

WMUR:KBW
Docket No. 40-8768
SUA-1387
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SEP 7 1982

MEMORANDUM FOR: Docket File No. 40-8768

FROM: Kristin B. Westbrook, Project Manager
Operating Facility Section I
Uranium Recovery Licensing Branch
Division of Waste Management

SUBJECT: REVIEW OF KERR MCGEE'S Q-SAND PROJECT QUARTERLY
REPORT (JANUARY-MARCH 1982) SOURCE MATERIAL LICENSE
NO. SUA-1387

Program Status

Leaching operations continued on a routine operating basis at Kerr McGee's (KM's) Converse County, Wyoming, R&D ISL facility. To date there have been no events which necessitate a change of operations or a shutdown.

Water Quality and Lixiviant Migration Control

Biweekly monitor well data as well as quarterly full chemical analyses of all monitor wells is included as required by License Condition No. 43. KM reported that there were no excursions or pond leaks detected during the quarter. One ore zone monitor well sample, well QM-1 on 2/25/82, slightly exceeded the UCL values for bicarbonate and alkalinity. An excursion was not confirmed on the followup sample as neither indicator exceeded its UCL. Monitor well fluid level data indicates no problems with the wellfield balance.

Surface Radiological Environmental Monitoring - Table 5.2.1.01 (a) - EIA

License Condition No. 56 requires reporting of data from the operational surface radiological environmental monitoring program as shown on Table 5.2.1.01a of the NRC's "Environmental Impact Appraisal (EIA)" for radon, sediment/soil, direct gamma and surface water. No Table 5.2.1.01a operational data was contained in the 4th Quarter 1981 report. In an April 12, 1982 phone conversation between K. Westbrook of NRC and M. Freeman of KM regarding the missing Table 5.2.1.01a data, Mr. Freeman indicated that the required sampling had been performed and that due to the length of time for analyses this data would lag behind by a quarter. We expected to receive only 4th quarter 1981 data from Table 5.2.1.01a in the 1st quarter 1982 report. However, in the 1st quarter 1982 report partial data is presented from both the 4th quarter 1981 and the 1st quarter 1982.

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Radon

Radon-222 (grab or continuous) sampling is required from 3 locations monthly for grab samples or quarterly if a passive continuous detector is used. KM's 1st quarter 1982 report states that no data was collected during the 4th quarter of 1981 because of improper continuous detector assembly by the manufacturer. In a July 28, 1982 phone conversation between K. Westbrook of NRC and Mr. Freeman of KM it was further explained that when the detector was sent for analysis it was discovered that no thermoluminescent dosimeter (TLD) chips were in it. KM did submit monthly data on Rn-222 for the 1st quarter of 1982. The monthly levels for January, February, and March 1982 are consistent with pre-operational levels and below the 10 CFR 20 maximum permissible concentrations (MPCs) for release to the unrestricted areas.

Sediment/Soil

Table 5.2.1.01a requires sediment/soil grab sampling quarterly from 3 locations for Ra-226. KM's reported values are at or below the pre-operational values reported in their previous quarterly report (October-December, 1981). The date for the analysis is listed in their current report (January-March 1982) as 1/12/82, but M. Freeman informed me (in the same phone call referenced in the preceding paragraph) that this data lags behind a quarter and was actually sampled during the 4th quarter of 1981. No data for Ra-226 is reported for the Ross Road location which KM states was "inaccessible due to snow and ice buildup in area". This is not expected to be a problem except during hard winter freezes.

Direct Gamma

Direct gamma surveys are required at 4 locations quarterly including the same upwind and downwind locations used for air sampling and two locations at the evaporation ponds. KM included this data for the 4th quarter 1981 and the 1st quarter 1982. A comparison with pre-operational data averaging 2.8-3.5 µR/hr, shows an increase of approximately 1 µR/hr - 2µR/hr at each location. All the levels remain very low and are within expected natural background ranges. The 4th quarter 1981 data at the pregnant surge tank is missing. In an August 5, 1982 phone conversation between myself and M. Freeman of KM, I was told that KM failed to take a sample reading due to confusion during the beginning of operations. However, KM has submitted data for 1st quarter 1982 and will also sample this location in the future.

Water Sampling - Ra-226 & Th-230

Table 5.2.1.01a requires quarterly water grab samples. Two samples are required for Ra-226 and Th-230; one Ra-226 and Th-230 at the outfall of the final Bill Smith Mine treatment unit (this point corresponds to NPDES 40-8768/kbw/82/08/16/0

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gallons per minute from the Q Sand project to the mine water treatment system. All parameters for this flow are within the control limits.

Followup Actions Needed

- 1) Ensure sediment/soil grab sample results are received for the 1st quarter of 1982 as these sample analyses continue to lag behind a quarter.
- 2) Ensure that Th-230 sample results for NPDES Point No. 1 at the outfall of the final Bill Smith mine treatment unit are received for the 1st quarter of 1982 as this data continues to lag behind a quarter.
- 3) Ensure receipt of 2nd quarter 1982 data as required by Table 5.2.1.01a for radon, and direct gamma as this data is not expected to lag behind a quarter.
- 4) Ensure that for the 2nd quarter of 1982 one Ra-226 sample and one Th-230 sample is collected at the outfall of the final Bill Smith Mine treatment unit (NPDES Point 1) and that one Ra-226 sample and one Th-230 sample is collected from the Q-Sand discharge stream prior to mixture with diluent water (NPDES Point 3).
- 5) Respond to KM's letter of August 5, 1982 which requested clarification of water sampling requirements on Table 5.2.1.01 a
- 6) Notify KM by letter that they must clarify exactly what data required by Table 5.2.1.01 a will lag behind, what the lag time will be, the specific reason for the lag time, and any subsequent changes in the lag times.

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Kristin B. Westbrook, Project Manager
Operating Facility Section I
Uranium Recovery Licensing Branch
Division of Waste Management

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Approved by:

John J. Linehan, Section Leader
Operating Facilities Section I
Uranium Recovery Licensing Branch

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