

Radiation Protection Section

March 5, 1979

Mr. James M. Rosel
Attorney at Law
Ranchers Exploration
and Development Corporation
1776 Montano Road, N.W.
Albuquerque, New Mexico 87197

Dear Mr. Rosel:

I wish to thank you and your organization for the February 12, 1979 site visit. The discussion and tour of surface facilities was very informative. After reviewing the data provided to me during my visit and the past data your organization had submitted I am concerned about the following areas of your licensed operation:

- a. Complying with license conditions
- b. Radiation protection of your employees
- c. Sampling/measurement techniques

I will briefly state my concerns in the following paragraphs and summarize a recommended course of action for you to consider.

- a. License condition 9.A. This condition authorizes the use of uranium mill tailings (coarse sands) as mine backfill on an operational test basis at a nominal rate at 8,000 tons per month. September, November and December backfilling operations used 10,780, 9,800 and 9,230 tons respectively which are somewhat in excess of the nominal value.
- b. License condition 13.A. This condition requires radon measurements at the North and South vents and tailings unloading/storage area. Since the initial radon measurements taken before the tailings transfer operation was initiated were accomplished with malfunctioning equipment (discovered later), there are no background/pre-operational data for comparison. Early measurements in 1977 were also suspect for the same reason and new equipment was received in March 1978. Therefore, measurements of radon since April 1978 should be representative of radon levels for backfilling, but will not enable a determination of the increment due to backfilling. From April 1978

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1978 (1400 #1 and 2, 1200 #1, 008). No measurements of any type have been reported for stope 013, 800 #2 and #3, 012 and 004 which are shown on the sandfilling sequence chart. Working level measurements at V4-11 during October 1978 are recorded as nil when the Pa-222 data appears significant on October 5 and 23, 1978.

- e. License Condition 17. The times of sampling are to be keyed as closely as possible to the completion of the backfilling of each stope. From reading the above comments of missing data and significant backfilling operations being conducted without collecting data shows that serious consideration is not being given to this license condition.

In consideration of the lack of a consistent sampling program, the wide variation of data, the lack of correlation of sampling in relationship to backfilling operations and radiation protection for your employees, I recommend that you immediately review your licensed operations to correct the obvious gaps identified (specifically condition 9A, 10, 13 and 17). Serious consideration must be given to an in depth evaluation of your sampling program to include sampling technique, sampling location and quality control of the sample analyses; i.e., instrument calibration, checks of analytical procedure with blank or spiked samples, duplicate samples to check reproducibility and split samples for correlation between another laboratory results and your present laboratory.

Your prompt attention to the problems identified above and an expeditious response is expected so that an appropriate enforcement action will not be necessary. If you wish, Dr. Tom Buhl of our Environmental Monitoring Program can be available for advice and consultation to assist you in reviewing your sampling program.

The license condition 15 requires meeting the New Mexico Water Quality Control Commission Regulations. Details of meeting this condition should be discussed more completely with Mr. Bruce Callahan, Water Pollution Control Section, NMED.

Sincerely,

Gerald W. Stewart
Environmental Scientist III

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