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Docket No. 40-8768
04008768510E

MEMORANDUM FOR: Docket File No. 40-8768

FROM: Gary R. Konwinski, Project Manager
Licensing Branch 2
Uranium Recovery Field Office, RIV

SUBJECT: REVIEW OF SEQUOYAH FUELS CORPORATION'S FOURTH
QUARTER 1985 REPORT FOR THE Q AND O-SANDS R&D
IN SITU LEACH PROJECT

By letter dated February 10, 1986, Sequoyah Fuels Corporation (SFC) submitted their fourth quarter 1985 report in accordance with License Condition No. 52 of Source Material License SUA-1387. This memorandum presents the URFO staff review of this submittal.

Water Quality and Excursion Control

Leaching of the O-Sand continued throughout the quarter with 19.0 million gallons of fluid being recovered from the wellfield. Overrecovery during the period totaled 1.2 million gallons. This represents 6 percent overrecovery for the reporting period.

Restoration of the Q-Sand R&D project commenced in November 1984, in accordance with the approved restoration plan. Fluid production during the current reporting period totaled 12.1 million gallons. Overrecovery totaled 5.5 million gallons for the quarter.

Waste water produced from the O-sand and Q-sand projects and routed to the solar evaporation ponds totaled 62,732 gallons. The remainder of the waste water was treated and discharged in accordance with NPDES Permit No. WY 0022411.

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Bi-weekly and monthly monitor well sampling was performed, and analytical results reported, in accordance with License Condition No. 39. Concentrations which had stabilized in the previous report after showing a slight increase early in 1985, have remained stabilized throughout this reporting period. Other than these changes, there were no other trends or significant changes indicated by the water quality data. As in the previous four quarterly reports, water levels in O-Sand and M-Sand wells continued to increase during this period. This has been attributed to the flooding of the nearby Bill Smith Mine.

Radon Surveys

During the data collection period for the third quarter report, SFC's contract laboratory, which had routinely performed radon surveys discontinued this service and removed their equipment from three monitoring locations. In response to this, SFC contacted the NRC and indicated that data would not be available for this quarter. On November 21, 1985, Source Material License SUA-1387 was amended to suspend radon monitoring at all but the downwind location. The radon concentration at this site was $.71 \times E-9$ uCi/ml. This represents 24% of MPC for unrestricted areas and is consistent with previous readings. Future submittals will only address radon monitoring at a single location.

Direct Gamma Surveys

Direct gamma surveys were performed at the three radon monitoring stations and at a station located within close proximity to the solar evaporation ponds. Reported data ranged from a low of 11 uR/hr at the upwind station, to a high of 21 uR/hr at the surge tank station. The reported values are almost identical to those from the previous reporting period and consistent with past data. Potential exposures resulting from this gamma activity remain less than 10 CFR 20.101(a) and 105(a) limits.

Sediment/Soil and Water Surveys

Sediment samples were collected and analyzed for radium-226 in accordance with License Condition No. 59. All reported values were less than 5 pCi/gram above baseline.

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Water samples collected at the outfall of the final treatment unit were analyzed for radium-226 and thorium-230. The highest reported values were $9.0\text{E-}9$ uCi/ml radium and $5.0\text{E-}9$ uCi/ml thorium, both of which are less than 10% of MPC for unrestricted areas.

NPDES Permit No. WY-0022411

SFC submitted a copy of the NPDES quarterly report in accordance with License Condition No. 52. The report indicates an average flow from the O-Sand and Q-Sand project to the mine water treatment system of 52.1 gpm. All reported data were well within permitted concentration limits.

Conclusions

SFC has submitted their fourth quarter 1985 report in accordance with License Condition No. 52 of SUA-1387. The URFO staff review of this report did not identify any problems or significant trends. Reported data were within applicable limits. No further action is necessary at this time.

/s/

Gary R. Konwinski, Project Manager
Licensing Branch 2
Uranium Recovery Field Office, RIV

Approved by:

/s/

Harry J. Pettengill, Chief
Licensing Branch 2
Uranium Recovery Field Office, RIV

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