

August 5, 1994

**Certified Mail
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Mr. Robert M. Bernero, Director
Office of Nuclear Material Safety
and Safeguards
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555

SUBJECT: License SUB-1010; Docket No. 40-8027
Revision of SFC's Contingency Plan

Dear Mr. Bernero:

The Sequoyah Fuels Corporation (SFC) Radiological Contingency Plan and Implementing Procedures were developed in accordance with the requirements of a U.S. Nuclear Regulatory Commission (NRC) Order to Modify License, dated February 11, 1981. The Order referred to guidance documents that established the threshold possession limits for requiring a radiological emergency plan. The guidance provided with the Order was later incorporated into 10 CFR 40.31 (j).

10 CFR 40.31 states, in part, that

"(j)(1) Each application to possess UF_6 in excess of 50 kilograms in a single container or 1000 kilograms total must contain either:

(i) an evaluation showing that the maximum intake of uranium by a member of the public due to a release would not exceed 2 milligrams;
or

(ii) an emergency plan for responding to the radiological hazards of an accidental release of source material and any associated chemical hazards directly incident thereto."

SFC developed and implemented its Radiological Contingency Plan (emergency plan) and Implementing Procedures shortly after receipt of the OML and has continued to maintain an emergency response capability since that time.

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As part of the initial cleanout program following shutdown of processing operations, SFC transferred all filled UF_6 cylinders offsite. The remaining cylinders (approximately 1300) have been inspected and reweighed as necessary to verify that they are "empty." ("Empty cylinders" are defined by SFC to contain a residual quantity of UF_6 of 50 pounds or less.) All UF_6 cylinders that did not meet this criteria have been washed to remove the residual UF_6 .

Since the above actions brought SFC's UF_6 possession under the first part of paragraph (j)(1) but not the second part (total UF_6 exceeds 1000 Kg), SFC commissioned Science Applications International Corporation (SAIC) to evaluate the potential intake of uranium by an offsite resident resulting from the release of UF_6 stored at the SFC site. A range of scenarios most likely to bound the range of credible accidents involving UF_6 cylinder breaches were analyzed. The results indicated that the maximum calculated intake would be delivered in an accident involving a cylinder immersed in a fire. The analysis found that, to preclude the possibility of an intake by an offsite resident of greater than 2 mg, the maximum heel that could remain in any one cylinder was 175 pounds (See Enclosure).

SAIC recommended that all heels be reduced to less than 175 pounds, that cylinders should not be stored within 60 feet from fuel storage tanks, and that individual tanks contain no more than 2600 gallons of fuel. These recommendations have been implemented by SFC.

Release of 175 pounds of UF_6 would also result in the generation of approximately 40 pounds of HF. The maximum offsite HF concentration for a release of this magnitude, assuming a 60 second release duration, is estimated to be 3 mg/m³, well below the IDLH (immediately dangerous to life and health) of 25 mg/m³ and the STEL (short term exposure limit) of 5 mg/m³.

Additionally, inventories of anhydrous hydrofluoric acid and nitric acid have been eliminated and the inventories of anhydrous ammonia, sulfuric acid and flammable fuels (propane, diesel, and gasoline) are being maintained at less than the threshold quantities requiring special controls and response plans under OSHA and the new EPA Clean Air Act. Furthermore, the probability of a significant fire occurring in the solvent extraction circuit has been eliminated by removing and disposing of the entire inventory of hexane and tributyl phosphate. These actions minimized the possibility of an employee or member of the public being injured by a chemical release or fire at the Facility.

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Over three-fourths of the drummed yellowcake (approximately 25,000 drums) has been removed from the site to a licensed facility. The remaining drums of yellowcake and miscellaneous uranium-bearing materials have been individually inspected and the poor quality drums have been overpacked, redrummed, or repaired to minimize the possibility of spills.

Finished DUF_4 product material has been removed to the customer's site. Approximately 800 drums of DUF_4 scrap, slag, and waste materials remain on site at this time. These drums have been inspected, repaired, overpacked as necessary, and moved inside the DUF_4 building for interim storage.

SFC believes that the UF_6 release evaluation demonstrates that the maintenance of an emergency plan is no longer required for its facility under 10 CFR 40.31. Despite this conclusion, however, SFC believes that an emergency response program should be continued at a level to assure adequate response effectiveness, as required by Chapter 8 of its license. During periods of time when licensed materials are being handled, an onsite response capability will be maintained. During the periods of time when licensed materials are not being handled, emergency response will be provided on a call-in basis.

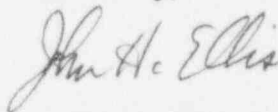
Effective August 22, 1994, SFC will cease all routine and planned activities involving handling of licensed materials on the backshifts, weekends and holidays. These activities will be limited to normal dayshift hours. Backshift staffing will be reduced to one security guard per shift. This security guard will be required to conduct routine inspections outside the restricted area perimeter. The guard will be trained to recognize potential problems that may originate from within the Restricted Area and will activate emergency response teams by telephone if necessary.

The SFC staff has been directed to make changes in the Contingency Plan and the Contingency Plan Implementing Procedures to implement the changes described above. These changes, which will be made effective August 22, 1994, will be provided to the NRC for review as soon as they have been reviewed and approved by SFC's Plant Review Committee.

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Should you have any questions concerning the revisions, please contact me at 918/489-3390.

Sincerely,



John H. Ellis
President

Enclosure

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