

December 21, 1989

**Certified Mail
Return Receipt Requested**

Mr. Glen Sjoblom, Acting Chief
Fuel Cycle Safety Branch
Division of Industrial and Medical Nuclear Safety
Office of Nuclear Material Safety and Safeguards
U.S. NUCLEAR REGULATORY COMMISSION
Washington, D.C. 20555

RE: License SUB-1010; Docket No. 40-8027

Dear Mr. Sjoblom:

Log	Jan-90-2
Remitter	
Check No.	000 80465
Amount	\$150
Fee Category	2. Fund
Type of Fee	
Doc. Check Ser.	1/8/90
is Completed	1/8/90

This letter is to inform you of an anticipated corporate reorganization relating to Sequoyah Fuels Corporation, the licensee holding License SUB-1010 and to request a transfer of that license to a new corporate entity, New Sequoyah Fuels Corporation ("NSFC"). At the present time, the licensee, Sequoyah Fuels Corporation ("SFC") is a wholly-owned subsidiary of Sequoyah Holding Corporation, which itself is a wholly-owned subsidiary of General Atomics ("GA"). The effect of the planned reorganization will be a name change of the operating facility: the operating assets of SFC which relate to licensed activities will transferred to the new company, NSFC, which will be a direct, wholly-owned subsidiary of SFC. Thus, following the reorganization (a) the license will be held by NSFC; (b) NSFC will be a wholly-owned subsidiary of the current licensee, SFC; (c) SFC will continue to be a wholly-owned subsidiary of Sequoyah Holding Corporation; and (d) Sequoyah Holding Corporation will continue to be a wholly-owned subsidiary of GA. In accordance with 10 CFR Part 170.31, enclosed is Check No. 080465, dated 12/21/89, in the amount of \$150.00 as SFC's application fee for this request.

NSFC will acquire all of the operating assets of SFC that are related to licensed activities. The only assets of SFC that will not be transferred to NSFC are the ranches currently owned by SFC, the contracts described below and a portion of existing inventory that will be used in connection with those

9001120224 891221
PDR ADOCK 04008027
C PNU

DF04
26230

Mr. Glen Sjoblom
December 21, 1989
Page Two

contracts. The reserve accounts will be transferred from SFC to NSFC. There will be no change in the operation of the Sequoyah Facility: all of the current operating and management personnel of SFC will become operating and management personnel of NSFC. The officers and directors of SFC and NSFC will be the same as those that are currently officers and directors of SFC. The oversight responsibilities and obligations of personnel of GA as undertaken in the license will be unchanged.

A number of the contracts that SFC currently has with utility customers and other domestic and foreign corporate customers require customer consent to assignment by SFC to a subsidiary or affiliate. Many of these contracts, therefore, will not be assigned by SFC to NSFC, but will be performed under a subcontract with NSFC. SFC also will continue as the named party on the natural UF₆ holding agreement with the Department of Energy ("DOE"). That agreement allows SFC to ship UF₆ into and hold UF₆ at DOE enrichment facilities. Deliveries of UF₆ to SFC's customers are then simply made by means of a book transfer from SFC's holding account to the customer's DOE enrichment feed account.

Holding will continue to submit copies of audited consolidated financial statements for itself, SFC and NSFC within 90 days of the close of each fiscal year (currently the companies are on a fiscal year ending December 31). Projected income statements and balance sheets for SFC as of November 30, 1989 and December 31, 1989 have been submitted under separate cover to prevent public disclosure of proprietary information under the provisions of 10 CFR 2.790.

Attached to this letter are revised pages of the license to reflect the new corporate structure.

SEQUOYAH FUELS CORPORATION

By Scott P. Knight
Scott P. Knight
Vice President

DOCKET NO. 40-8027

CONTROL NO. 26230

DATE OF DOC. Dec. 21, 1989

DATE RCVD. Dec. 22, 1989

FCUF

PDR

FCAF

LPDR

I & E REF.

SAFEGUARDS

FCTC

OTHER

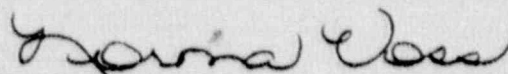
DATE 1/4/90

INITIAL SAC

Mr. Glen Sjoblom
December 21, 1989
Page Three

STATE OF OKLAHOMA)
)
COUNTY OF SEQUOYAH)

On this 21st day of December, 1989, before me,
Norma Voss, a Notary Public for the State of
Oklahoma, personally appeared Scott P. Knight who being duly
sworn, stated that he is the Vice President Sequoyah Fuels
Corporation, that he has read the foregoing letter to Leland
C. Rouse and that the information and statements therein are
true and correct to the best of his knowledge and belief.



Notary Public

(SEAL)

My commission expires:

12-1-92

LIST OF FIGURES

FIGURE		PAGE
2-1	Organization Chart for New Sequoyah Fuels Corporation	I. 2-7
3-1	Sequoyah Facility General Arrangement Fenced Area	I. 3-13
3-2	Sequoyah Facility Sludge Storage	I. 3-14
5-1	Sequoyah Facility General Arrangement Fenced Area With Elevations	I. 5-14
9-1	Location Map	II. 9-5
9-2	Sequoyah Facility Aerial Photo	II. 9-6
9-3	Sequoyah Facility Plot Plan	II. 9-7
10-1	Raffinate Sludge Concentration	II. 10-12
10-2	Aerial Photograph - Sequoyah Facility and Surrounding Area	II. 10-18
11-1	Organization Chart for New Sequoyah Fuels Corporation	II. 11-2
13-1	Area Designations and Number of Air Samples in Each Location	II. 13-17
13-1A	Specific Air Sample Locations	II. 13-18
14-1	Monitoring Locations	II. 14-62
16-1A	Dry Uranium Concentrate Sampling	II. 16-2A
16-1B	Uranium Slurry Receiving and Sampling	II. 16-2B
16-1C	Digestion	II. 16-2C
16-1D	Solvent Extraction	II. 16-2D
16-1E	Fertilizer Production	II. 16-2E
16-1F	Concentration	II. 16-2F
16-1G	Denitration	II. 16-2G
16-1H	Reduction	II. 16-2H
16-1I	Hydrofluorination	II. 16-2I

CHAPTER 1. STANDARD CONDITIONS AND SPECIAL AUTHORIZATIONS

1.1 Name

New Sequoyah Fuels Corporation is a wholly-owned subsidiary of Sequoyah Fuels Corporation, which is a wholly-owned subsidiary of Sequoyah Holding Corporation, which is a wholly-owned subsidiary of General Atomics, which is a wholly-owned subsidiary of General Atomic Technologies Corporation. General Atomic Technologies Corporation is controlled by James N. Blue, a United States citizen. The Principal office of New Sequoyah Fuels Corporation is located at Sequoyah Facility, I-40 and Highway 10, Gore, Oklahoma 74435.

1.2 Location

The New Sequoyah Fuels Corporation, Sequoyah Facility is located 2-1/2 miles southeast of Gore, Oklahoma, on State Highway 10 south of U.S. Highway 64, and north of Interstate Highway 40. This location is approximately 150 miles east of Oklahoma City, Oklahoma and 40 miles west of Fort Smith, Arkansas.

1.3 License Number

The Sequoyah Facility is currently operating under Nuclear Regulatory Commission Source Material License Number SUB-1010. The initial license was granted on February 20, 1970 and was last renewed on September 20, 1985.

1.4 Possession Limits

The maximum amount of Natural or Depleted Uranium that the Licensee is allowed to possess at any one time shall be 20 million MTU.

1.5 Location Where Material Will be Used

Licensed material shall be used at the New Sequoyah Fuels Corporation Sequoyah Facility.

1.6 Definitions

AHF - Anhydrous Hydrogen Fluoride

Combination stream - the liquid effluent from the facility which is made up of several liquid discharges.

CWE - cooling water system moved by pressure head at Lake Tenkiller.

License No. SUB-1010
Amend. No. Revision

Docket No. 40-8027
Date 12/21/89

Page
I. 1-1

7. Monitoring wells on the designated raffinate fertilizer application test sites shall be sampled at the beginning of each fertilizer application season, every other month during fertilizer application, and one month after the last fertilizer application. Samples shall be analyzed individually for nitrates, gross alpha, and all elements whose concentration in the applied raffinate exceeds the concentrations stated for short-term use of irrigation waters. If the gross alpha concentration in a monitoring well exceeds 15 pCi/liter, an analysis for uranium and radium-226 shall be conducted. If the nitrate concentration in a monitoring well exceeds 10mg/liter or it gross alpha exceeds 15 pCi/liter, New Sequoyah Fuels Corporation shall take appropriate investigation and corrective action.

8. Surface water samples shall be collected from designated ponds (ponds P-1 through P-3 and the retention pond on the 270 acre plot) at the beginning of each fertilizer application season, every other month during fertilizer application, and one month after the last fertilizer application. Samples shall be individually analyzed for any element whose concentration in the raffinate fertilizer exceeds Livestock Enterprize Standards, Appendix II, as specified in Water Quality Criteria, 1972, and gross alpha. If the gross alpha exceeds 15 pCi/liter, an analysis analysis for uranium and radium-226 shall be made.

9. If New Sequoyah Fuels Corporation decides to discontinue the use of any designated test site as part of the treated raffinate fertilizer application area, the Division of Fuel Cycle and Material Safety, U.S. Nuclear Regulatory Commission must be informed promptly so alternate areas for long-term testing can be identified. Should more than 30% of a test site be eliminated from application for any reason, an alternate test site will be proposed.

License, No. SUB-1010
Amend. No. Revision

Docket No. 40-8027
Date 12/21/89

Page
I. 1-6

10. Forage grown on land fertilized with treated raffinate may be released providing that the heavy metal content of forage for animals does not exceed the maximum tolerable dietary level given in the National Academy Sciences report, "Mineral Tolerance of Domestic Animals," Washington, D.C., 1980, as shown in Appendix III on Page I.1-7.6. and that the forage contains no more than 1.0 pCi/gm Ra-226, 0.25 pCi/gm Th-230 or 2.5 ugm/gm U measured on a dry basis. Analysis shall be reported on a dry basis, with the moisture content of the vegetation also reported.
11. Other crops grown on land fertilized with treated raffinate may be used or sold without restriction if the use or sale is approved by a qualified independent agronomist.
12. New Sequoyah Fuels Corporation shall continue to obtain input and recommendations for the overall treated raffinate fertilizer use program from Oklahoma state Extension Agronomists.
13. A completion report for the previous calendar year's fertilizer program shall be submitted to NRC by May 1 of each year. The report shall contain a description of the program, the analytical results obtained, an analysis of the results, a discussion of any unusual or unexpected results and a summary of the projected future program.
14. New Sequoyah Fuels Corporation is responsible for all tests, controls, arrangements and reports required under Conditions 1-13 above regardless of the ownership of the fertilized land or crops.

License No. SUB-1010
Amend. No. Revision

Docket No. 40-8027
Date 12/21/89

Page
I. 1-7

CHAPTER 2. GENERAL ORGANIZATIONAL AND ADMINISTRATIVE REQUIREMENTS

2.1 Licensee's Policy

The Corporate Manager, Health Physics shall be responsible for establishing corporate radiation health and safety standards and procedures, and coordinating them with managers and executives directly affected. Corporate radiation health and safety standards and procedures shall require the approval of the Corporate Vice President, Human Resources.

The Corporate Manager, Health Physics shall publish and maintain the Corporate Radiation Health and Safety Manual. This manual shall contain corporate radiation health and safety standards and procedures, and radiation exposure limits for all employees and other persons (e.g., visitors, contractors, etc.) potentially subject to such exposure from company operations.

The Corporate Manager, Licensing, Safety and Nuclear Compliance (LS & NC) is functionally responsible for obtaining and maintaining federal and state licenses and permits required for possessing and processing radioactive materials for all operational units of General Atomics with the exception of New Sequoyah Fuels Corporation (NSFC). The Corporate Manager, LS & NC may provide counsel to NSFC in matters relating to licensing and permits.

The Vice President, Administration, NSFC, shall be primary contact with the Nuclear Regulatory Commission and other federal and state agencies.

All significant actions with regulatory agencies shall be subject to the approval of the Vice President, Administration, or the President, NSFC.

