

**DECOMMISSIONING
FUNDING PLAN**

FOR

SEQUOYAH FACILITY

SEQUOYAH FUELS CORPORATION

GORE, OKLAHOMA

DOCKET NO. 40-8027

SOURCE MATERIAL LICENSE NO. SUB-1010

AUGUST 29, 1990

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1.0 Introduction

In accordance with the requirements of 10 CFR 40.36(d), Sequoyah Fuels Corporation (SFC) is submitting this Decommissioning Funding Plan with its application for renewal of License SUB-1010. This plan includes a cost estimate for decommissioning and a description of the method of assuring funds for decommissioning, including means of adjusting the cost estimate and funding level periodically over the life of the Sequoyah Facility. Certain portions of this plan involve sensitive financial and business planning information. These portions have been designated proprietary information and are submitted separately under the provisions of 10 CFR 2.790, along with the required affidavit. Additionally, a "Decommissioning Program Discussion" is submitted with the application for renewal of License SUB-1010. This discussion explains certain aspects of SFC's decommissioning program as affected by the current regulatory environment.

2.0 Cost Estimate for Decommissioning

2.1 Decommissioning Costs

SFC estimates the total costs to decommission the Sequoyah Facility, based upon the rules and regulations currently in place and SFC's expectations as to future regulatory requirements, to be \$5,374,790. This estimate assumes a fluorine gas sales business and other businesses will continue beyond the active life of licensed activities which will absorb a major portion of the indirect costs and administrative burden.

The estimate includes:

- Expenditures for the Planning and Preparation Phase of the decommissioning program. Preparation of a final Decommissioning Plan will be processed by in-house staff. Development of work plans will be on-going as the decommissioning activity progresses and will be developed by in-house staff. Special equipment required is all off-the-shelf type equipment and no major lead time for custom fabrication is anticipated. Decontamination activities will be performed by a reduced work force selected from the total facility work force at the time of licensed activity shut down. Site characterization costs are included in the application to dispose of materials onsite.
- A detailed listing of tasks to be completed in twelve major areas of the facility has been developed, including equipment removal; ceiling, floor and wall cleaning; drain removal; and ventilation system removal. Numbers of

personnel required to perform each task safely and efficiently have been assigned and an estimated time to complete each task assessed. These man-hour summaries were then consolidated and costed to determine the manpower costs and total time to complete the activity.

- A listing of support personnel required (i.e., security, health physics, accounting, payroll, etc.) was then assembled and a cost estimate made on each position for the duration of time required. It was assumed a period of 16 months beyond the completion of decontamination would be required for a cadre of management and health physics personnel to coordinate the final survey verification procedure in order to close out the license.
- Approximately 1000 drums (7,500 ft³) of low-level radioactive wastes will be generated during decommissioning activities. These wastes will consist primarily of compacted burnable wastes such as plastic, gloves, clothing, etc.
- Restoration of the facility grounds, including onsite disposal of contaminated soil, is intended to be accomplished prior to decommissioning. Thus, costs for restoring the facility grounds are included in the costs of onsite disposal discussed above.
- Costs for final radiation surveys are included in staff support requirements.
- Long-term surveillance requirements are unknown at this time.
- Additional costs included are taxes on property, etc., utilities to complete the decontamination/close-out activities and insurance.

2.2 Tax Code

Estimated expenses for decommissioning are not deductible for tax purposes under the IRS economic performance rules Code Section 461. Under the economic performance rule, a deduction for the cost of services to be performed by the taxpayer is not permitted until the taxpayer performs the services.

The payment for decommissioning expenses will result in a deduction when decommissioning is performed which will have the effect of a positive cash flow to SFC for the tax benefit of the expenditure at the time of decommissioning. The combined Federal and State return, based on current tax rates, would be 39% of the total expenditure. This tax credit would be realized as credit against revenue, or rebated if there were not any revenue. Thus,

reducing the decommissioning cost estimate to $\$5,374,790 \times 0.61 = \underline{\$3,278,622}$.

2.3 Uranium Recovery

Given the nature of the continuous bulk process employed to purify uranium and produce UF_6 in a closed system, significant quantities of uranium will be cleaned out of the equipment during dismantlement and decontamination operations. Since any uranium removed from the process will be in a purified form (i.e., having been purified in the head-in solvent extraction process) it is reasonable to assume the recovered uranium will have value.

Using experiences over the past twenty years of maintenance and replacements of equipment and engineering hold-up calculations, it has been determined that, after operating the equipment to the lowest point of throughput, a total of 52,523 pounds of uranium as UF_4 , UO_3 , UNH, etc., will remain in the equipment. This quantity of uranium is equivalent to 64,000 pounds of U_3O_8 which has a commercial value of \$768,000 in today's market. This material would be recovered, collected and sold - not only for the revenue but also because the alternative would be expensive commercial low-level radioactive disposal packaging, transportation and disposal costs. The value of recovered uranium further reduces the decommissioning cost estimate to a net value of $\$3,278,622 - 768,000 = \underline{\$2,510,622}$.

