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40-8304
40-8562

UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D. C. 20555

JUL 23 1980

MEMORANDUM FOR: Ross A. Scarano, Chief
Uranium Recovery Licensing Branch

FROM: Ronald S. Kaufmann
Uranium Recovery Licensing Branch

SUBJECT: WYOMING MINERAL CORPORATION MEETING

Place and Date

Willste Building, Silver Spring, Maryland; June 16, 1980

Attendees

WMC	NRC
Eric Tiepel	Ross Scarano
Bill Ford	Jack Rothfleisch
	Terry Vandell
	Ron Kaufmann

Purpose

To discuss (1) the renewal of R&D license SUA-1204, (2) the possibility of WMC commencing recovery operations in unit 6 before the end of the ninety-day Show Cause Order period, and (3) the progress of the ninety-day period activities.

Discussion

R&D License Renewal Docket 40-8304

The renewal of the Wyoming Mineral Corporation (WMC) R&D in-situ project license (No. SUA-1204) which covers a portion of the Irigaray site and several areas not within the Irigaray site boundaries was discussed. Tiepel said that WMC was only interested in renewing the license for the 5I7 site. This site lies within the Irigaray boundary, just north of the current commercial-scale well fields. Because the commercial-scale mine operations will include the 5I7 field within about two (2) years, WMC wants to renew the R&D license so the R&D field will not have to be restored until after commercial-scale operations at 5I7 are completed. Scarano said that the NRC would be willing to renew the license for two or more years, but only for the Irigaray claims, specifically the 5I7 site and only if WMC maintains a groundwater monitoring program to ensure that all contamination remains at the site.

Amendment to the Show Cause Order and Commercial Scale License, Docket 40-8502

Tiepel asked about the possibility of WMC starting operations in mine unit 6 and increasing the plant flow rate before the NRC completes its evaluation of results of the ninety-day data collecting period. The data collecting period was specified in the NRC May 23, 1980, Show Cause Order. Scarano's response was that WMC could submit data related to mining of unit 6 before the end of the data collecting period; however the NRC would not approve the proposed action without a substantial assurance that lixiviant can be monitored and controlled.

Show Cause Order Program Docket 40-8502

WMC then outlined their ninety-day data collection program. The program, which is divided into five parts is aimed at evaluating site hydrogeology, eliminating future excursion problems, and cleaning up contamination in the coal zone in units 1 through 5. Data collection for the program is being conducted both by WMC and their contractor, D'Appolonia. Part one is a continuing monitoring program. Part two includes plugging known exploration wells, testing and repairing damaged operation wells, and cleaning up the coal zone contamination by groundwater sweep. Part three consists of an evaluation of the hydrogeology based on correlation of drill cores and geophysical data obtained from 3 wells that will be drilled. Part four involves the evaluation of the hydrogeology based on aquifer pumping tests and water quality data. Part five is a program to locate currently unidentified exploration wells. The enclosure to this memo, which WMC provided at this meeting, describes parts three, four, and five in more detail.

The present control program does not include cleaning up contamination in zones above the coal zone. Scarano said that if contamination in the upper zones can be cleaned up, the NRC would require it. It was suggested that WMC could begin cleanup of the upper sand layer, during the fourth part of their program, by using wells SSM 3 and 51 (known to be contaminated) as the pumping wells in the scheduled pump tests. Finally, the NRC requested that when WMC submits the data from the ninety-day period, WMC also submit their interpretation of the data.

Actions

The following additional actions will be taken by WMC in connection with the ninety-day collection program:

1. Aside from the proposed sampling program presented by WMC, wells SSM 3, SSM 6, SSM 11, RS 25, RS 54, and RS 60 will be analyzed for chloride, arsenic, selenium and ammonia.

2. WMC will provide the NRC with an outline of the quality assurance program used by their laboratory.

3. WMC will submit results of replicate water quality analyses to the NRC for samples from the wells listed in 1 above. Analysis of replicate samples will be performed by an EPA approved laboratory.

4. When supplying fence diagrams and geologic cross-sections, WMC will provide vertical scale elevations and groundwater level elevations.

5. WMC will submit pre-mining and current site water table maps and regional potentiometric maps which show locations of reliable control points. The WMC contractor shall interpret these maps.

6. WMC will sample offsite wells Jepson 2, Willow 2, Willow 3, and S.S.1 and analyze the samples for chloride, arsenic, selenium, ammonia, and other major parameters.

7. If the results of the ninety-day hydrologic investigation show that the upper or lower confining zones do not exist, are discontinuous, or are significantly leaky, WMC must, if well field operations are to continue, determine if well field pumping can adequately control and limit lixiviant movement into the upper or lower aquifers. If pumping will not adequately control lixiviant movement, WMC must present a scheme which demonstrates how groundwater in the upper and lower aquifers could be restored if contamination occurred.

8. WMC will provide a tabulation of all of the current monitor wells, types of analysis, frequency of analysis, dates of excursions, upper control limits, and a map showing all of the monitor well locations.

9. WMC will make sure the NRC received all deep monitor well data.

Ronald S. Kaufmann
Uranium Recovery Licensing Branch
Division of Waste Management

Enclosure:
As stated

cc: Eric Tiepel, WMC

ENCLOSURE
6/13/80

SUMMARY OF 90-DAY PROGRAM

A. Geology

Purpose: Define hydrostratigraphy and check for vertical confining layers.

1. Tasks

(a) Use electric logs and existing core data to construct geologic cross sections, structure maps, isopach maps, or three dimensional data displays

(b) Conduct a coring and geophysical logging program. At least three holes will be cored from the surface to the top of the upper Irigaray Sandstone. Geophysical logs will be run in each hole to collect additional geophysical data concerning the aquifer and to correlate the data with existing geophysical interpretations

At least the following logs will be run; caliper, gamma-gamma, neutron, gamma, and resistivity. Geophysical logs will also be run for other existing cased holes.

B. Hydrology

Purpose: Define hydrostratigraphy, confining layer, and provide more information for contaminate removal.

1. Tasks

(a) Construct chloride maps of upper strata

(b) Review and summarize previous hydrologic tests

(c) Conduct new pump tests

(1) One large pump test in production zone

(2) Two small pump tests in Unit 1 sand.

C. Exploration Holes

1. Tasks

(a) Locate all exploration holes and drilled but not completed holes.

(b) Designate exploration holes and drilled but not completed holes that have been plugged.