The Manager, Health and Safety (RSO) shall be responsible for the facility's radiation health and safety activities which includes:

- Initiating and directing programs to ensure compliance with all applicable provisions of corporate radiation health and safety standards and procedures, federal and state regulations and license conditions,
- Establishing and maintaining systems for recording facility radiation survey and exposure data,
- Coordinating on-site contacts with representatives of federal and state agencies responsible for regulating radioactive materials and advising the Vice President, Administration and the Corporate Manager, License, Safety, and Nuclear Compliance, of the results of the on-site contacts.

- Identifying and proposing new and revised radiation health and safety standards and procedures as needed, and
- Notifying the Corporate Manager, Health Physics of radiation related incidents or emergency situations involving radioactive materials.

The Corporate Manager, Health Physics shall be responsible for ensuring the qualifications of the Radiation Safety Officer to perform these duties and shall assist and advise him on matters involving radiation exposure and related subjects.

The Corporate Manager, Licensing, Safety, and Nuclear Compliance shall review the radiation health and safety practices of New Sequoyah Fuels Corporation. This review is to ensure compliance with the current company radiation health and safety standards and procedures, applicable federal and state regulations, and license conditions. The Corporate Manager, Licensing, Safety, and Nuclear Compliance, shall document and submit the results of each review and any recommendations for new or revised standards and procedures to the Vice President, Operations and the Vice President, Administration with copies to the Corporate Manager, Health Physics and the Corporate Vice President, Human Resources. Information copies shall be furnished to other corporate executives as appropriate.

In the event of a radiation-related incident or emergency situation, the Corporate Manager, Health Physics, the Corporate Manager, Industrial Safety, and the Radiation Safety Officer shall conduct or have conducted a thorough investigation and prepare a special incident report which will be distributed to the appropriate individuals.

2.2 Organizational Responsibilities and Authority

The organization for New Sequoyah Fuels Corporation and its corporate oversight is described below and depicted in Figure 2-1.

The President, New Sequoyah Fuels Corporation shall have overall responsibility for the safe operation of the Sequoyah Facility. Additional responsibility has been assigned to the Vice President, Administration, the Vice President, Operations, the Vice President, Business Development and the Controller for various functions as described in this license. These individuals report directly to the President, New Sequoyah Fuels Corporation.

The Corporate Manager, Licensing, Safety, and Nuclear Compliance who reports to the Corporate Vice President, Human Resources, shall be responsible for directing quarterly audits at the Sequoyah Facility to evaluate and verify compliance with the applicable federal and state regulations, NRC license conditions, permits, corporate policies, adherence to facility procedures, and

Contingency Plan and Implementing Procedures and operational matters. The results of each review and any recommendations for new or revised standards and procedures shall be submitted to the Vice President, Administration, with copies to the Vice President, Operations, and the President, New Sequoyah Fuels Corporation, the Corporate Manager, Health Physics and the Corporate Vice President, Human Resources.

The Corporate Manager, Health Physics who reports to the Corporate Manager, Licensing, Safety, and Nuclear Compliance, shall be responsible for the preparation of detailed corporate standards dealing with the control of radiation, spread of radioactive contamination and the monitoring of personnel and nuclear facilities. He is responsible for auditing procedures and plant operations in the health physics area. He reports his findings and recommendations for program improvements to the Corporate Manager, Licensing, Safety, and Nuclear Compliance and the ALARA Committee.

The Vice President, Administration shall be responsible for all technical services activities. He specifically oversees the health and safety programs, the nuclear licensing and environmental compliance programs, the facility laboratory, the facility training programs, the Quality Assurance Program and all necessary administrative services to support the safe and efficient operation of the facility. He specifically approves all operating procedures, plant modifications and processes, equipment criteria and other general administrative matters. He shall also be responsible for obtaining and maintaining federal and state licenses and permits for the general liaison with the regulatory agencies of the federal, state and local governments and for coordinating with operating facility managers in matters concerning health, safety and environmental requirements. He reports to the President, New Sequoyah Fuels Corporation.

The Manager, Nuclear Licensing and Environmental Compliance who reports to the Vice President, Administration shall be responsible for maintaining federal and state licenses and permits. He advises facility managers in matters concerning licenses, permits, and nuclear and environmental regulatory requirements. He prepares all correspondence to federal and state agencies and ensures that the proper management review is conducted on all correspondence before it is submitted to the respective agency. He shall be responsible for developing programs, procedures and guidance related to environmental monitoring and compliance.

The Senior Environmental Engineer, who reports to the Manager, Nuclear Licensing and Environmental Compliance shall be responsible for developing and implementing programs and procedures to comply with all environmental monitoring requirements, excluding plant effluent monitoring, required by federal and state agencies. This includes the maintenance of environmental records required by New Sequoyah Fuels Corporation and by regulatory agencies.

The Manager, Health and Safety, who reports to the Vice President, Administration shall be responsible for developing and implementing programs, procedures and guidance in the functional areas of health physics, industrial hygiene, industrial safety and physical security. He shall be responsible for the effluent monitoring program, the respiratory protection program, the bioassay program, the health and safety program and the program for surveillance of all plant activities related to these areas. He shall be the Sequoyah Facility Radiation Safety Officer (RSO) and shall be responsible for maintaining all radiation exposure and other health and safety records required by General Atomics, New Sequoyah Fuels Corporation and by regulatory agencies. He shall assist the Corporate Manager, Health Physics in establishing radiation health and safety standards and procedures and in coordinating them with the managers and executives directly affected. He manages the Health and Safety Department.

He serves as the Contingency Plan Coordinator and is responsible for the implementation of the Contingency Plan and Contingency Plan Implementing Procedures. He works with the Manager, Procedures and Training to ensure that all facility employees and members of the response organizations receive initial and continuing training.

He and the Manager, Procedures and Training, or their designated representatives, shall certify that each chemical operator's on-the-job training and module certification has been adequate and that the employee is competent and qualified to perform his or her responsibilities.

The Manager of Procedures and Training who reports to the Vice President, Administration, shall be responsible for managing the facility's procedures system and training program. In addition, he will manage the community relations program. He and the Manager, Health and Safety, or their designated representatives, shall certify that each employee's on-the-job training and module certification has been adequate and that the employee is competent and qualified to perform his or her responsibilities.

The Manager, Facility Laboratory, who reports to the Vice President, Administration, shall be responsible for the operation of the facility's radiological/non-radiological analytical laboratory. Required analytical and calibration procedures shall be prepared and maintained under his direction.

The Manager, Quality Assurance, who reports to the Vice President, Administration, shall be responsible for the development of a Facility Quality Assurance Plan and implementing procedures to assure that all operations and safety related activities are performed in accordance with facility procedures. This shall include pertinent requirements for all activities affecting the safety-related functions of structures, systems and components including assurance that design, procurement, fabrication, handling, shipping, storing, cleaning, erecting, installing, inspecting,

testing, operating, maintaining, repairing and modifying requirements are done according to specification or instruction. The program shall provide assurance that indoctrination and training of personnel performing activities affecting quality, as necessary to assure that suitable proficiency is achieved and maintained, is done. Although the individual reports to the Vice President, Administration, he shall have organizational freedom with direct access to the President, New Sequoyah Fuels Corporation.

The Vice President, Business Development shall be responsible for the development and implementation of the facility's waste treatment and disposal plan including programs related to decontamination, decommissioning and fertilizer (ammonium nitrate) distribution. He reports to the President, New Sequoyah Fuels Corporation.

The Manager, Waste Treatment and Disposal Operations shall be responsible for the execution of the facility's waste treatment and disposal plan including management of the waste management personnel, process and procedure development, and compliance with all applicable federal, state and company rules and regulations. He reports to the Vice President, Business Development.

The Supervisors, Waste Treatment and Disposal Operations shall be responsible for the development of procedures and methods and operation of the facility's program to reduce the volume of solid waste generation requiring commercial disposal including waste collection, sorting, decontamination, waste packaging and shipping. They report to the Manager, Waste Treatment and Disposal Operations.

The Vice President, Operations shall be responsible for all nuclear manufacturing activities. He specifically oversees the operations, modifications, and process and equipment criteria. He shall be responsible for safe and efficient plant operations. He reviews all operating procedures, plant modifications and processes, equipment criteria and other general and administrative matters. He reports to the President, New Sequoyah Fuels Corporation.

The Manager, Maintenance, who reports to the Vice President, Operations, shall be responsible for all maintenance activities. He shall prepare and maintain maintenance and surveillance procedures which specify maintenance-related activities within the requirements of approved health and safety standards and regulations.

The Manager of Engineering, reporting to the Vice President, Operations shall provide and supervise engineering services to safely, efficiently and economically convert yellowcake to UF_6 and to reduce UF_6 to UF_4 through process and design modification and process evaluations.

The Manager of Operations, who reports to the Vice President, Operations shall be responsible for all operational activities at the Sequoyah Facility. Operating procedures, which specify

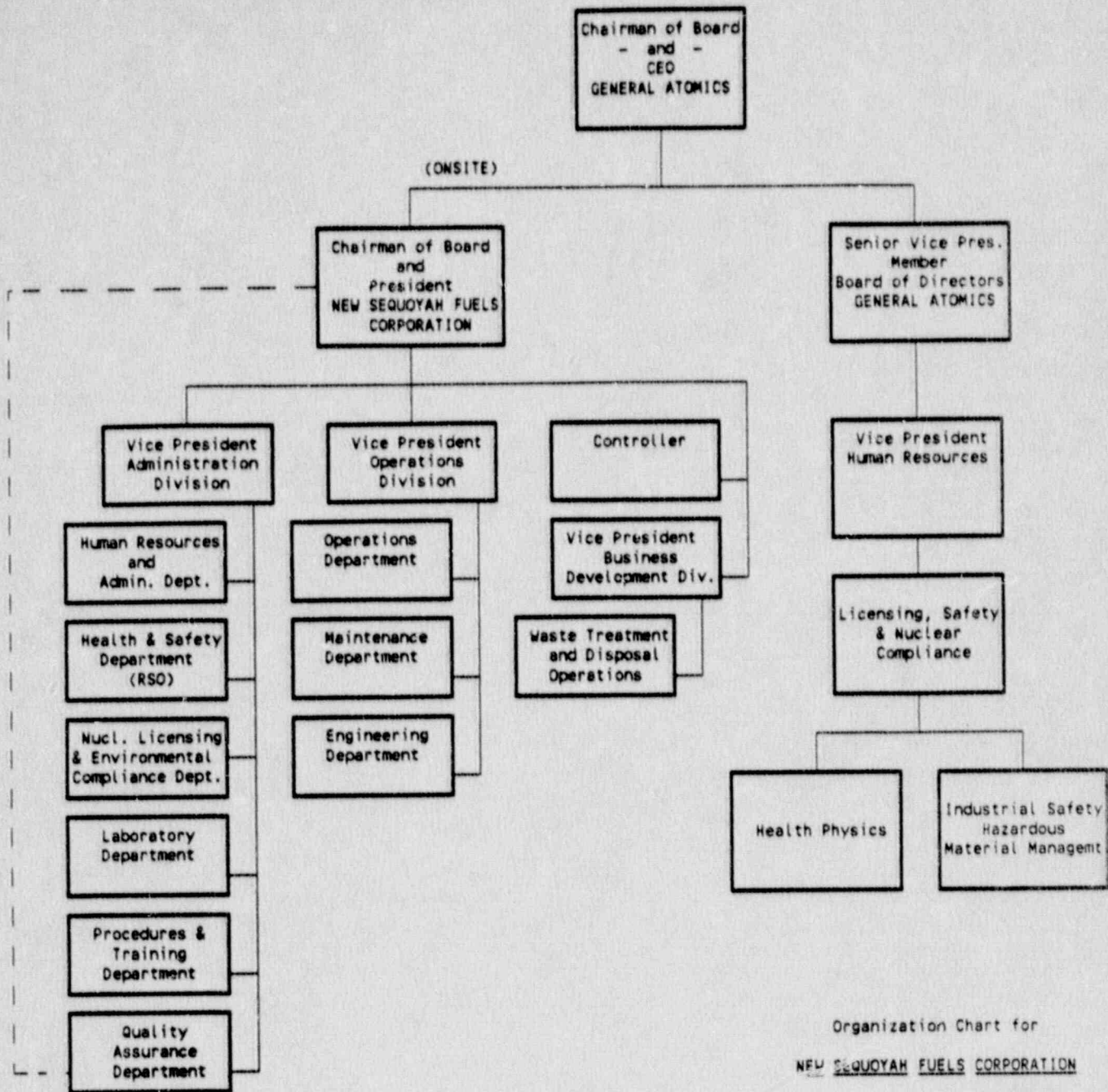
operating steps within the requirements of the approved health and safety standards and process and equipment criteria, shall be prepared and maintained under his direction.

