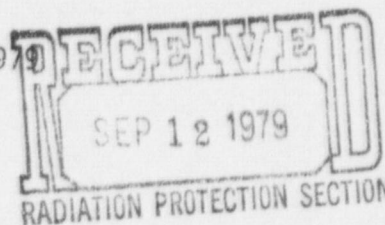


Gulf Mineral Resources Co.

1720 So. Bellaire St.
Denver, CO 80222

September 10, 1979



Mr. James L. Mackin
New Mexico Environmental Improvement Division
P. O. Box 968
Santa Fe, New Mexico 87503

RE: Radioactive Materials License Application for
Mt. Taylor Ion Exchange Unit

Dear Jim:

Attached are the responses to the questions posed by Kate Coleman on the license application for the Mt. Taylor Ion Exchange Unit. It is hoped these responses will be satisfactory.

Best Wishes,

A handwritten signature in cursive script that reads "Karen H. Rasmussen".

Karen H. Rasmussen

KHR:rw
Attachments

9805050033 790910
PDR ADOCK 04008908
C PDR



RESPONSES TO NMEID QUESTIONS ON MT. TAYLOR IX UNIT
RADIOACTIVE MATERIALS LICENSE APPLICATION

1. Please provide a site layout map showing the location of the IX unit, its relationship to the mine, pond locations, and discharge drainage area.

See attached maps A and B.

2. RPS 16, Item 4. Will B. K. Reaveau be the on-site RSO? In view of the size of the IX unit, there should be an RSO on-site.

B. K. Reaveau is located at Mt. Taylor and is the alternate RPO on all New Mexico radioactive material licenses. He has full authority to act in the absence of the RPO.

3. RPS 16, Item 7. What will be done with the barium-radium precipitate prior to the completion of the Mt. Taylor Mill?

The barium-radium precipitate will remain in the settling ponds until moved to the tailings pond.

4. RPS 16, Item 10. Will the emergency response equipment, currently maintained by RSO in Denver, be moved to the Mt. Taylor Mine IX unit when the unit is operational?

No. Adequate radiological survey equipment currently exists at Mt. Taylor Mine to cover foreseen emergencies. The emergency response equipment maintained in Denver is for the use of the RPO to respond to emergencies involving GMRC facilities and transport related incidents involving yellow-cake.

5. RPS 16, Item 11. In addition to the National Bureau of Standards, which recognized standards organizations will be used?

The national standards organizations in Great Britain and France may be utilized. It should be noted that ²²⁶Radium sources traceable to NBS are no longer commercially available.

6. RPS 16, Item 13:

- A. What monitoring will be done after the elution schedule has been established? Inform the NMEID when the schedule is changed from once per day.

At present, the monitoring schedule after the elution schedule is established is unknown since it will be based on the schedule. Gulf will notify NMEID when the monitoring schedule is established.

- B. What type of fume hood will be used?

A perchloric acid fume hood is presently being utilized.

- C. Identify outflow measuring point and other sampling points.

See attached Map A.

7. RPS 16, Item 14:

- A. Prior to termination of personnel monitoring, inform the NMEID of the results indicating that an acceptable level has been achieved.

Should Gulf decide to terminate any personnel monitoring, the RPS will be so notified.

- B. Please provide a sketch of the truck route between the Mt. Taylor mine and the Kerr-McGee Ambrosia Lake Mill. The truck route will include State Highway 509 in addition to State Highway 53 as specified in the application.

The plans to have the eluant processed at Kerr-McGee have changed. The eluant will be processed at United Nuclear Homestake Partnership Mill. A sketch of State Highway 53 from Mt. Taylor to United Nuclear Homestake Partnership Mill is enclosed as Map C.

- C. We assume the Gulf Transportation Incident Response of August 1978 applies to this IX unit.

Gulf feels the cleanup of any spill of IX eluant has been adequately addressed in the application. The Gulf Transportation Incident Response of August 1978 is applicable to interstate shipments of yellowcake and thus does not really apply to local shipments of IX eluate. Certainly, parts of the plan will be utilized, such as the standby equipment and notification procedures.

8. RPS 16, Item 15:

- A. Fill in the blank on the form.

Please add in item 15, "see page 4, supplemental info".

- B. In the process of decommissioning the IX unit, what criteria guide will be used to determine decontamination limits for unrestricted use of equipment and the site?

Decontamination limits for unrestricted site and equipment use taken from Regulatory Guide 1.86, USNRC, June 1974 are as follows:

(See Table 1 on Page 3)

Table 1

Acceptable Surface Contamination Levels		
Natural Uranium, ^{235}U , ^{238}U and Associated Decay Products		
Average ^{ab}	Maximum ^{ac}	Removable ^{ad}
5,000 dpm α /100cm ²	15,000 dpm α /100cm ²	1,000 dpm α /100cm ²

- a. As used in this table, dpm (disintegrations per minute) means the rate of emission by radioactive material as determined by correcting the counts per minute observed by an appropriate detector for background, efficiency, and geometric factors associated with the instrumentation.
 - b. Measurements of average contaminant should not be averaged over more than 1 square meter. For objects of less surface area, the average should be derived for each such object.
 - c. The maximum contamination level applies to an area of not more than 100cm².
 - d. The amount of removable radioactive material per 100cm² of surface area should be determined by wiping that area with dry filter or soft absorbent paper, applying moderate pressure, and assessing the amount of radioactive material on the wipe with an appropriate instrument of known efficiency. When removable contamination on objects of less surface area is determined, the pertinent levels should be reduced proportionally and the entire surface should be wiped.
8. C. What action is being taken to ensure the maintenance of the restricted use of this land until full reclaimed?

The IX unit site is Gulf owned land.