



**Rocky Mountain
Remediation Services, L.L.C.**
... protecting the environment

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**CORRES. CONTROL
LTR. NO.**

August 12, 1996

96-RM-EC-00056-KH

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STP UPGRADES PHASE III, OU9 PIPE EXCAVATION - PRB-083-96

- Refs:
- a) Geoprobe Characterization Report for the OU9 Pipe, dated August 8, 1996
 - b) Action levels for radionuclides in Soils for the Rocky Flats Cleanup Agreement (U.S. Department of Energy (DOE), U. S. Environmental Protection Agency (EPA), and Colorado Department Public Health & Environmental (CDPHE)

Action: No response is required.

PURPOSE

To summarize RMRS project plan for the construction of the effluent storage tanks and the management of the OU9 pipe.

DISCUSSION

Reference a) summarizes site characterization work that was done to define rad contamination observed at the site of the effluent storage tanks. The soils were generally under 1.0 pCi/gm for Am and Pu. In the vicinity of the OU9 pipe, higher activities were measured. RMRS selectively sampled the "hottest" areas identified by hand-held instruments for isotopic analysis. These analyses yielded Am = 18.1 and Pu = 6.5 (pCi/gm).

For comparison, the proposed action levels (Ref. b) are Am = 229 and Pu = 2001. This is the Tier I, 85 mrem, hypothetical resident scenario proposed as a "put back" level. Tier I is defined as the action level for surface soils cleanup and put back in the presence of institutional controls, e.g., land use restricted to open space. This action level would limit exposure to the open space user to below 15 mrem. The hypothetical resident exposure scenario (85 mrem) is based on the conservative assumption that institutional controls break down and a resident moves onto the site. This "putback" action level is currently the appropriate administrative framework to control the OU9 excavation, as the excavated materials will be placed back into the hole from which they were removed. This "putback" level has not been agreed upon between DOE, EPA and CDPHE.

The most conservative action level is Tier II, the surface soil unrestricted release level which would limit exposure of a resident to 15 mrem. Tier II activity levels are Am = 40

Project File	X	X
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CORRES. CONTROL		
RMRS CC	X	X
TRAFFIC		

CLASSIFICATION:		
UCNI		
UNCLASSIFIED		
CONFIDENTIAL		
SECRET		

AUTHORIZED CLASSIFIER
SIGNATURE:

Date:

N REPLY TO RFP CC NO.:

ACTION ITEM STATUS:
 OPEN CLOSED
 PARTIAL

LTR APPROVALS:

ORIG. & TYPIST INITIALS:

GMA:dlu
46469 (Rev. 9/92)

438 1/2

ADMIN RECCRD
IA-A-000321

and Pu = 353 pCi/gm. Thus, even the "hottest" soils encountered in the OU9 site fall well within the unrestricted release level for Rocky Flats Environmental Technology Site. RMRS plans on using the excavated materials as structure backfill, and not for unrestricted release, so compliance with Tier II standards would provide an extra level of protection, even if Tier I would be the controlling requirement.

A subcontractor, qualified to work in contaminated soils, excavated to the pipe in two locations and poured grout into the trenches to seal both ends of the pipe. Ground water was found in both trenches and samples taken after several days. These samples showed elevated alpha and beta activity.

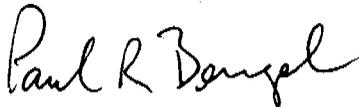
These data support the following conceptual site model:

- Pipe has leaked and released contaminants to the nearby soils. Elevated alpha and beta activity found in water standing in the trenches results from clean groundwater contacting the pipe and its contents.
- RMRS will first remove the contaminated pipe and closely-associated soils, segregating these materials, then do the general structural excavation to allow the effluent tank construction to resume.
- The soils and groundwater will be monitored during excavation to protect personnel and to run a check against the assumed model. If contaminated ground water or soils are found beyond the OU9 pipe vicinity, the situation would be reassessed.

The RMRS plan is to excavate the OU9 materials and stockpile them for characterization. These materials will be covered to control airborne dispersion while sampling and analysis are done and decisions made regarding the disposition of these materials. Eventually, it is important to get an interpretation from K-H staff who are negotiating the Action Levels with the regulators that compliance with Tier I (put back) levels means that these soils can be used as structure backfill, and thus put back into the same general excavation from which they came, even if that means that each cubic foot of soil will not be replaced exactly where it came from. Similarly, if soils meet the Tier II (free release) action levels, RMRS may be free to redistribute soils to other on-plant location given that appropriate approvals are received.

RESPONSE REQUIREMENTS

No response is required.



Paul R. Bengel, Vice President
Engineering/Construction/ Decommissioning

Attachment:
As Stated

GMA:dlu

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J. A. Detamore T130C
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