The Area Managers, UF_6 , DUF_4 , and UO_3 , who report to the Manager of Operations, shall be responsible for planning and coordinating the safe and efficient operation of their assigned areas. They also provide technical direction to the Shift Supervisors and shall perform short and long range planning involving the overall operation of the assigned production areas.

The Shift Supervisors, who report to the Area Managers, shall be responsible for directing the activities of operators and for assuring that all operating procedures are followed in the performance of the production activities.

The Manager, Process Engineering, who reports to the Manager of Operations, shall be responsible for developing process improvements, investigating off-normal conditions and conducting special studies that provide safe and efficient operations.

The Controller, who reports to the President, New Sequoyah Fuels Corporation shall be responsible for nuclear material accountability.



Organization Chart for
NEW SEQUOYAH FUELS CORPORATION

Figure 2-1

or nuclear materials manufacturing facilities. The individual shall have demonstrated through progressively more responsible management positions the ability to manage complex technical and administrative programs similar to those found in a chemical processing plant or other type nuclear fuel cycle facilities.

The Manager, Maintenance shall hold a degree in science or engineering with 5 years experience in maintenance/operation of a chemical or nuclear materials processing plant.

The Manager of Engineering shall hold a degree in science or engineering with 5 years experience in chemical or nuclear materials processing, or chemical materials handling. The individual shall have 3 years experience in a supervisory position.

The Manager of Operations shall hold a degree in science or engineering with 5 years experience in the operation of a chemical or nuclear materials processing plant with at least 3 years of management experience. He shall have demonstrated proficiency in identifying process changes which require health physics and safety analysis.

The Area Managers shall hold a degree in science or engineering with 3 years experience in chemical processing, process engineering, or project engineering and handling of uranium materials. They shall have demonstrated experience in a project, engineering, or managerial activity.

The Manager, Process Engineering shall hold a degree in science or engineering with 3 years experience in chemical processing, process engineering, or project engineering and handling of uranium materials. He shall have demonstrated experience in a project engineering or managerial activity.

The Shift Supervisors shall hold a degree in science or engineering or have a high school diploma with 5 years experience in a chemical processing plant. The individual shall be thoroughly familiar with the uranium production activities and have a thorough knowledge of the approved operating procedures.

2.6 Training

NSFC is committed to a comprehensive training program to ensure that all employees receive the instruction necessary to be able to perform their jobs safely and efficiently. Components of the training program include:

2.6.1 General Employee Training

General Employee Training consists of classroom lectures and demonstrations for all new hires. Topics covered include: chemistry and physics, plant operations, health physics, safety,

requirements for the development of new operating procedures, revisions to existing operating procedures, the review and approval process, the level of training required, if any, and the degree of documentation necessary to demonstrate that the appropriate facility operating personnel are knowledgeable of new or revised operating procedures.

2.7.2 Document Control

A document control system shall be established and maintained to assure that the procedures in use are the latest revision. A sanction statement regarding the serious nature of failure to follow the procedures shall be included in the Sequoyah Operating Procedures System and emphasized in the employee training program.

2.7.3 Activities Involving Uranium

All activities involving uranium shall be conducted in accordance with approved radiation health and safety standards. The radiation health and safety standards shall be prepared by the Corporate Manager, Health Physics and shall be reviewed for license compliance by the Manager, Nuclear Licensing and Environmental Compliance, and the Vice President, Administration. The standards shall be reviewed for operability by the Manager, Health and Safety and the Vice President, Operations and approved by the Corporate Vice President, Human Resources. Changes to the health and safety standards shall follow the same administrative review and approval system as original standards.

2.7.4 Design Control

Process and equipment design, which delineate the process and prescribe critical design parameters, shall be prepared by the Manager, Engineering, reviewed by the Vice President, Operations and the Manager, Operations and the Manager, Health and Safety and shall be approved by the Vice President, Administration. The Manager, Nuclear Licensing and Environmental Compliance shall review major process and equipment changes. Major changes to process operations and to equipment design shall be reviewed for operability and approved by the Vice President, Administration or the President, NSFC.

Modifications or changes to process operations or equipment that normally occur during operations shall be prepared by the Manager, Engineering; reviewed by the Vice President, Operations, the Manager, Health and Safety (RSO) and the Manager, Operations; and approved by the Vice President, Administration. All experimental and developmental work to be performed at the Sequoyah Facility shall be approved by the Vice President, Administration prior to its initiation.

qualified personnel trained in basic radiation protection and knowledgeable about federal and state regulations, corporate policies and facility procedures. At the conclusion of the audit, the auditor shall conduct an exit interview with the Vice President, Administration or his designee and apprise him of any significant findings and the need for any immediate corrective actions. A formal report of findings, observations, and recommendations shall be prepared and submitted by the Corporate Manager, Licensing, Safety and Nuclear Compliance to the Vice President, Administration. Copies of the report shall be furnished to the Corporate Manager, Health Physics, the Manager, Nuclear Licensing and Environmental Compliance, the Vice President, Operations and the President of New Sequoyah Fuels Corporation. In responding to the report, the Vice President, Administration shall give the status of corrective action that has been taken and provide a schedule for additional action which will be taken. The auditor shall conduct a follow-up review to ensure corrective action is being taken in a timely manner.

The Manager, Quality Assurance shall conduct periodic audits, at least once every 12 months, of operations and safety-related activities in accordance with the QA Plan and Procedures. The audits shall be conducted to verify compliance with corporate policies, procedures, license conditions and federal regulations. A report of the areas audited shall be made quarterly to the Vice President, Administration. Audit findings shall be documented with copies of the report forwarded to the Vice President, Administration, the Vice President, Operations and the President, New Sequoyah Fuels Corporation. The Vice President, Administration shall be responsible for assuring that audit findings are addressed in a timely manner. Follow-up action, including reaudit of deficient areas, shall be taken where indicated.

2.9 Investigation and Reporting of Non-Normal Occurrences

The Sequoyah Facility shall establish an "Incident Report" system. An incident report shall be made for each release of material resulting in gross airborne alpha activity in excess of 3 MPC based on uranium. This incident report shall be initiated by the Manager, Health and Safety and is directed to the supervisor whose personnel were potentially exposed and then forwarded to the Vice President, Operations and the Vice President, Administration. The supervisor shall sign the report including any pertinent observations as to the correction of the condition to avoid further incidents. The report shall then be distributed to the Vice President, Operations, the Manager of Operations, the Vice President, Administration, the Manager, Nuclear Licensing and Environmental Compliance, the Corporate Manager, Health Physics, and the Corporate Manager, Licensing, Safety and Nuclear Compliance. These reports form a basis for the quarterly ALARA review and include a dose assessment based upon the occupancy conditions and protective equipment used at the time of the incident.

are not covered by established procedures. In accordance with Sequoyah Facility Operating Procedure - Hazardous Work Permits, the Shift Supervisor shall be responsible for determining when an HWP is required and for issuing it. The Health and Safety Technicians shall provide appropriate clothing and equipment requirements. At the completion of the work the HWP shall be released in accordance with the requirements noted in the referenced procedure.

3.2.2 ALARA Committee

An ALARA Committee shall be established for the Sequoyah Facility. The Committee shall be comprised of personnel from the Human Resources Department of General Atomics, and personnel from New Sequoyah Fuels Corporation. The General Atomics membership includes the Corporate Manager, Health Physics and the Corporate Manager, Licensing, Safety and Nuclear Compliance. New Sequoyah Fuels Corporation membership includes the Vice President, Administration, the Vice President, Operations, the Vice President, Business Development, the Manager, Health and Safety (RSO) and the Managers of Operations; Maintenance; Engineering; and the Manager, Nuclear Licensing and Environmental Compliance. The Corporate Manager, Health, Physics shall serve as the Chairman of the ALARA Committee.

Quarterly ALARA audits shall be performed by the Corporate (GA) Manager, Health Physics resulting in a report to the Committee consisting of a review of trend and cause analysis of radiological exposure conditions within the facility, employee exposures, and progress of administrative and engineering controls needed to assure that exposures to personnel and release to the environment are maintained "as low as is reasonably achievable" (ALARA).

The ALARA Committee shall meet at least annually to evaluate the quarterly trend and cause analysis. The ALARA Committee shall also review exposure and effluent release data to determine (1) if there are any upward trends developing in personnel exposures for identifiable categories of workers, types of operations, or effluent releases, (2) if exposure and release might be lowered in accordance with the ALARA objectives, and (3) if equipment for effluent control is being properly used, maintained, and inspected. From this review the Committee may recommend additional investigations be conducted and revise equipment and/or procedures to improve ALARA performance. A report documenting the results of the annual meeting shall be prepared by the Chairman of the ALARA Committee and forwarded to the President, New Sequoyah Fuels Corporation. The Vice President, Administration shall respond in writing to the recommendations in the annual ALARA report to the Chairman of the ALARA Committee.

CHAPTER 4. NUCLEAR CRITICALITY SAFETY

The New Sequoyah Fuels Corporation Sequoyah Facility is licensed for and processes only Source Material. There are no plans for processing materials enriched in U235 and therefore there is no need to address nuclear criticality for the facility.

License No. SUB-1010
Amend. No. Revision

Docket No. 40-8027
Date 12/21/89

Page
I. 4-1

CHAPTER 5. ENVIRONMENTAL PROTECTION

5.1 Effluent Control Systems

The NRC staff has calculated the average annual dose to the nearest resident using current average source terms and has used this information to set action levels for the facility. It was shown from the staff dose calculations that the liquid effluent from this facility is not a significant pathway to man. Therefore, the staff has applied an action level based solely on the quarterly release of airborne effluents as follows: "if the radioactivity in the plant gaseous effluents exceeds 30,000 uCi per calendar quarter, the licensee shall, within 30 days, prepare and submit to the Commission a report which identifies the cause for exceeding the limit and the corrective actions to be taken by the licensee to reduce release rates." If the parameters important to a dose assessment change, a report shall be submitted within 30 days which describes the changes in parameters and includes an estimate of the resultant change in dose commitment.

Sequoyah Facility shall conduct a dose assessment for the nearest resident on a quarterly basis using site-specific information and methodology in Appendix A of the NRC Environmental Assessment (NUREG-1157). If the quarterly dose commitment to a maximally-exposed individual in the general public exceeds 6.25 mrem for any organ, a report shall be submitted to the Commission within 30 days of the determination of the quarterly dose. In the event that the calculated dose to any member of the public in any consecutive 12-month period is about to exceed the limits specified in 40 CFR 190.10, New Sequoyah Fuels Corporation shall take immediate steps to reduce emissions so as to comply with 40 CFR 190.10. As provided in 40 CFR 190.11, the licensee may petition the Nuclear Regulatory Commission for a variance from the requirements of 40 CFR 190.10. If a petition for a variance is anticipated, the licensee shall submit the request at least 90 days prior to exceeding the limits specified in 40 CFR 190.10.

5.1.1 Liquid Effluent

Discharge of liquid process effluents to the unrestricted area is through the "combination stream," and NPDES Permit No. OK0000191 limits the maximum discharge quantities. The combined effluent stream, consisting of the fluoride treatment effluent, the sanitary waste water treatment system discharge, the overflow from the recirculating cooling water system, and the excess plant intake water, shall be sampled continuously at the point where it leaves the immediate plant area south of the port access road. (See Drawing 110-C-1020 Rev. 3, page 5-2.1). Daily grab samples shall be analyzed for temperature, pH, uranium, nitrate and fluoride for purposes of control. Monthly composite samples shall be analyzed for uranium, thorium-230, nitrate and fluoride. The samples shall

CHAPTER 7. DECOMMISSIONING PLAN

7.1 Introduction

The New Sequoyah Fuels Corporation Sequoyah Facility is expected to continue operation for many years, possibly until the year 2000. Decommissioning of the facility and termination of its license requires certain decontamination and disposal efforts. Contaminated equipment and materials will be buried onsite only after receiving specific prior authorization from the Nuclear Regulatory Commission.