2.4 Credits to Offset Decommissioning Costs

Although SFC does not factor them into the net decommissioning cost estimate, a number of additional credits will be available to offset decommissioning costs. These credits are enumerated herein to provide NRC additional assurance that ample funds will be available to complete the decommissioning of the Sequoyah Facility.

The Sequoyah Facility and other uranium hexafluoride conversion operations are unique in terms of non-nuclear related business opportunities which result from or can be integrated with licensed operations. Some of these business activities will continue to operate or be sold as a going concern after the useful life of the licensed activity has been terminated.

Additionally, given the nature of the continuous bulk process employed and the types of metals required to operate the process in a highly corrosive environment, a significant amount of salvage value, in terms of resale of valuable decontaminated equipment and metal, will be realized during decommissioning activities.

These dynamics provide assurances that, during decommissioning activities, ongoing cash flow to support the decontamination effort will be available and the resale of salvaged metals and equipment will provide funds to replace those expenditures in order to maintain the viability of those business segments which are not part of the licensed activity.

In a short-term scenario, where an unforeseen event may cause decommissioning of licensed activities prior to the end of its useful life, SFC has sufficient pre-produced inventory to pay for decommissioning. This inventory represents contracted sales where the costs have been expensed but the revenue from those sales will not be realized until the product is delivered to the customer's account at the enrichment facility. Given the nature of the continuous process, the nature of the industry to deliver yellowcake well in advance of enrichment requirements, and the obvious economic advantages of low unit costs, it has been and will continue to be to SFC's economic advantage to continue to maintain a high level of pre-produced inventory.

2.4.1 Business Opportunities (Unrecorded Net Worth)

This section is considered proprietary information and has been submitted separately under the provisions of 10 CFR 2.790.

2.4.2 Fertilizer

A portion of the nitric acid used to dissolve uranium concentrates for purification is ultimately recovered as a pure ammonium nitrate solution and used as fertilizer. Currently, this fertilizer is used to fertilize over 10,000 acres of Sequoyah Fuels International Corporation-owned pasture land in support of its ranching operations. Plans are underway to secure approval to sell this fertilizer commercially and any inventory remaining on-site at the time of decommissioning will be sold to offset the cost of decommissioning.

The present inventory of 53 million gallons, for example, contains approximately \$2,005,514 worth of ammonium nitrate fertilizer. It is anticipated that at any given time a minimum of 30 million gallons will be in inventory and revenues received at the time of final sale can be used to offset decommissioning costs. An off-setting credit of \$1.16 million would result from this activity.

2.4.3 Land

SFC's parent, Sequoyah Fuels International Corporation, currently owns over 10,000 acres of property used primarily to

efficiently utilize the fertilizer by-product produced during licensed activities. Termination of licensed activities would result in the ability to sell a significant portion of the improved 10,000 acres, and even at a low estimate of \$500/acre, the sale would generate over \$5,000,000 which could be used to fund the \$2,510,622 required to complete decommissioning activities.

2.4.4 Salvage and Warehouse Stock

Since much of the facility process equipment is constructed of stainless steel, monel, inconel, copper, etc., their worth as either decontaminated used equipment or as scrap metal is significant although unquantifiable at this time. Other salvageable materials include maintenance and shop tools and equipment, transportation vehicles and haulage equipment, etc. It is conceivable, based on experiences at other facilities which have been decommissioned, that a rough estimate value of \$2,000,000 to \$3,000,000 could be returned from sales of these materials.

Additionally, a considerable amount of cash could be generated from the sale of existing warehouse stock at the time facility operations were discontinued. The current value of warehouse stock at the Sequoyah Facility is approximately \$3,000,000. Even if only one-third of the purchase price is recovered, this would provide another \$1,000,000 that could be applied to decommissioning costs.

3.0 Financial Assurance for Decommissioning

3.1 Decommissioning Funding

SFC will provide financial assurance for decommissioning Sequoyah Facility in the form of an irrevocable standby letter of credit which meets the criteria in 10 CFR 40.36(e), in the amount of \$2,510,622. SFC intends to execute the letter of credit as soon as practicable following NRC's acceptance or approval of this Decommissioning Funding Plan. In the interim, financial assurance for decommissioning will continue to be provided by the certification of financial assurance in the amount of \$750,000, which was transmitted to NRC on July 26, 1990, in accordance with 10 CFR 40.36(c)(2).

3.2 Periodic Adjustments

SFC will adjust the decommissioning cost estimate and associated funding level at the time of each license renewal, or when the amounts/types of licensed material at the facility

change at a level that would have a substantial effect on decommissioning. Adjustments will include consideration of such factors as inflation, changes in facility conditions, and changes in expected decommissioning procedures.