambed and at the sediment/tuff interface. Surface samples should be collected from 0 to 12.0 inches, or from 0 to tuff, whichever is lesser.

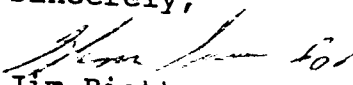
Sediment samples from the stream should also be analyzed for total metals and TPH, to be consistent with the SRP scheme for rows 1-5.

§ 4.2 p9 All water samples should also be analyzed for TPH, tritium, isotopic plutonium and cesium-137. Water quality samples should also be taken below the proposed furthest downstream site located immediately downstream from the jogging path bridge. It is recommended that at least one sample point be located at the junction of the stream channel and Twomile Canyon.

In order to quickly address and resolve the Department's concerns and comments regarding the SRP, I propose that a meeting of our respective staff members be arranged.

If you are interested in such a meeting, please contact Alex A. Puglisi of my staff at 827-2799, to make the necessary arrangements. Any questions concerning this response to your SRP should be directed to Danny Katzman of the Hazardous and Radioactive Materials Bureau at 827-4313 or Alex Puglisi at 827-2799.

Sincerely,


Jim Piatt
Chief
Surface Water Quality Bureau

JP/AAP/mlt

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cc: A. Tiedman, ADO, LANL, MS A120
T. Gunderson, EM-DO, LANL, MS K491
C. Nylander, EM-DO, LANL, MS K491
K. Hargis, EM-8, LANL, MS K490
D. McInroy, EM-992
Mike Saladen, K-490
Benito Garcia, Bureau Chief, Hazardous & Radioactive Material
Bureau
/ Bruce Swanton, Geologist, Hazardous & Radioactive Material
Bureau