The engineering estimates for decommissioning the Sequoyah Facility are based upon radiological survey data provided by Kerr-McGee and an onsite inspection by ATCOR, (since acquired by Chem Nuclear which has merged with Waste Management, Inc.). The estimates are for facility decontamination with disposal of radioactive materials both on-site and off-site.

The estimates assume burial of the bulk of the plant's processing equipment, simple cleaning methods for walls and overhead structures, surface scaling of process area flooring, and complete floor removal in only limited areas. While these decisions have been made at this point without benefit of a complete radiological survey and testing of decontamination techniques, they are based upon ATCOR's qualitative analysis of the data and experience obtained in previous decontamination projects.

7.2 Engineering Estimates

7.2.1 Assumptions and Conditions

- a) Release criteria for the facility will be in conformance with the U.S. Nuclear Regulatory Commission "Guidelines for Decontamination of Facilities and Equipment Prior to Release for Unrestricted Use or Termination of License for by-product, Source, or Special Nuclear Material".

Maximum fixed 15,000 dpm/100 cm²

Average fixed 5,000 dpm/100 cm²

Maximum loose 1,000 dpm/100 cm²

8. Fluoride Sludge Process Ponds	62,084
9. Fluoride Sludge Holding Basin	22,818
10. Emergency Holding Basin	15,000
11. Sewage Lagoon	9,000
12. Drainage Ditch	2,800

Total Estimated Cost for Ponds and Lagoons \$ 889,582
=====

7.5 Financial Arrangements

The New Sequoyah Fuels Corporation has established a reserve account to which charges are accrued on an annual basis during the remaining life of the Sequoyah Facility. Since the value of 1978 dollars will vary in subsequent years, the annual charge to the reserve will be adjusted by use of a pricing index. The 1983 value used for current reserve accounts is \$4,011,407 which has been adjusted for the additional costs for ponds and lagoons. The reserve account activity will be audited annually as part of the routine annual audit. A special audit report on the reserve account activity will be available at the Sequoyah Facility for review by the NRC I&E personnel.

New Sequoyah Fuels Corporation would consider the posting of a bond as a means of assuring the availability of adequate funds at the time of decommissioning if the State of Oklahoma would require this action through regulation and legislation.

CHAPTER 8. CONTINGENCY PLAN

The revised Sequoyah Facility Contingency Plan was developed in accordance with the requirements of a U.S. Nuclear Regulatory Commission (NRC) Order to Modify License, date February 11, 1981 and follows the general guidelines set forth in NUREG-0762. Revision 2 of the Contingency Plan submitted in August, 1986 is an update and expansion of the Sequoyah Facility Radiological Contingency Plan which was originally filed on March 11, 1982 in compliance with the NRC Order. The Plan provides an organized and methodical approach toward emergency response and addresses a spectrum of emergency conditions postulated for this type of facility. Although the probability of an accident is low, and has been substantially lowered further by a comprehensive upgrade of facility safeguards and human factors improvements, this Plan shall be maintained to provide for protection of the health and safety of facility employees and members of the general public in the vicinity of the Sequoyah Facility.

The Sequoyah Facility Contingency Plan interfaces with several related Contingency documents, particularly the Contingency Plan Implementing Procedures (CPIP's). The detailed instructions for implementation and support of the Plan are contained in these procedures. The Plan has been appropriately structured to coordinate activities with offsite response agencies and groups such as New Sequoyah Fuels Corporate Emergency Organization, Federal, State, and local government response groups and law enforcement agencies.

The Contingency Plan Coordinator shall be responsible for maintaining the Contingency Plan, the CPIP's and all emergency facilities, equipment and supplies in a constant state of readiness. He works with the Manager, Procedures and Training to insure that all facility employees and members of both onsite and offsite response organizations receive initial and continuing training. This training shall be documented. Employees with emergency response responsibilities shall demonstrate understanding of the plan requirements by written examination with documentation provided in the training file.

The licensee shall implement, maintain, and execute the response measures of the Radiological Contingency Plan submitted to the Commission on August 20, 1986; as supplemented with revised pages dated April 10, May 22, and June 12, 1987, October 1988, December 1988, February 1989, and November 1989. The licensee shall also maintain Contingency Plan Implementing Procedures for the Radiological Contingency Plan as necessary to implement the Plan. The licensee shall make no change in the Radiological Contingency Plan or the Contingency Plan Implementing Procedures that would decrease the response effectiveness of the Plan without prior NRC approval as evidenced by a license amendment. The licensee may make changes to the Radiological Contingency Plan and Contingency Plan Implementing Procedures without prior NRC approval if the changes do

not decrease the response effectiveness of the Plan. The licensee shall furnish the Chief, Fuel Cycle Safety Branch, Division of Industrial and Medical Nuclear Safety, NMSS, U.S. Nuclear Regulatory Commission, Washington, D.C. 20555, each change to the Radiological Contingency Plan within 6 months after the change is made.

License No. SUB-1010
Amend. No. Revision

Docket No. 40-8027
Date 12/21/89

Page
I. 8-2

CHAPTER 9. OVERVIEW OF OPERATION

9.1 Corporate Information

General Atomics is a corporation that engages in commercial research and development in the areas of nuclear energy, defense and other high technology products.

New Sequoyah Fuels Corporation is a wholly-owned subsidiary of Sequoyah Fuels Corporation, which is a wholly owned subsidiary of Sequoyah Holding Corporation which is a wholly-owned subsidiary of General Atomics, which is a wholly-owned subsidiary of General Atomic Technologies Corporation. General Atomic Technologies Corporation is controlled by James N. Blue, a United States citizen. New Sequoyah Fuels Corporation is responsible for the operation of the Sequoyah Facility at Gore, Oklahoma and sales of nuclear materials and services produced by this facility.

New Sequoyah Fuels Corporation is incorporated in the state of Delaware. The names, addresses and citizenship of the principal officers are:

Reau Graves, Jr.	Gore	President, Sequoyah Fuels Corporation	USA
James R. Edwards	San Diego	Secretary	USA
Brenda B. Dawson	San Diego	Assistant Secretary and Coordinator of Legal Services	USA

Parent company officers serving as the Board of Directors of the New Sequoyah Fuels Corporation are:

Reau Graves, Jr.	Gore	Senior Vice President	USA
John E. Jones	San Diego	Senior Vice President	USA
James R. Edwards	San Diego	Vice President, General Counsel	USA

9.2 Financial Qualification

The New Sequoyah Fuels Corporation is a wholly-owned subsidiary of Sequoyah Fuels Corporation, which is a wholly-owned subsidiary of Sequoyah Holding Corporation which is a wholly-owned subsidiary of General Atomics which is a wholly-owned subsidiary of General Atomic Technologies Corporation. General Atomic Technologies Corporation is controlled by James N. Blue, a United State citizen. There is no control of New Sequoyah Fuels Corporation by any alien, foreign corporation or foreign government through stock ownership, membership on the Board of Directors, or stock ownership in General Atomics, or its holding company, General Atomic Technologies Corporation.

9.3 Summary of Operating Objective and Process

The general plan for the Sequoyah Facility consists of the following activities:

- a. Refining of uranium from ore concentrates (yellowcake) and conversion to uranium hexafluoride (UF_6), and related laboratory support activities.
- b. Reduction of natural or depleted UF_6 to uranium tetrafluoride (UF_4), and related laboratory support activities.
- c. Treatment, storage and disposal of process and contaminated waste materials.
- d. Storage of natural and depleted uranium as UF_6 and UF_4 .

The UF_6 Conversion Plant utilizes a modification of the AEC conversion process, wherein yellowcake is first weighed and sampled, converted to an impure uranyl nitrate, and then refined by solvent extraction. The refined uranyl nitrate is denitrated to UO_3 , reduced to UO_2 , hydrofluorinated with anhydrous hydrofluoric acid to UF_4 and then fluorinated with elemental fluorine to produce UF_6 .

The UF_6 Reduction Plant supplies natural or depleted UF_4 for commercial use. The primary function of the process is the chemical reduction of natural or depleted UF_6 to natural or depleted UF_4 .

The process involves the receipt of natural or depleted UF_6 in 10-ton or 14-ton cylinders that is vaporized and reduced with thermal catalytic cracked ammonia as a source of hydrogen, to produce natural or depleted UF_4 .

9.4 Site Description

The license activities will be conducted in the UF_6 Conversion Plant and the UF_6 Reduction Plant at the New Sequoyah Fuels Corporation's Sequoyah Facility located in Sequoyah County, Oklahoma. The site is located 2-1/2 miles southeast of Gore, Oklahoma, on State Highway 10 off U.S. Highway 64 and Interstate Highway 40, about 40 miles west of Fort Smith, Arkansas and 150 miles east of Oklahoma City, Oklahoma.

The New Sequoyah Fuels Corporation site is bounded on the west by the Arkansas and Illinois Rivers, on the north by U.S. Highway 64 and on the east by the eastern section line of Section 22, which is approximately two miles east of the Arkansas River. The Sequoyah Facility is located in Section 21, T12N-R21E, Sequoyah County, Oklahoma.

CHAPTER 10. FACILITY DESCRIPTION

10.1 Facility Layout

The layout of the functional features of the facility is shown on drawings included at the end of this chapter. The plans and elevations shown on the drawings provide identification of the features discussed in this Chapter.

10.2 Utilities, Including Emergency Power

Utility services for the UF₆ Reduction Plant are provided from connections to the services for the UF₆ Conversion Plant. These services include steam, domestic water, fire water, cooling water, nitrogen, instrument air, and electrical power.

10.2.1 Primary Electrical System

Primary electrical power is supplied to the facility at 69KV from Oklahoma Gas and Electric Company's Warner Substation and Roland Road Substation. OG&E's substations are tied together in their substation located on NSFC property. (See Drawing 100-E-101.)

The 69KV lines feed two 10,000 KVA 69KV/12.47KV transformers in the substation. Either of these transformers have the capacity to supply the facility's electrical requirement. Power at 12.47 KV is fed to the plant's load centers and rectifiers through static reclosers. The static reclosers are equipped with protective relays and are electrically operated from the control room.

The double-ended load centers each have two 1000 KVA 12.47KV/480V transformers, fused primary load break switch, 480V main breakers and a tie breaker. The load centers are loop tied from the reclosers. A transformer in each load center is supplied from a recloser and the other transformer supplied from a different recloser. The load centers distribute power to a number of motor control centers, the fire pump, the denitrator control panels, and a depolarization rectifier. A separate load center is supplied for the UF₆ Reduction Plant. One transformer is supplied from one vacuum switch in the main distribution system.

Control switches for operating the load center main breakers are located in the control room along with voltmeters and ammeters to monitor transformer electrical loading. Each load center transformer is equipped with a ground fault sensing relay and indication provided in the control room for a ground fault.

With the redundancy designed into this electrical system, the plant could remain operational if one of the 10,000 KVA substation transformers failed or if one of the 1000 KVA transformers in each load center should fail.

CHAPTER 11. ORGANIZATION AND PERSONNEL

11.1 Unit Functions

The President, New Sequoyah Fuels Corporation shall have overall responsibility for the safe operation of the Sequoyah Facility. Additional responsibility has been assigned to the Vice President, Administration; Vice President, Operations; the Vice President, Business Development; and the Controller for various functions as described in Chapter 2.0 of the license.

The facility organization consists of ten departments, each headed up by a Manager who reports to a Division Vice President as shown in Figure 11-1. The functional responsibilities of the various departments are described in Chapter 2.0.

