



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

Return to ORFO 467-55

40-8681

PDR

FEB 25 1983

URFO:DMG
Docket No. 40-8681
04008681361E

MEMORANDUM FOR: Docket File No. 40-8681

FROM: Daniel M. Gillen, Project Manager
Licensing Branch I
Uranium Recovery Field Office, RIV

SUBJECT: REVIEW OF 10 CFR 40.65 ENVIRONMENTAL MONITORING
REPORT FOR THE ENERGY FUELS NUCLEAR WHITE MESA MILL
(JULY-SEPTEMBER, 1982)

By letter dated November 24, 1982, Energy Fuels Nuclear (EFN) submitted an environmental monitoring report for the third quarter of 1982 in compliance with 10 CFR 40.65 and license requirements for implementation of 40 CFR 190. This memorandum presents the URFO staff review of the data with respect to past data and applicable standards. A review of this submittal with respect to the requirements of 40 CFR 190 can be found in a separate memorandum to the file from D. Sollenberger, dated January 28, 1983.

Air Particulate Sampling

Air particulate data for the quarter were reported for five locations: at the nearest residence, at the meteorological station (north of the mill), at two locations south and southeast of the tailings, and at Black Mesa, which represents background concentrations. All of the values were less than the most restrictive MPC limits for unrestricted areas, with all values of U-nat, Pb-210 and Ra-226 less than 1% of their MPC limits. Thorium-230 concentrations measured at the two locations near the tailings areas resulted in percentages of MPC limits much higher than any other air concentrations. However, these concentrations were still only 19.7% and 11.8% of the most restrictive MPC limits for unrestricted areas. These thorium-230 concentrations are basically unchanged from the last quarter's data, but represent a continuation of the noticeable increase from the previous data. Trends in the air particulate monitoring near the tailings should be looked at closely in the future environmental data reviews, and any significant upward trends approaching MPC limits will result in consideration of improvements to the interim tailings stabilization program. The air particulate data showed no other significant change from the data in the previous monitoring reports.

Stack Sampling

Stack sampling concentrations of U-nat, Th-230, Ra-226 and Pb-210 for the third quarter of 1982 were reported as required for the yellowcake dryer stack

B303180154 B30225
PDR ADOCK 04008681
C PDR

20879

DESIGNATED ORIGINAL

Certified By B. Fisher

FEB 25 1983

and the three sample plant stacks. The concentrations and resulting release rates are comparable to previously reported data.

Groundwater Sampling

The White Mesa Mill groundwater monitoring program was revised by Amendment No. 13 of SUA-1358 issued on June 28, 1982. The amendment set different parameter monitoring requirements for quarterly, semiannual and annual periods. This being the third quarter, the quarterly requirements were applicable, and in accordance with the licensed program, EFN monitored for pH, specific conductance, temperature, uranium and chloride. Samples were obtained from monitor wells 1-5 around the tailings cells and from the White Mesa Mill water well. Wells 6, 7, and 8 have been eliminated due to construction of Cell 3; wells 9 and 10 (shallow) were found to be dry; and new wells 11, 12 and 13 (established by Amendment No. 13) were just completed and have not yet been sampled.

All measured uranium concentrations are well below the MPC for unrestricted use and no parameters show significant variation from previously reported data.

Surface Water Sampling

The results of one surface water sample at Cottonwood Creek were reported for the quarter. All of the reported concentrations are less than 10% of the MPC's for unrestricted areas and show no significant change when compared to previous surface water data.

Radon Sampling

Radon gas sampling data were collected at the five air particulate monitoring locations. The highest reported value was only 6% of the MPC limit for unrestricted areas. The data shows no significant change from previous data.

Direct Radiation

Direct gamma radiation was monitored using environmental TLD's at the five air particulate monitoring locations. The highest reported value was 27.4 mrem/qtr measured at the location just south of the tailings disposal area. The direct radiation data were similar to previous quarters' data and were typical of background levels in the area.

Vegetation Sampling

Vegetation samples of crested wheatgrass were collected at three locations around the mill during this quarter. The samples were measured for radium-226

FEB 25 1983

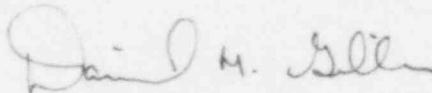
and lead-210 in accordance with the licensed program, and the results show no significant change from previous data.

As reported in the January 28, 1983 memorandum to the file from D. Sollenberger, the vegetation concentrations were used to calculate the 50-year dose commitment for ingestion of meat from cattle raised on the nearby vegetation. The computed doses to the whole body, bone and kidney were all much less than the 40 CFR Part 190 standard.

Conclusions

The licensee has submitted all the data in accordance with the requirements of Source Material License No. SUA-1358. The staff has concluded that no significant variations from previous environmental data are evident and that the reported data are within applicable limits.

This report completes EFN's 40 CFR 190 quarterly reporting requirements. The NRC staff has concluded (January 28, 1983 memorandum from D. Sollenberger to the file) that the evaluation of data for the entire reporting year indicates that the White Mesa Mill is in compliance with the 40 CFR Part 190 standard. EFN will now revert to the 10 CFR Part 40.65 requirement for submittal of environmental monitoring data within 60 days after January 1 and July 1 of each year.



Daniel M. Gillen, Project Manager
Licensing Branch I
Uranium Recovery Field Office, RIV

Approved By:



John J. Linehan, Branch Chief
Licensing Branch I
Uranium Recovery Field Office, RIV

Case Closed: 04008681361E