

40-8768/PRH/85/05/08/0

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MAY 21 1985

URFO:PRH
Docket No. 40-8768
04008768413E

MEMORANDUM FOR: Docket File No. 40-8768

FROM: Paul R. Hildenbrand, Project Manager
Licensing Branch 1
Uranium Recovery Field Office, Region IV

SUBJECT: REVIEW OF SEQUOYAH FUELS CORPORATION'S FOURTH
QUARTER 1984 REPORT FOR THE Q AND O-SANDS R&D
IN SITU LEACH PROJECT (OCTOBER THROUGH DECEMBER 1984)

By letter dated February 19, 1985, Sequoyah Fuels Corporation (SFC) submitted their fourth quarter 1984 report in accordance with License Condition No. 52 of Source and Byproduct Materials 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 204 million gallons of fluid being recovered from the wellfield. Over-recovery during the period totaled 0.47 million gallons and averaged 3.5 gpm. This represents a 2.45 percent over-recovery rate for the reporting period.

Restoration of the Q-Sand R&D project commenced in November 1984, in accordance with the approved restoration plan. Over-recovery from this project totaled 2.3 million gallons and averaged 17 gpm, representing a 18.1 percent over-recovery rate.

Waste water produced from these two projects and routed to the solar evaporation ponds totaled 249,129 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. A review of analytical data submitted with the report did not indicate significant increases or trends in any excursion parameter. Water levels in O and M-Sand wells increased during the period. This has been attributed to the flooding of the nearby Bill Smith Mine.

On December 26, 1984, SFC reported fluid in the west cell evaporation pond leak detection system. The water level of this cell subsequently was lowered and the liner repaired. Leak testing was performed in April 1985. A final report concerning this incident is forthcoming.

Radon Surveys

Radon-222 was monitored at three locations and reported in accordance with License Condition No. 20. The highest reported concentration was 1×10^{-9} uCi/ml at the surge tank location. This represents 33 percent of MPC for unrestricted areas and does not denote a significant increase from past data.

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 16 uR/hr at the upwind station, to a high of 75 uR/hr at the surge tank station. The reported values are consistent with past data, and 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.

Water samples collected at the outfall of the final treatment unit were analyzed for radium-226 and thorium-230. The highest reported values were 4×10^{-10} uCi/ml radium (less than 1% of MPC for unrestricted areas) and 1.5×10^{-9} uCi/ml thorium (1.3% of MPC for unrestricted areas).

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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 and O-Sands project to the mine water treatment system of 16.7 gpm. All reported data were well within permitted concentration limits.

Conclusions

SFC has submitted their fourth quarter 1984 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.

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Licensing Branch 1
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Original Signed By

Edward F. Hawkins

Approved by:

Edward F. Hawkins, Chief
Licensing Branch 1
Uranium Recovery Field Office, Region IV

Case Closed: 04008768413E

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