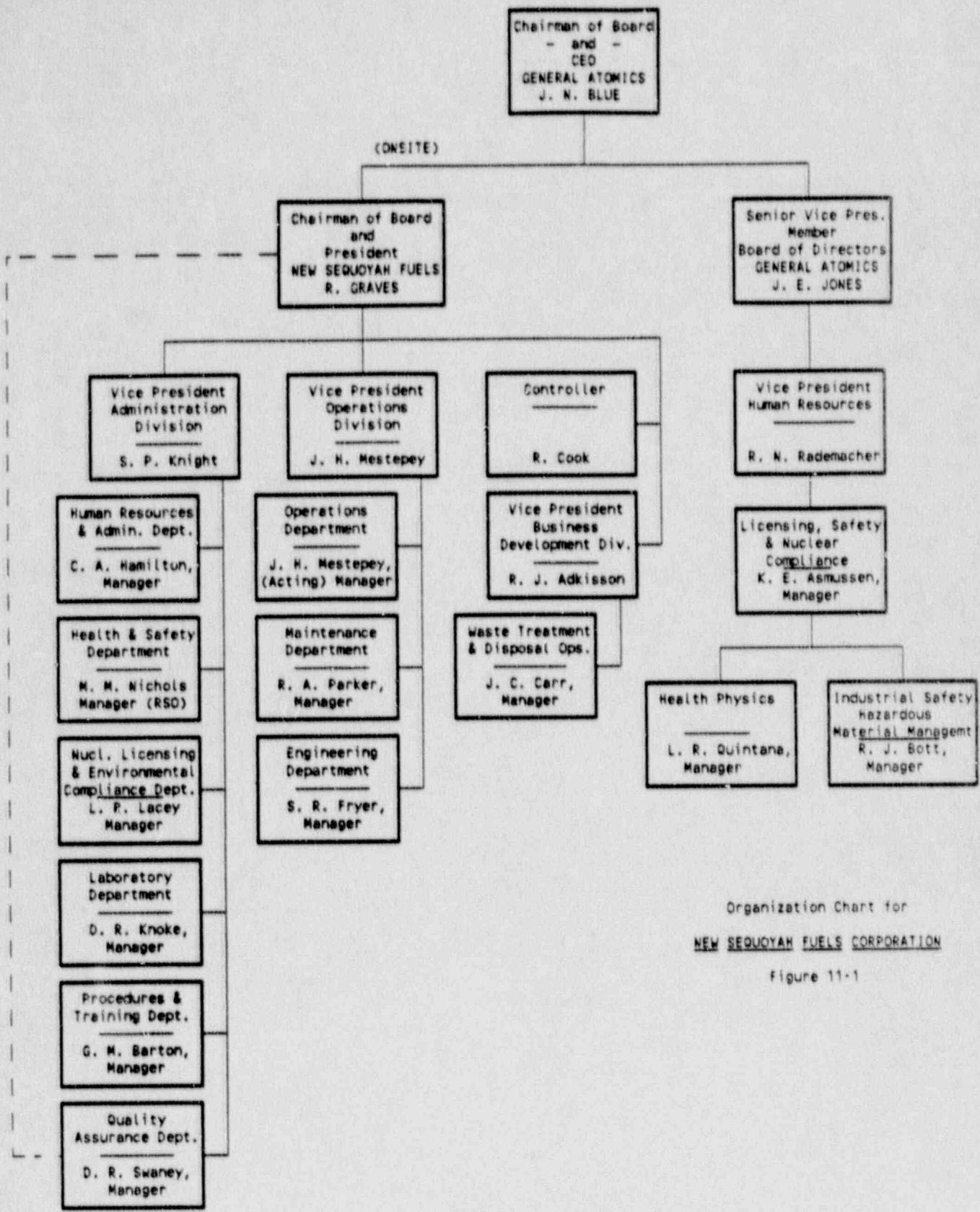
11.2 Organizational Procedures

In view of the company's basic concern for the well-being and protection of its employees and for the health and safety of the public, and in the discharge of its responsibilities under public laws and regulations, a stringent and effective program is maintained for the control of radiation and contamination hazards. To conduct the program, organizational components are established to provide not only for strong facility management in radiation safety but also for independent development of process and equipment criteria and health and safety standards, and audit thereof, under conditions which minimize the length of reporting lines and maximize the effectiveness of management control.

A basic premise of New Sequoyah Fuels Corporation and General Atomics is that every individual has a personal responsibility for carrying out his assigned task in a manner which will not only achieve its operational objectives, but will do so without endangering the health and safety of that individual, his co-workers, or the public. It follows that every person in the chain of operational command has responsibility for health and safety matters for all operations under his control.

It is also a basic premise of New Sequoyah Fuels Corporation and General Atomics that there be a strong independent overview of the activities of the line operations to assure, through a check and balance system, that health and safety matters have been adequately considered in the process selection and equipment design; that adequate procedures have been established to assure that the process and equipment are operating in a safe manner; and that personnel are adequately protected against radioactivity and radiation hazards.

Organizational responsibilities specific to the Sequoyah Facility are established to give full weight to these two



Organization Chart for
NEW SEQUOYAH FUELS CORPORATION
 Figure 11-1

premises. The organizational responsibilities are discussed in Chapter 2.0 of the license.

11.3 Plant Operations Review Committee

The Sequoyah Facility Plant Operations Review Committee is composed of senior facility managers having key roles in ensuring that the facility operations are conducted safely, efficiently, and in compliance with regulatory requirements. The Committee is responsible for:

- a. Reviewing new and revised operating procedures;
- b. Reviewing procedures for the conduct of experiments or tests;
- c. Determining the need for and the level of training to be conducted prior to implementing new or revised operating procedures, experiments, or tests;
- d. Determining whether reviewed activities are consistent with current license conditions or if a license amendment is required prior to implementation;
- e. Reviewing and approving the procedures for the chemical operator qualification and certification system, and;
- f. Reviewing and commenting upon any matter presented to it by the Vice President, Administration.

The Plant Operations Review Committee is normally chaired by the Manager, Procedures and Training. Other members of the Committee include: the Manager, Operations; the Manager, Health and Safety; the Manager, Engineering; the Manager, Maintenance; and the Manager, Laboratory. The Committee meets as necessary to conduct required business.

11.4 Training

NSFC is committed to a comprehensive training program to ensure that all employees receive the instruction necessary to be able to perform their jobs safely and efficiently. The degree of training is commensurate with the individual employee's duties and responsibilities, and with the potential hazards involved. Instruction is provided by individuals knowledgeable in the subject matter involved. Formal training is documented and records are maintained by the Procedures and Training Department.

CHAPTER 11. ORGANIZATION AND PERSONNEL

11.1 Unit Functions

The President, New Sequoyah Fuels Corporation shall have overall responsibility for the safe operation of the Sequoyah Facility. Additional responsibility has been assigned to the Vice President, Administration; Vice President, Operations; the Vice President, Business Development; and the Controller for various functions as described in Chapter 2.0 of the license.

The facility organization consists of ten departments, each headed up by a Manager who reports to a Division Vice President as shown in Figure 11-1. The functional responsibilities of the various departments are described in Chapter 2.0.

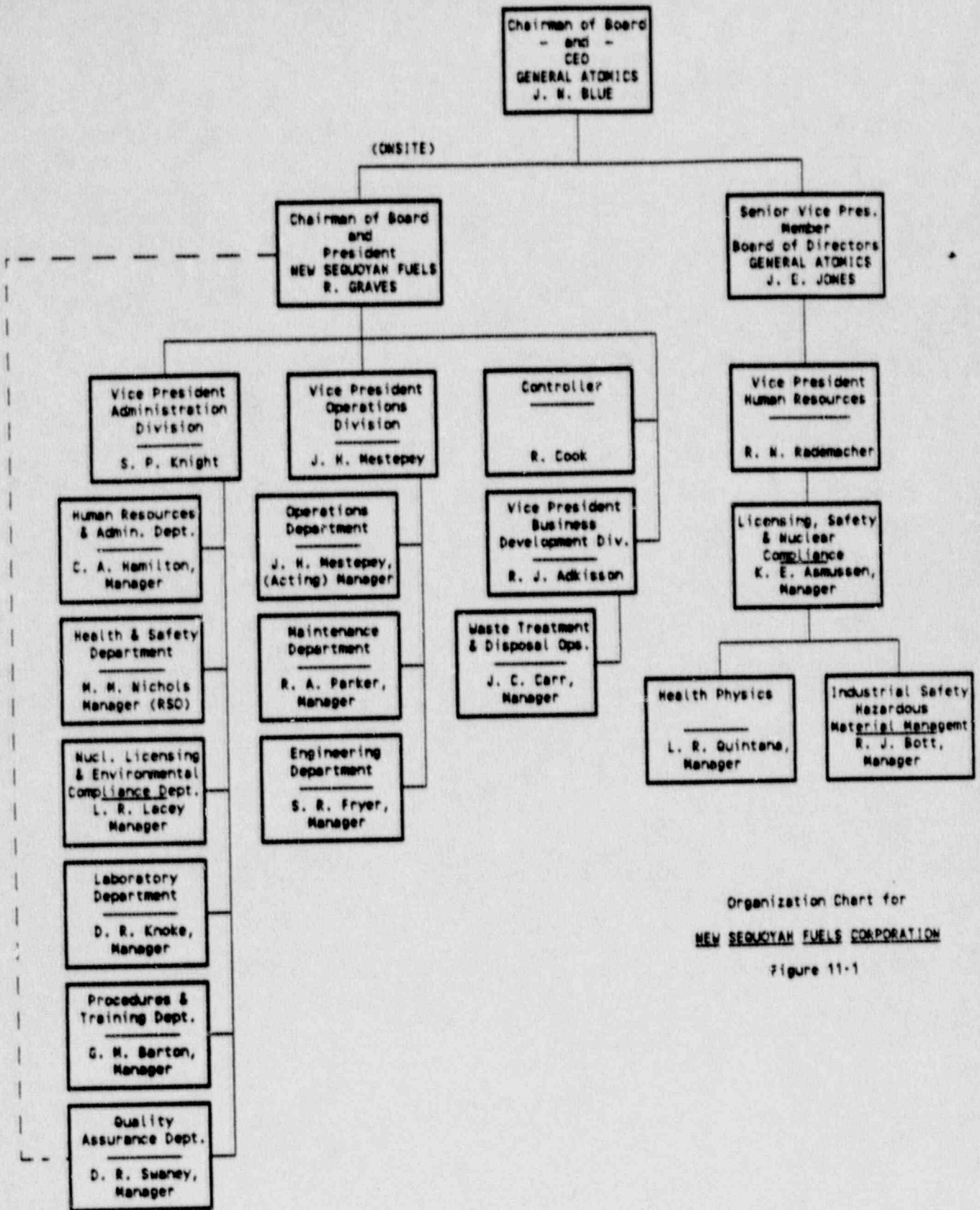
11.2 Organizational Procedures

In view of the company's basic concern for the well-being and protection of its employees and for the health and safety of the public, and in the discharge of its responsibilities under public laws and regulations, a stringent and effective program is maintained for the control of radiation and contamination hazards. To conduct the program, organizational components are established to provide not only for strong facility management in radiation safety but also for independent development of process and equipment criteria and health and safety standards, and audit thereof, under conditions which minimize the length of reporting lines and maximize the effectiveness of management control.

A basic premise of New Sequoyah Fuels Corporation and General Atomics is that every individual has a personal responsibility for carrying out his assigned task in a manner which will not only achieve its operational objectives, but will do so without endangering the health and safety of that individual, his co-workers, or the public. It follows that every person in the chain of operational command has responsibility for health and safety matters for all operations under his control.

It is also a basic premise of New Sequoyah Fuels Corporation and General Atomics that there be a strong independent overview of the activities of the line operations to assure, through a check and balance system, that health and safety matters have been adequately considered in the process selection and equipment design; that adequate procedures have been established to assure that the process and equipment are operating in a safe manner; and that personnel are adequately protected against radioactivity and radiation hazards.

Organizational responsibilities specific to the Sequoyah Facility are established to give full weight to these two



Organization Chart for
NEW SEQUOYAH FUELS CORPORATION

Figure 11-1

premises. The organizational responsibilities are discussed in Chapter 2.0 of the license.

11.3 Plant Operations Review Committee

The Sequoyah Facility Plant Operations Review Committee is composed of senior facility managers having key roles in ensuring that the facility operations are conducted safely, efficiently, and in compliance with regulatory requirements. The Committee is responsible for:

- a. Reviewing new and revised operating procedures;
- b. Reviewing procedures for the conduct of experiments or tests;
- c. Determining the need for and the level of training to be conducted prior to implementing new or revised operating procedures, experiments, or tests;
- d. Determining whether reviewed activities are consistent with current license conditions or if a license amendment is required prior to implementation;
- e. Reviewing and approving the procedures for the chemical operator qualification and certification system, and;
- f. Reviewing and commenting upon any matter presented to it by the Vice President, Administration.

