



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION 6
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DALLAS, TX 75202-2733

August 9, 1999

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Handwritten: fsw LANL 7/10/99/L

Mr. James Bearzi, Chief
Hazardous and Radioactive
Materials Bureau
New Mexico Environment Department
2044A Galisteo Street
Santa Fe, NM 87505

(K)

Re: Comments on the Reach Reports For Pueblo and Upper and Lower Los Alamos Canyons,
Los Alamos National Laboratory (LANL), EPA I.D. NM0890010515

Dear Mr. Bearzi:

The Environmental Protection Agency (EPA) has reviewed LANL's Reach Reports for Pueblo and Upper and Lower Los Alamos Canyons dated December 1998 and January 1999 and has comments regarding the Reports. Jeff Yurk, Region 6 RCRA risk assessor, reviewed the risk assessment portion of the Reports. Enclosed are EPA's comments.

Should you have any questions, please feel free to contact Rich Mayer at (214) 665-7442 or Jeff Yurk at (214) 665-8309.

Sincerely,


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

Enclosure

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Comments on LANL's Reach Reports for Pueblo and Upper and Lower Los Alamos Canyons

The Reports include the sampling results and conclusions on sediment samples taken along the reach of Pueblo and Upper and Lower Los Alamos Canyons. Jeff Yurk, reviewed the risk assessment portion of the Reports. Since the three documents reviewed were all essentially implementation of the same methodology, one set of risk assessment comments encompassing all three documents is included for your consideration.

Pueblo Canyon Comments

1. **General Comment:** Although the results presented did not indicate hazardous constituents above Region 6 screening levels, EPA is concerned that the number of samples analyzed for the Canyon was low. To increase the comfort level, EPA recommends more samples for hazardous constituents be taken. A greater majority of the samples should be placed near the confluence of acid canyon and a quarter of a mile downgradient of the confluence.
2. **General Comment:** It is recommended that LANL conduct a similar sampling study of Acid Canyon for hazardous constituents.
3. **Page D-25; Table D4-1:** Please include the Arsenic, Barium, Chromium, Nickel, and Thallium results in the revised table.

Upper Los Alamos Canyon

1. **General Comment:** Regarding the samples rejected (PCBs, Pesticides and SVOCs) in the Upper Los Alamos Canyon Report, when or will these locations be re-sampled? Please clarify.
2. **Page D-31; Table D4-1:** Please provide the Arsenic, Barium, Nickel, and Thallium results in the revised Upper Reach Report.

Lower Los Alamos Canyon

1. **Page D-19; Table D4-1:** Please provide the Arsenic, Barium, Nickel, and Thallium results in the revised Lower Reach Report.

Risk Assessment Comments

General

The reports reviewed are intended to identify any need for immediate remedial action or additional data collection from the standpoint of potential risk. The conclusion of all three reports is that no immediate remedial action is necessary and further sampling and risk analysis is needed. The initial risk analysis did not include an evaluation of the surface water or ground water exposure pathways and did not include an American Indian exposure scenario as specified in the Core Canyons methodology cited in each document. Also, it was noted in each report that sample density was not adequate to identify hot spots. Maximum sediment concentrations presented were reviewed against human health residential screening levels and sediment toxicity numbers available in the literature for ecological receptors, and no concentrations appear to be at levels requiring immediate action.

Specific

1) Comment: The only major impact noted in these reports is a field note in the Pueblo Canyon Reach Report which states that "Reach P-3 East, also known as the swamp, has obvious major impacts from the Bayo WWTP on the type and abundance of various ecological receptors."

Proposed Action: This statement needs to be clarified as to why this area does not require immediate action.

2) Comment: The ecological screening levels used were generated from a previously submitted document which has not been finalized and approved. Also, toxicity reference values required to calculate such levels have not even been submitted at this time.

Proposed Action: If conclusions are to be drawn at this point, it should be clearly stated what concentrations were compared to what toxicity values with a full reference for the values used and an explanation of why the toxicity value selected is an adequate screening value.

3) Comment: All of the ecological receptors evaluated in the screening assessment are not presented.

Proposed Action: Documentation of what receptors were evaluated in the screening process should be presented and why certain receptors were chosen to represent the terrestrial ecosystems evaluated.

4) Comment: Consumption rates utilized in the human health risk assessment are presented. They are equivalent to a meat consumption rate of 1.1 pounds per week, a fruit consumption rate of 0.22 pounds per week, and a vegetable consumption rate of 0.31 pounds per week.

Proposed Action: Someone at NMED familiar with the site should review these consumption rates and determine their appropriateness.

5) Comment: Biotransfer factors and uptake models utilized and COPC-specific values were not found in these documents and therefore dose and concentrations could not be validated.

Proposed Action: Confirm that all information necessary to repeat calculations necessary to support conclusions are presented.

6) Comment: Dropping COPC's by comparison to background may be inappropriate for inorganic compounds if a source of contamination can be identified for a bioavailable, toxic form of the inorganic which is not equivalent to the chemical form measured during background studies.

Proposed Action: Prior to dropping an inorganic COPC due to a comparison to background levels, it should be confirmed that background levels are below risk levels of concern or that there are no sources of contamination for the particular inorganic COPC in a toxic, bioavailable form.

7) Comment: In inaccurate preliminary remediation goal (PRG) under CERCLA is established in these documents for radionuclides (i.e. 15 mrem/yr).

Proposed Action: Review OSWER Directive No. 9200.4-18 to update methodology utilized for obtaining PRG's for radionuclides.

8) Comment: These documents appear to have used a hazard quotient equal to one to generate PRG's, while previous proposed methodologies by LANL accounted for multiple contaminants in generating PRG's.

Proposed Action: PRG's for the canyon reaches should be based on a hazard quotient less than one (e.g. 0.1) to account for multiple contaminants. This is a risk management decision which should be provided by NMED.

9) Comment: It is unclear the benefit of additional sampling and risk analysis in the canyons will accomplish prior to defining the nature and extent of contamination from all mesa top sources.

Proposed Action: Define the nature and extent of all potential sources prior to conducting any

Comments and Recommendations
Pueblo and LA Canyon Reports
LA-UR-98-476, 98-483, & 99-001
EM/ER:98-068, 98-3974, & 98-3975

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additional work in the canyons.

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SUBJECT: Peer Review of the Reach Report for Pueblo Canyon

FROM: Rich Mayer
LANL Project Manager

TO: Dave Neleigh, Chief
New Mexico - Federal Facilities Section

LANL's Reach Report for Pueblo Canyon was not peer reviewed since it was reviewed by Jeff Yurk, a RCRA risk assessor.