



October 11, 1990

**Certified Mail  
Return Receipt Requested**

Mr. Robert D. Martin  
Regional Administrator  
U.S. NUCLEAR REGULATORY COMMISSION  
Region IV  
611 Ryan Plaza Drive, Suite 1000  
Arlington, Texas 76011

RE: Denitration Subfloor Monitor Contamination  
10 CFR 20.405 Report

Dear Mr. Martin:

On September 14, 1990, Sequoyah Fuels Corporation (SFC) informed Region IV of the existence of a shallow well (or sump) adjacent to the Sequoyah Facility's Boildown area (the well is now termed a "denitration subfloor monitor"). The initial sample collected and analyzed on September 14 indicated a uranium concentration of 6.2 g/l.

During the NRC Exit Meeting of September 13, 1990, NRC Inspectors identified an apparent violation of 10 CFR 20.405(a)(1)(iii) involving the underground storage tank excavation north of the Solvent Extraction Building. It is SFC's interpretation that this situation is similar to that involving the apparent violation, e.g.: greater than 10 CFR 20, Appendix B, Table I concentrations in an uncontrolled location. Therefore, SFC is filing this report to comply with NRC's interpretation of 10 CFR 20.405(a)(1)(iii) as stated on September 13.

Should you have any questions on this matter, please contact me at 918/489-3207.

Best Regards,

Lee R. Lacey  
Vice President  
Regulatory Affairs

LRL:nv  
Enclosure

xc: Charles J. Haughney, NRC - NMSS  
Keith E. Asmussen, General Atomics

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SEQUOYAH FUELS CORPORATION

REPORT ON DENITRATION SUBFLOOR MONITOR CONTAMINATION

(10 CFR 20.405)

1. Estimate of each individual's exposure:

The SFC health physics staff has evaluated potential exposures of Operations personnel involved in sampling and pumping liquid from the denitration subfloor monitor. Based on the evaluation, personnel exposure to airborne radioactivity is considered minimal, and direct radiation exposure is considered to be negligible.

2. Levels of radiation and concentrations of radioactive material involved:

The liquid samples collected from the denitration subfloor monitor show the following concentrations for the period 09-14-90 through 10-08-90:

Average concentration: 10.3 g/l uranium  
Maximum concentration: 14.93 g/l uranium

As of October 8, 1990, approximately 197.3 liters of liquid has been removed from the denitration subfloor monitor. The liquid is being recycled through the process system.

3. The cause of exposure levels or concentrations:

The cause of the liquid contaminated in the denitration subfloor monitor is apparently due to past operations. Floor leaks in the Main Process Building during past years resulted in licensed material penetrating the floor and accumulating in soil beneath the floor. Migration of licensed material along utility pathways may have also contributed significantly. Ongoing investigatory work at the Main Process Building should provide more specific information in this regard.

4. Corrective steps taken or planned to prevent recurrence:

In compliance with the NRC's Order Modifying License (OML) issued on September 19, 1990, SFC shall:

- 1) Obtain sufficient information to ensure the integrity of the floor of the Main Process Building and repair the floor as necessary. Minimize process liquids in sumps and on floors. Stop all activities that intentionally place liquids in sumps and on floors until the integrity of sumps and floors has been ensured.

- 2) Characterize the quantity (volume and activity) and location of licensed material under the Main Process Building, and obtaining, as necessary, soil borings and corings and digging intercept trenches to determine the direction and extent of underground migration.
- 3) Identify all potential pathways for migration beneath and beyond the Main Process Building, considering the effect of building structures and utilities, the nature and extent of underground shale and other formations, and construction activities that could have affected the integrity of groundwater barriers.
- 4) Examine present and past monitoring well data for evidence of licensed material attributable to Main Process Building activities, determining whether the present and past monitoring well program has been adequate, in terms of well location, depth, and sampling, to identify migration from the Main Process Building.
- 5) Determine whether licensed material is being or has been released beyond the restricted area by migration from the Main Process Building.
- 6) Develop a plan to identify and characterize other locations on SFC property where past or present operations could have resulted in contaminating the environment.

SFC has hired an environmental consulting firm, Roberts/Schornick and Associates, Norman, Oklahoma, to assist in the geohydrological investigation and characterization. In some areas SFC is going beyond the strict scope of the OML. For example, SFC is expanding item 1) to floors and sumps in other areas of the facility beyond the Main Process Building. It is SFC's intent to comply with both the letter and the spirit of the OML.

Additionally, SFC has requested that its employees come forward with any knowledge they might have regarding environmental and/or contamination problems from past or present operations at the Sequoyah Facility. Such information will be integrated into the effort represented in item 6) of the OML.