The Plant Operations Review Committee is normally chaired by the Manager, Procedures and Training. Other members of the Committee include: the Manager, Operations; the Manager, Health and Safety; the Manager, Engineering; the Manager, Maintenance; and the Manager, Laboratory. The Committee meets as necessary to conduct required business.

11.4 Training

NSFC is committed to a comprehensive training program to ensure that all employees receive the instruction necessary to be able to perform their jobs safely and efficiently. The degree of training is commensurate with the individual employee's duties and responsibilities, and with the potential hazards involved. Instruction is provided by individuals knowledgeable in the subject matter involved. Formal training is documented and records are maintained by the Procedures and Training Department.

11.4.5 Development and Approval of Training Materials

Development and approval of training materials is the responsibility of the department under whose cognizance the subject matter falls. New training materials and revisions to existing training materials are developed by individuals competent in the subject matter and approved by the cognizant Department Manager. Examples of subject matter and approval authority are:

<u>Approval</u> =====	<u>Subject Matter</u> =====
Manager, Operations	Chemical Operations
Manager, Health and Safety	Health Physics Hazard Communications Safety Respiratory Protection Contingency Plan

11.4.6 Training Records

Training records, including attendance and test results, where applicable, are maintained by the Procedures and Training Department.

11.5 Functions of Key Personnel

The functions of key personnel both in General Atomics and New Sequoyah Fuels Corporation are discussed in Chapter 2.0 of the license.

11.6 Education and Experience of Key Personnel

Rodney N. Rademacher, Vice President, Human Resources, General Atomics

Education

BA Industrial Psychology, San Diego State University, 1962.
Graduate Studies, San Diego State University.
Graduate Studies, University of Colorado, Colorado Springs.

Experience

1974- Vice President, Human Resources, General Atomics.
Employed by General Atomics (GA) since early 1974 in various management capacities. As Director of Human Resources, performed in essentially the same capacity.

Scott P. Knight, Vice President, Administration, New Sequoyah Fuels Corporation

Education

BS Engineering, U.S. Military Academy.
JD, DePaul University College of Law.
MBA Operations and Financial Management, University of Chicago.
Radiation Protection Program, Harvard University School of Public Health.
Continuing education in chemical operations through American Institute of Chemical Engineers Courses.

Experience

- 1/90- Vice President, Administration Division, New Sequoyah Fuels Corporation.
- 11/88-1989 Vice President, Administration Division, Sequoyah Fuels Corporation.
- 6/88-10/88 General Manager, Sequoyah Fuels Corporation.
- 1986-1988 Manager, Administration and Services, Sequoyah Fuels Corporation.
Chairman, Plant Operations Review Committee. Acting Facility Manager during absences of the General Manager, Sequoyah Facility.
- 1986 Manager, Operations Analysis, Kerr-McGee Corporation.
- 1984-1985 Graduate studies at University of Chicago; President of not-for-profit corporation.
- 1970-1983 Served as commissioned officer in the United States Army. Managed military operational organizations, from 40 to 1,250 persons in size, which employed heavy equipment and sophisticated systems to accomplish varied combat, security and training missions worldwide.
- Management Analyst. Developed an automated inventory control system for the Army Medical Center, San Francisco, California.
- Managed the Operations division at the U.S. Army Armor School.
- Legal Counsel. Senior Prosecutor for U.S. forces stationed along East German border; managing attorney trial defense and legal assistance centers.

Lee R. Lacey, Manager, Nuclear Licensing and Environmental Compliance, New Sequoyah Fuels Corporation

Education

MS Human Resources Development, Oklahoma State University.
BS Engineering Technology, Oklahoma State University.

U.S. Navy:

Electronics Technician Class "A" School.
Basic Nuclear Power School.
Nuclear Power Training Unit (Prototype Training).
Submarine School.

Experience

1/90- Manager, Nuclear Licensing and Environmental Compliance, New Sequoyah Fuels Corporation.

1989 Manager, Nuclear Licensing and Environmental Compliance, Sequoyah Fuels Corporation.

1986-1988 Manager, Health, Safety, and Environment, Sequoyah Fuels Corporation, Department Manager for the Health, Safety and Environment Department at the Sequoyah Facility. Responsible for the following programs: health physics, industrial safety, environmental monitoring, industrial hygiene, physical security, occupational health and emergency preparedness. Served as the Facility Contingency Plan Coordinator. Directly supervised the Facility Radiation Safety Officer.

1985-1986 Manager, Training Services, Quadrex Corporation, Tulsa, Oklahoma. Managed Quadrex's training services business. Served as a consultant in the areas of nuclear training, health physics, emergency preparedness, and regulatory compliance.

1983-1985 Manager of Projects, Quadrex Corporation, Tulsa, Oklahoma. Managed large consulting projects and directed the business activities of the Projects Department. Technical involvement included development and implementation of training programs, conduct of audits, development of training administrative controls, and support of INPO accreditation programs. Consulted in health physics and emergency preparedness.

1981-1983 Manager of Radiological Training and Services, Quadrex Corporation, Tulsa, Oklahoma. Directed the business activities of the Radiological Training and Services Section. Developed emergency plan procedures, developed drill scenarios, and managed emergency

exercises. Developed radiological training programs and materials. Wrote a nuclear facility Radiation Protection Plan manual.

- 1980-1981 Senior Health Physics Consultant, Quadrex Corporation, Tulsa, Oklahoma. Supervised health physics, training, and emergency preparedness projects for utility clients. Assigned as Radiation Safety Officer for a radiological facility decontamination project. Revised emergency plans and developed implementing procedures. Developed a comprehensive health physics technician training program.
- 1980 Reactor Health Physics Inspector, U.S. Nuclear Regulatory Commission, Atlanta, Georgia. Conducted inspections of power reactor health physics programs. Performed as a member of the Health Physics Appraisal Team.
- 1977-1980 Health Physicist, Duke Power Company, Charlotte, North Carolina. Assignment to the corporate health physics staff. Responsibilities included training, exposure control, respiratory protection, and procedure development. Performed technical audits and ALARA design reviews.
- 1974-1977 Administrator/Recruiter, U.S. Naval Reserve, Stillwater, Oklahoma. Provided administrative and recruiting support for units of the Naval Reserve.
- 1966-1972 Reactor Operator/Electronics Technician, U.S. Navy. Nuclear Reactor Operator on S1W and S5W submarine reactor plants.

Professional Recognition

- Certified Hazardous Materials Manager
- Registered Environmental Professional
- American Industrial Hygiene Association
- Health Physics Society
- USNRC Certificate of Appreciation - Three Mile Island Response
- Health Physics Society Continuing and General Education Committee (1986-Present)
- American Industrial Hygiene Association Committee on Continuing Education (1987-Present)
- Atomic Industrial Forum Committee on Radiation Protection (1982-84)
- Atomic Industrial Forum Ad Hoc Committee on Engineering Techniques to Reduce Occupational Exposures (1978-79)
- American Board of Health Physics Certification, Part 1
- Certified Hazard Control Manager

Carolyn L. Couch, Senior Environmental Engineer, New Sequoyah Fuels Corporation

Education

BS Biology (Minor in Chemistry), East Central University, Ada, Oklahoma.

Experience

1/90- Senior Environmental Engineer, New Sequoyah Fuels Corporation.
1989 Senior Environmental Engineer, Sequoyah Fuels Corporation.
1985-1989 Environmental Engineer, Sequoyah Fuels Corporation.
1979-1985 Associate Engineer, Sequoyah Facility, Kerr-McGee Corporation.

Michael M. Nichols, Manager, Health and Safety, New Sequoyah Fuels Corporation

Education

BS Engineering Technology (Health Physics), Oklahoma State University.
Certification - Hazards Control Manager, Master Level.

Experience

1/90- Manager, Health and Safety (RSO), New Sequoyah Fuels Corporation.
1989 Manager, Health and Safety (RSO), Sequoyah Fuels Corporation.
1988-1989 Manager, Health Physics and Industrial Hygiene (RSO), Sequoyah Fuels Corporation.
1985-1988 Superintendent of Plant Support, (Radiation Protection Manager) Wolf Creek Power Station, Wolf Creek Nuclear Operating Corporation. Responsible for Fire Protection, Radiation Protection and Emergency Planning. Responsible for the management, direction, and supervision of a department of 175 personnel. Interfaced with FEMA, NRC, EPA and other State and Local Regulatory agencies in areas of compliance, inspection

and joint training. During plant start-up: responsible for installation, testing and modification of radioactive and chemical systems.

- 1979-1985 Radiation Protection Manager, Wolf Creek Nuclear Operating Corporation. Responsible for development of programs and procedures to assure compliance with regulatory requirements, Radiation Protection, Emergency Planning, internal and external dosimetry, nuclear plant start-up and power ascension and industrial and chemical safety. Developed site specific Health Physics Program description for Wolf Creek final Safety Analysis Report. Responsible for the development and implementation of the Emergency Plan. Directed development of Technician and Engineer Training Program as well as plan wide radiation worker, GET, safety/chemical safety and respiratory protection and Emergency Plan Training.
- 1973-1979 Supervisor, Radiological and Industrial Hygiene Program Development, Arkansas Nuclear One, Arkansas Power and Light Company. Responsible for Radiological and Industrial Hygiene Program development and implementation including regulatory interface, equipment calibration for fixed and portable instrumentation and associated training. Developed procedures for analyses of secondary and primary chemistry samples; performed chemical and radiochemical analyses of various samples; developed and implemented various procedures including instrument calibration, system start-up and repair.
- 1972-1973 Technician, Enrico Fermi Nuclear Power Plant, Detroit Edison Company. Supervision of personnel during start-up efforts, defueling, and decommissioning Fermi I-LMFBR; supervised activities during fuel and major component removal.
- 1971-1972 Laboratory Technician, Enrico Fermi Nuclear Power Plant, Detroit Edison Company. Part-time chemistry and radiological technician activities and analyses while attending Oklahoma State University.

Kenneth G. Simeroth, Supervisor-Health Physics/Assistant RSO, New Sequoyah Fuels Corporation

Education

BS Industrial Technology, Northeastern State University.
AA Northeastern State, Tahlequah, Oklahoma (Major: Arts and Physics).
Certificate, Chemical Operator School, Gore, Oklahoma.
Radiological Technologist Course, Rockwell International.

License No. SUB-1010
Amend. No. Revision

Docket No. 40-8027
Date 12/21/89

Page
II. 11-15

Experience

1/90- Supervisor-Health Physics/Assistant RSO, Sequoyah Facility, New Sequoyah Fuels Corporation.

1989 Supervisor-Health Physics/Assistant RSO, Sequoyah Facility, Sequoyah Fuels Corporation.

1970-1988 Senior Health and Safety Technician, [Sequoyah Facility], Sequoyah Fuels Corporation, [Kerr-McGee Corporation]

1970 Chemical Operator, Sequoyah Facility, Kerr-McGee Corporation.

Glenn M. Barton, Manager, Procedures/Training and Community Relations, New Sequoyah Fuels Corporation

Education

BA Business, Oklahoma City University.
MA Human Relations, University of Oklahoma.

Experience

1/90- Manager, Procedures/Training and Community Relations, Sequoyah Facility, New Sequoyah Fuels Corporation.

6/88-1989 Manager, Procedures/Training and Community Relations, Sequoyah Facility, Sequoyah Fuels Corporation.

1986-6/88 Manager, Procedures and Training, Sequoyah Facility, Sequoyah Fuels Corporation.

1985-1986 Manager, Employee Relations, U.S. Onshore Division of Oil and Gas Division.

1981-1985 Manager, Training and Personnel Services, Kerr-McGee Corporation.

1979-1981 Administrator, Employee Relations, Kerr-McGee Corporation.

1975-1979 Employee Relations Specialist, Kerr-McGee Corporation.

1974-1975 Senior Job Analyst, Kerr-McGee Corporation.

1972-1974 Senior Administrative Analyst, Kerr-McGee Corporation.

1967-1972 Systems Analyst, Kerr-McGee Corporation.

Don R. Knoke, Manager, Sequoyah Facility Laboratory, New Sequoyah Fuels Corporation

Education

BS Chemistry, West Virginia University.

Experience

1/90- Manager, Facility Laboratory, New Sequoyah Fuels Corporation.

