

October 17, 1996

Mr. Bill Ferdinand, Manager  
Radiation Safety, Licensing and  
Regulatory Compliance  
Quivira Mining Company  
6305 Waterford Bldg., Suite 325  
Oklahoma City, Oklahoma 73118

SUBJECT: AMBROSIA LAKE URANIUM MILL SITE VISIT

Dear Mr. Ferdinand:

Enclosed for your information is a report of the October 1, 1996, site visit by staff members of the U.S. Nuclear Regulatory Commission. The site visit was conducted to review activities related to Quivira Mining Company's (QMC's) Ambrosia Lake uranium mill site.

As noted in the enclosed report the staff expects QMC to include specific information concerning radon flux measurements in the report required by 10 CFR Part 40, Appendix A, Criterion 6 (4). The information requested includes canister construction and activity measurement quality control.

If you have any questions concerning the enclosed site visit report, please contact Kenneth Hooks, the NRC Project Manager for the Ambrosia Lake site at (301) 415-7777.

Sincerely,

/s/ Daniel M. Gillen For J. Holonich

Joseph J. Holonich, Chief  
Uranium Recovery Branch  
Division of Waste Management  
Office of Nuclear Material Safety  
and Safeguards

Docket No. 40-8905  
License No. SUA-1473

Enclosure: As stated

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TRIP REPORT FOR VISIT TO QUIVIRA'S AMBROSIA LAKE,  
NEW MEXICO, MILL SITE

DATE: October 1, 1996

PLACE: Quivira Mining Company (Rio Algom)  
Ambrosia Lake Facility, New Mexico

PURPOSE: Familiarize NRC staff with current site conditions and examine  
equipment used for the radon flux measurements.

ATTENDEES: NRC - E. Brummett, Linda Howell  
Quivira - Peter Luthiger

OBSERVATIONS:

During the two hour visit, Peter Luthiger discussed the status of the tailings piles, ponds, and reclamation activities, then we toured the reclamation area. The NRC staff noted rock being placed on the top of Pond 1 and beginning of excavation for the pit to bury the waste drums.

The NRC staff examined a canister used to collect radon for the flux measurement and mentioned that the construction appeared different than the EPA model. It was suggested that the licensee document how its canister compares in construction and function to the EPA model.

The NRC staff asked the licensee to perform leak tests on three of the metal cans that are used to hold the radon-laden charcoal for four hours before the radioactivity is measured. Three cans, sealed with 1.5 turns of electrical tape, were held in a large bucket of hot water. All three leaked (bubbles visible). Peter Luthiger contended that the water was too hot (he said he did successful tests in cold water), so three other cans were tested in warm water and all leaked. The NRC staff indicated that DOE performed leak tests in hot water for 2 percent of the cans used in radon flux measurements. Staff stated that, even though not mentioned in EPA Method 115, evidence that valid measurements were made should be provided by the licensee (when the flux measurements are submitted). The NRC staff will check on the type of tape DOE uses on the cans and inform Quivira Mining Company.

Enclosure