



UNITED STATES  
NUCLEAR REGULATORY COMMISSION  
WASHINGTON, D.C. 20555-0001

DOCKET NO: 40-8027  
LICENSE NO: SUB-1010  
LICENSEE: SEQUOYAH FUELS CORPORATION  
SUBJECT: SAFETY EVALUATION REPORT, LICENSE AMENDMENT  
APPLICATION DATED NOVEMBER 18, 1996, RE: REMOVAL OF  
SPECIAL PROCESS COMMITMENTS

1. INTRODUCTION

1.1 Background

By license amendment application dated November 18, 1996, Sequoyah Fuels Corporation (SFC) requested a change to Chapter 6 to the license for its Sequoyah facility near Gore, Oklahoma. This action, to remove the special process commitments, followed an inspection by Region IV on August 5, 8, and 9, 1996, (IR 40-8027/96-01) in which the inspector identified an unresolved item (URI 40-8027/9601-02) concerning the status of the fire protection program.

1.2 Purpose and Need for Proposed Action

The purpose of the action is to remove those special operations commitments in Chapter 6 of the license. This action is being taken because the facility is prohibited from operation so that the commitments are no longer required.

1.3 Description of Proposed Action

The proposed action is to remove all special operations commitments in Chapter 6 of the license except Condition 9, that valve protectors shall be installed on UF<sub>6</sub> cylinders prior to shipping. The licensee proposes that Condition 9 be added to the NRC license (NRC Form 374).

2. FACILITY DESCRIPTION/OPERATING HISTORY

2.1 Site Locale and Physical Description

The SFC site is located in western Sequoyah County. It is approximately 40 km (25 mi) southwest of Gore, Oklahoma on a hillside overlooking the confluence of the

Illinois and Arkansas Rivers. U.S 64 bounds the site on the north, Oklahoma 10 on the east, and I-40 on the south. The industrial area occupies approximately 32 ha (80 a) and comprises several process buildings, several ponds, and an open area formerly used to store drums of uranium oxide. South and west of the process area are spreading areas for the treated raffinate (fertilizer program), which is not part of the licensed activities.

## 2.2 Description of Facilities

The facility includes the main process and solvent extraction buildings; the depleted uranium process building; two 10 CFR 20.304 disposal areas; several process-chemical disposal pits, three ponds of raffinate sludge; several former fertilizer ponds; and a former storm water collection basin. This license amendment request addresses activities in and around the process buildings.

## 2.3 Chronological Description of Facility Development and Operations

Kerr-McGee began conversion of uranium oxide to uranium hexafluoride in 1970; in 1987, conversion of depleted uranium hexafluoride to depleted uranium tetrafluoride began. In 1988, General Atomics, of San Diego, California, purchased all stock in SFC from Kerr-McGee. In November 1992, following an uncontrolled release of NOX, the main process was permanently shut down. In July 1993, the depleted uranium process was also shut down and the licensee is decommissioning the site, in accordance with 10 CFR 40.42. In September 1993, NRC issued a letter to SFC prohibiting all activities except those related to decommissioning.

# 3. RADIOLOGICAL STATUS OF THE FACILITY

## 3.1 Radiological Status of all Structures and Systems

The internals of all process systems contain some residual uranium; there is surface contamination on interior surfaces of the buildings.

## 3.2 Radiological Status of Surface and Subsurface Soils

Soils on the site are contaminated with uranium and some daughter products. The concentrations range from a few to a few hundred pCi/g, and to depths as great as five meters (16 feet).

### 3.3 Radiological Status of Ground and Surface Water

The Arkansas River, about one kilometer (0.5 mi) west of the site, contains uranium and other contaminants, mostly from upstream pollution. The ground water under the site contains uranium concentrations as great as 45,000 pCi/l in the vicinity of the main process building; there are also nitrate plumes from the former fertilizer ponds of greater than 50  $\mu\text{g/l}$ , moving generally southwest.

## 4. EVALUATIONS

Conditions 1-8 and 10-12 of Chapter 6 specify support system operation required for various portion of the operation of the main process. By letter from R.M. Bernero, NRC, to J.H. Ellis, SFC, dated September 1, 1993, SFC was prohibited from continued operation. Therefore, support system operation is no longer required, and removal of these conditions is appropriate.

Condition 9 of Chapter 6 specifies that valve protectors be installed on all  $\text{UF}_6$  cylinders prior to shipment. Because there is still a small volume of  $\text{UF}_6$  (less than 50 kg (110 lbs)) in most cylinders, this condition is still appropriate and should be incorporated in the license.

Conditions 13 and 17 of Chapter 6 identify procedure review and operator training requirements for facility operation. Because operation is prohibited and because requirements for procedure review and training are stated in Sections 2.5-2.7 of the license application, these conditions are no longer required, and removal is appropriate.

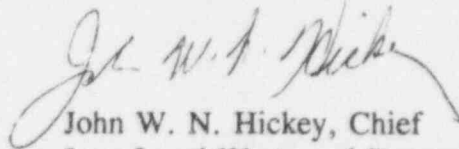
Conditions 14-16 specify limitations on filling  $\text{UF}_6$  cylinders. Because this activity is prohibited, these conditions are no longer required, and removal is appropriate.

Conditions 18-26, and 28 specify design, construction and operational requirements on the depleted uranium processing facility. Because operation of this facility is prohibited, these conditions are no longer required, and removal is appropriate.

Condition 27 of Chapter 6 specifies that any  $\text{UF}_4$  remaining on the site, that is not suitable for sale or recycle shall be shipped to an authorized facility for disposal. Currently, there are approximately 455,000 kg (500 tons) of this material at SFC. Therefore, this condition is still appropriate and should be incorporated in the license.

## 5. CONCLUSIONS

The staff has reviewed SFC's proposed license amendment to remove the special process conditions of Chapter 6 from the license. The staff concludes which it is appropriate to remove 26 of the 28 conditions. Condition 9, which relates to protectors on  $UF_6$  cylinders during shipping, and Condition 27, which relates to disposal of remaining  $UF_4$ , should be incorporated in the license.



John W. N. Hickey, Chief  
Low-Level Waste and Decommissioning  
Projects Branch  
Division of Waste Management  
Office of Nuclear Material Safety  
and Safeguards

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**ENCLOSURE 3**