5/86-1989 Manager, Facility Laboratory, Sequoyah Fuels Corporation.

1986- Senior Analytical Chemist, Sequoyah Facility, Sequoyah Fuels Corporation.

1969-1986 Supervisor, Laboratory Instruments, Sequoyah Facility, Kerr-McGee Corporation.

1968-1969 Chemist, Method Development, Sequoyah Facility, Kerr-McGee Corporation.

1966-1968 Chemist, Method Development, Amceel Plant, Celenase Fibers Company.

1957-1966 Chemist, Mallinckrodt Chemical Works, Uranium Division, Weldon Springs, Missouri.

David R. Swaney, Manager, Quality Assurance, New Sequoyah Fuels Corporation

Education

BS Chemistry, Antioch College.
Certified - American Chemical Society.

Experience

1/90- Manager, Quality Assurance, New Sequoyah Fuels Corporation.

4/86-1989 Manager, Quality Assurance, Sequoyah Fuels Corporation.

1969-1986 Manager, Facility Laboratory, Sequoyah Facility, Sequoyah Fuels Corporation.

1966-1969 Supervisor, Department of Chemical Control,
Mallinckrodt, Inc., St. Louis, Missouri.

1961-1966 Supervisor, Analytical Department, Uranium Division,
Mallinckrodt Chemical, Weldon Spring, Missouri.

1958-1961 Staff Assistant, Analytical Department, Uranium
Division, Mallinckrodt Chemical, Weldon Spring,
Missouri.

1953-1957 Chemist, Department of Chemical Control, Destrehan
Facility, Mallinckrodt Chemical, St. Louis, Missouri.

1951-1953 Department of Chemical Control, Mallinckrodt Chemical,
St. Louis, Missouri.

Ronald J. Adkisson, Vice President, Business Development, New
Sequoyah Fuels Corporation

Education

BBA Marketing/Management, Central State University.

Experience

1/90- Vice President, Business Development, New Sequoyah Fuels
Corporation.

12/88-1989 Vice President, Business Development, Sequoyah Fuels
Corporation.

8/83-11/88 Director, Contract Management and Cimarron Operations.

1981-1983 Director, Uranium Sales, Kerr-McGee Nuclear Corporation.

1979-1981 Manager, Technical Sales, Kerr-McGee Nuclear
Corporation.

1978-1979 Manager, Regulatory Claims, Kerr-McGee Nuclear
Corporation.

1976-1978 Sr. Planning Analyst - Market Planning, Kerr-McGee
Nuclear Corporation.

1975-1976 Claims Representative, Kerr-McGee Corporation.

1973-1975 Accountability & Security Supervisor, Kerr-McGee Nuclear
Corporation.

1972-1973 Nuclear Technician, Kerr-McGee Nuclear Corporation.

James C. Carr, Manager, Waste Treatment and Disposal Operations,
New Sequoyah Fuels Corporation

Education

Chemistry, 3 years, University of Colorado, Boulder, Colorado
Diploma, Agar High School, Agar, South Dakota.

Experience

1/90- Manager, Waste Treatment and Disposal Operations, New
 Sequoyah Fuels Corporation.

12/87-1989 Manager, Waste Treatment and Disposal Operations,
 Sequoyah Fuels Corporation.

1985-1987 Manager, Process Engineering, Sequoyah Fuels
 Corporation.

1984-1985 Manager, Sequoyah Facility, Sequoyah Fuels Corporation.

1978-1984 Manager, Engineering, Kerr-McGee Nuclear Corporation.

1975-1978 Senior Process Engineer, Kerr-McGee Nuclear Corporation.

1972-1975 Technical Supervisor - FFTF, Kerr-McGee Nuclear
 Corporation.

1971-1972 Plutonium Plant Supervisor, Kerr-McGee Nuclear
 Corporation.

1969-1971 Senior Process Engineer, Kerr-McGee Nuclear Corporation.

1963-1969 Shift Supervisor, Dow Chemical Corporation, Rocky Flats.

James H. Mestepey, Vice President, Operations, New Sequoyah Fuels
Corporation

Education

BS General Science (Chemistry, Physics & Mathematics), Louisiana
State University.

Experience

1/90- Vice President, Operations, New Sequoyah Fuels
 Corporation.

11/88-1989 Vice President, Operations, Sequoyah Fuels Corporation.

7/87-10/88 Manager of Operations, Sequoyah Fuels Corporation.
4/87-7/87 Manager, Special Projects and Process Technology,
Sequoyah Facility, Sequoyah Fuels Corporation.
1985-1987 Senior Project Manager, New York State Energy Research
and Development Authority, West Valley, New York.
1984-1985 Manager, Special Nuclear Studies, Allied Corporation,
Barnwell, South Carolina.
1979-1983 Manager, Plant Engineering and Maintenance,
Allied-General Nuclear Services, Barnwell, South
Carolina.
1977-1979 Manager, Design Engineering, Allied-General Nuclear
Services, Barnwell, South Carolina.
1973-1977 Superintendent, UF₆ Facility, Allied-General Nuclear
Services, Barnwell, South Carolina.
1971-1973 Technical Superintendent, Metropolis Works, Allied
Corporation, Metropolis, Illinois.

R. A. Parker, Manager, Maintenance, New Sequoyah Fuels
Corporation

Education

BS Electrical Engineering, Western Michigan University.

Experience

1/90- Manager, Facility Maintenance, New Sequoyah Fuels
Corporation.
6/86-1989 Manager, Facility Maintenance, Sequoyah Fuels
Corporation.
1982-1986 Superintendent Prep Plant, Kerr-McGee Coal Corporation,
Clovis Point Mine.
1980-1982 Senior Construction Engineer, Kerr-McGee Coal
Corporation, Jacobs Ranch and Clovis Point Mines.
1979-1980 Construction Engineer, Kerr-McGee Coal Corporation,
Jacobs Ranch and Clovis Point Mines.
1978-1979 Development and Implementation of Prevent Maintenance
Program, Atlantic Richfield company, Black Thunder Mine.

1976-1978 Development and Implementation of Preventive Maintenance Programs, Eveleth Mines, Thunderbird Mines.
1975-1976 Electrical Engineer, Hibbing Taconite Company, Hibbing, Minnesota.
1972-1975 Instructor, Michigan Technological University, Houghton, Michigan.
1969-1972 Electrical Engineer, Consumers Power Company, Jackson, Michigan.

Sam R. Fryer, Manager, Engineering, New Sequoyah Fuels Corporation

Education

BS Chemical Engineering, Massachusetts Institute of Technology.
MBA Marketing Concentrate, Harvard Business School.
Registered Professional Engineer in Oklahoma.

Experience

1/90- Manager, Engineering, New Sequoyah Fuels Corporation.
8/86-1989 Manager, Engineering, Sequoyah Fuels Corporation.
1985-1986 Director, Technology and Engineering, Sequoyah Fuels Corporation.
1980-1985 Manager, Planning and Analysis, Roy M. Huffington, Inc., Houston, Texas.
1977-1980 Manager, Planning, Cities Service Company, Tulsa, Oklahoma.
1966-1977 Manager of Chemicals Getty/Skelly Oil Company. Other positions during this period included Development Engineer, Vice President and Director Chemland Corporation (subsidiary), Vice President and Director Hawkeye Chemical Company (subsidiary), Director Yong-Nam Chemical Company (subsidiary).
1964-1966 Attended Harvard MBA Program.
1960-1964 Development Engineer, Dow Chemical Company.

Michael R. Chilton, Area Manager, UF₆, New Sequoyah Fuels Corporation

Education

BS Chemical Engineering, University of Missouri.

Experience

1/90- Area Manager, UF₆, New Sequoyah Fuels Corporation.
5/89-12/89 Area Manager, UF₆ Sequoyah Fuels Corporation.
1/89-5/89 Area Manager, UF₆ & DUF₄, Sequoyah Fuels Corporation.
1/88-1/89 Manager, DUF₄ and Process Engineering, Sequoyah Fuels Corporation.
1986-1988 Manager, DUF₄, Sequoyah Facility, Sequoyah Fuels Corporation.
1985-1986 Operations Liaison, DUF₄ Construction Project, Sequoyah Fuels Corporation.
1981-1985 Process Engineer, Sequoyah Fuels Corporation.

Tom L. Johns, Area Manager, UO₃, New Sequoyah Fuels Corporation

Education

BS Chemical Engineering, University of Arkansas.

Experience

1/90- Area Manager, UO₃, New Sequoyah Fuels Corporation.
5/89-12/89 Area Manager, UO₃, Sequoyah Fuels Corporation.
9/88-5/89 Senior Process Engineer, Sequoyah Fuels Corporation.
1985-9/88 Instrumentation Engineer, Power Specialties, Inc.

Larry A. Tharp, Manager, Process Engineering, New Sequoyah Fuels Corporation

Education

BSCHE Chemical Engineering, University of Tulsa.

Experience

- 1/90- Manager, Process Engineering, New Sequoyah Fuels Corporation.
 - 1989 Manager, Process Engineering, Sequoyah Fuels Corporation.
 - 1986-1988 Area Manager, Sequoyah Facility, Sequoyah Fuels Corporation.
 - 1979-1986 Senior Process Engineer, Sequoyah Facility, Kerr-McGee Corporation.
 - 1970-1978 Area Supervisor, Sequoyah Facility, Kerr-McGee Corporation.
 - 1969-1970 Senior Engineer, Sequoyah Facility, Kerr-McGee Corporation.
 - 1963-1969 Technical Assistant to the Superintendent, International Paper Company, Pine Bluff, Arkansas.
-

Joseph E. Bohannon, Area Manager, DUF₄, New Sequoyah Fuels Corporation

Education

BS Chemical Engineering, University of Oklahoma.
Registered Professional Engineer in Oklahoma.
Radiation Safety Specialty Training, Oklahoma State University.
Visible Emissions Training, Eastern Technical Associates.
Economic Evaluation and Investment Decision Methods, Colorado School of Mines.
Practical Project Economic Evaluation, A.I.C.H.E.
Selected Diffusional Unit Operations, Oklahoma State University.
Crystallization Technology, Center for Professional Development.

Experience

- 1/90- Area Manager, DUF₄, New Sequoyah Fuels Corporation.
- 5/89-12/89 Area Manager, DUF₄, Sequoyah Fuels Corporation.
- 7/87-5/89 Senior Process Engineer, Sequoyah Fuels Corporation.
- 6/85-7/87 Engineer, Technology Division, Kerr-McGee Corporation.
- 6/82-6/85 Associate Engineer, Technology Division, Kerr-McGee Corporation.

Farrell Mathews, Shift Supervisor, New Sequoyah Fuels Corporation

Education

Diploma, Sapulpa High School.

Experience

1/90- Shift Supervisor, New Sequoyah Fuels Corporation.
1989 Shift Supervisor, Sequoyah Fuels Corporation.
1986-1988 Area Superintendent, Sequoyah Facility, Sequoyah Fuels Corporation.
1970-1986 Area Supervisor, Sequoyah Facility, Kerr-McGee Corporation.
1969-1970 Shift Supervisor, Sequoyah Facility, Sequoyah Fuels Corporation.

John L. Swimmer, Shift Supervisor, New Sequoyah Fuels Corporation

Education

Diploma, Vian High School, Vian, Oklahoma.
Connors State College (30 hours).

Experience

1/90- Shift Supervisor, New Sequoyah Fuels Corporation.
1/88-1989 Shift Supervisor, Sequoyah Fuels Corporation.
11/86-1/88 Area Superintendent, Sequoyah Facility, Sequoyah Fuels Corporation.
10/68-11/86 Shift Supervisor, Sequoyah Facility, Sequoyah Fuels Corporation, Kerr-McGee Corporation.

Jerry Sam Gilbreath, Shift Supervisor, New Sequoyah Fuels Corporation

Education

Diploma, Vian High School, Vian, Oklahoma.

Experience

1/90- Shift Supervisor, New Sequoyah Fuels Corporation.
11/86-1989 Shift Supervisor, Sequoyah Fuels Corporation.
6/78-11/86 Assistant Control Room Operator, Sequoyah Facility,
Sequoyah Fuels Corporation.
11/71-6/78 Chemical Operator, Sequoyah Facility, Kerr-McGee
Corporation.
6/71-11/71 Chemical Operator Trainee, Sequoyah Facility, Sequoyah
Fuels Corporation.
10/70-6/71 Laborer/Sampler, Sequoyah Facility, Sequoyah Fuels
Corporation.

Sammie N. Moore, Shift Supervisor, New Sequoyah Fuels Corporation

Education

Diploma, High School Graduate, Ft. Gibson, Oklahoma.

Experience

1/90- Shift Supervisor, New Sequoyah Fuels Corporation.
1/71-1989 Shift Supervisor, Sequoyah Fuels Corporation.
1969-1971 Control Room Operator, Sequoyah Facility, Kerr-McGee
Corporation.

J. C. Brewer, Shift Supervisor, New Sequoyah Fuels Corporation

Education

Diploma, Bokoshe High School.

Experience

1/90- Shift Supervisor, New Sequoyah Fuels Corporation.
1/72-1989 Shift Supervisor, Sequoyah Fuels Corporation.

1969-1972 Control Room Operator, Sequoyah Facility, Kerr-McGee Corporation.

Richard Hughes, Jr., Shift Supervisor, New Sequoyah Fuels Corporation

Education

Diploma, Okay High School, Okay, Oklahoma.

Experience

1/90- Shift Supervisor, Sequoyah Facility, New Sequoyah Fuels Corporation.
4/86-1989 Shift Supervisor, Sequoyah Facility, Sequoyah Fuels Corporation.
2/78-4/86 Assistant Shift Supervisor, Sequoyah Facility, Kerr-McGee Corporation.
1975-1978 Assistant Control Room Operator, Sequoyah Facility, Kerr-McGee Corporation.
1969-1975 Chemical Operator, Sequoyah Facility, Kerr-McGee Corporation.

Jimmy D. Hummingbird, Shift Supervisor, New Sequoyah Fuels Corporation

Education

Diploma, Stillwell High School, Stillwell, Oklahoma.

Experience

1/90- Shift Supervisor, New Sequoyah Fuels Corporation.
4/86-1989 Shift Supervisor, Sequoyah Fuels Corporation.
1/79-4/86 Assistant Shift Supervisor, Sequoyah Facility, Kerr-McGee Corporation.
1970-1979 Control Room Operator, Sequoyah Facility, Kerr-McGee Corporation.
1969-1970 Chemical Operator, Sequoyah Facility, Kerr-McGee Corporation.

Jerry D. Clapp, Shift Supervisor, New Sequoyah Fuels Corporation

Education

Diploma, Hobbs High School, Hobbs, New Mexico.
Bailey Computer Training.

Experience

1/90- Shift Supervisor, New Sequoyah Fuels Corporation.
11/86-1989 Shift Supervisor, Sequoyah Fuels Corporation.
1976-1986 Control Room Operator, Sequoyah Facility, Sequoyah Fuels Corporation.
1969-1976 Chemical Operator, Sequoyah Facility, Sequoyah Fuels Corporation.

Barbara Sue Smith, Shift Supervisor, New Sequoyah Fuels Corporation

Education

Diploma, Braggs High School, Braggs, Oklahoma.
College Training - 3 years - John F. Kennedy College.

Experience

1/90- Shift Supervisor, New Sequoyah Fuels Corporation.
11/86-1989 Shift Supervisor, Sequoyah Fuels Corporation.
1977-1986 Chemical and Relief Operator, Sequoyah Facility, Sequoyah Fuels Corporation.
1977 Labor, Sequoyah Facility, Sequoyah Fuels Corporation.

Deborah Ann Emerson, Shift Supervisor, New Sequoyah Fuels Corporation.

Education

GED American Schools, Chicago, Illinois.

Experience

1/90- Shift Supervisor, New Sequoyah Fuels Corporation.

License No. SUB-1010
Amend. No. Revision

Docket No. 40-8027
Date 12/21/89

Page
II. 11-27

7/87-1989 Shift Supervisor, Sequoyah Fuels Corporation.
1977-1987 Chemical Operator, Sequoyah Facility, Kerr-McGee Corporation.
1976-1977 Chemical Operator Trainee, Sequoyah Facility, Kerr-McGee Corporation.
1976 Laborer, Sequoyah Facility, Kerr-McGee Corporation.

Lloyd Macarty, Shift Supervisor, UO₃ Area, New Sequoyah Fuels Corporation

Education

Diploma, Northeast High School, Oklahoma City, Oklahoma.

Experience

1/90- Shift Supervisor, New Sequoyah Fuels Corporation.
6/89-12/89 Shift Supervisor, Sequoyah Fuels Corporation.
3/88-6/89 Control Room Operator II, Sequoyah Facility, Sequoyah Fuels Corporation.
1/79-3/88 Assistant Control Room Operator, Sequoyah Facility, Sequoyah Fuels Corporation
2/78-1/79 Relief Operator, Sequoyah Facility, Kerr-McGee Corporation.
5/71-2/78 Chemical Operator, Sequoyah Facility, Kerr-McGee Corporation.
8/70-5/71 Chemical Operator Trainee, Kerr-McGee Corporation.
6/68-7/70 Salesman, Standard Life Insurance Company, Oklahoma City, Oklahoma.
1/68-6/68 Salesman, B.M.A. Insurance Company, Oklahoma City, Oklahoma.
9/67-12/67 Assistant Service Manager, City Chevrolet, Muskogee, Oklahoma.
12/65-8/67 Chemical Operator, Fansteel Metalurgical, Muskogee, Oklahoma.
8/60-9/65 Route Salesman, Carnation, Phoenix, Arizona.

License No.
Amend. No.

SUB-1010
Revision

Docket No. 40-8027
Date 12/21/89

Page
II. 11-28

5/54-7/60 Packing/Shipping Clerk, Macklanburg, Oklahoma City,
Oklahoma.

Leroy M. Reid, Shift Supervisor, New Sequoyah Fuels Corporation

Education

Diploma, Sallisaw High School, Sallisaw, Oklahoma.

Experience

1/90- Shift Supervisor, New Sequoyah Fuels Corporation.
1989 Shift Supervisor, Sequoyah Fuels Corporation.
1988-1989 Relief and Project Supervisor, Sequoyah Facility,
Sequoyah Fuels Corporation.
1986-1988 Area Superintendent, Sequoyah Facility, Sequoyah Fuels
Corporation.
1979-1986 Shift Supervisor, Sequoyah Facility, Sequoyah Fuels
Corporation.
1978-1979 Assistant Shift Supervisor, Sequoyah Facility, Sequoyah
Fuels Corporation.
1972-1978 Control Room Operator, Sequoyah Facility, Kerr-McGee
Nuclear Corporation.
1969-1972 Assistant Control Room Operator and Chemical Operator,
Sequoyah Facility, Kerr-McGee Nuclear Corporation.

Bill F. Bradley, Shift Supervisor, New Sequoyah Fuels Corporation

Education

Diploma, Sallisaw High School, Sallisaw, Oklahoma.
Connors State College (one year).

Experience

1/90- Shift Supervisor, New Sequoyah Fuels Corporation.
9/87-1989 Shift Supervisor, Sequoyah Fuels Corporation.
1978-1987 Assistant Shift Supervisor, Sequoyah Facility,
Kerr-McGee Corporation.

License No. SUB-1010
Amend. No. Revision

Docket No. 40-8027
Date 12/21/89

Page
II. 11-29

- 1977-1978 Chemical Operator, Sequoyah Facility, Kerr-McGee Corporation.
- 1973-1977 Laboratory Technician, Sequoyah Facility, Kerr-McGee Corporation.
- 1970-1973 Chemical Operator, Sequoyah Facility, Kerr-McGee Corporation.
-

Billy Jo McAffrey, Shift Supervisor, New Sequoyah Fuels Corporation

Education

Diploma, Welch High School, Welch, Oklahoma.
N.E.O.A.M., Miami, Oklahoma.
Oklahoma State University (3-1/2 years), Stillwater, Oklahoma.

Experience

- 1/90- Shift Supervisor, New Sequoyah Fuels Corporation.
- 5/89-12/89 Shift Supervisor, Sequoyah Fuels Corporation.
- 10/88-5/89 Chemical Operator IV, Sequoyah Fuels Corporation.
- 11/87-10/88 Chemical Operator, Sequoyah Facility, Kerr-McGee Corporation.
- 7/87-11/87 Shift Supervisor, UF₄ Area (temporary assignment), Sequoyah Facility, Kerr-McGee Corporation.
- 5/78-7/87 Chemical Operator, Sequoyah Facility, Kerr-McGee Corporation.
- 3/78-5/78 Chemical Operator Trainee, Sequoyah Facility, Kerr-McGee Corporation.
- 11/77-3/78 Laborer, Sequoyah Facility, Kerr-McGee Corporation.
- 5/76-5/77 Self-Employed (Farming), Welch, Oklahoma.
- 9/75-5/76 Oklahoma State University Meat Laboratory, Stillwater, Oklahoma.
- 5/75-9/75 Self-Employed (Farming), Welch, Oklahoma.
-

License No. SUB-1010
Amend. No. Revision

Docket No. 40-8027
Date 12/21/89

Page
II. 11-30

Louie G. Wells, Shift Supervisor, New Sequoyah Fuels Corporation

Education

Connors State College - Sociology.
Northeastern State University (95 college credit hours).

Experience

1/90- Shift Supervisor, New Sequoyah Fuels Corporation.
5/89-12/89 Shift Supervisor, Sequoyah Fuels Corporation.
10/88-5/89 Control Room Operator II, Sequoyah Fuels Corporation.
3/88-10/88 Control Room Operator I, Sequoyah Fuels Corporation.
8/83-3/88 Assistant Control Room Operator, Sequoyah Facility,
Sequoyah Fuels Corporation.
1/79-8/83 Relief Operator, Sequoyah Facility, Kerr-McGee
Corporation.
7/73-1/79 Chemical Operator, Sequoyah Facility, Kerr-McGee
Corporation.
7/72-7/73 Chemical Operator Trainee, Sequoyah Facility, Kerr-McGee
Corporation.
5/72-7/72 Laborer, Sequoyah Facility, Kerr-McGee Corporation.
7/71-5/72 Stillwell Canning Company, Stillwell, Oklahoma.
1/71-5/71 Central Mill, Tulsa, Oklahoma.
6/70-9/71 DuPont Plastics, Tulsa, Oklahoma.

Eulous Youngblood, Shift Supervisor, New Sequoyah Fuels
Corporation.

Education

Diploma, Gans High School, Gans, Oklahoma.

Experience

1/90- Shift Supervisor, New Sequoyah Fuels Corporation.
5/89-12/89 Shift Supervisor, Sequoyah Fuels Corporation.

10/88-5/89 Control Room Operator II, Sequoyah Fuels Corporation.
12/80-10/88 Assistant Control Room Operator, Sequoyah Facility,
Kerr-McGee Corporation.
6/78-12/80 Relief Operator, Sequoyah Facility, Kerr-McGee
Corporation.
7/73-6/78 Chemical Operator, Sequoyah Facility, Kerr-McGee
Corporation.
7/72-7/73 Chemical Operator Trainee, Sequoyah Facility, Kerr-McGee
Corporation.
5/72-7/72 Laborer, Sequoyah Facility, Kerr-McGee Corporation.
9/68-1/72 Wards Manufacturing, Fort Smith, Arkansas.

D. K. Isham, Supervisor, Waste Treatment and Disposal Operations,
New Sequoyah Fuels Corporation

Education

Diploma, Vian High School, Vian, Oklahoma.
Associate Degree, Connors State College, Warner, Oklahoma.
Additional College Courses - Westark Community College, Tulsa
University.
Bailey Computer Training.

Experience

1/90- Supervisor, Waste Treatment and Disposal Operations, New
Sequoyah Fuels Corporation.
11/86-1989 Supervisor, Waste Treatment and Disposal Operations,
Sequoyah Fuels Corporation.
1971-1986 Chemical and Relief Operator, Sequoyah Facility,
Sequoyah Fuels Corporation.
1970-1971 Assistant Control Room Operator, Sequoyah Facility,
Sequoyah Fuels Corporation.
1969-1970 Operator, Sequoyah Facility, Sequoyah Fuels Corporation.

License No. SUB-1010
Amend. No. Revision

Docket No. 40-8027
Date 12/21/89

Page
II. 11-32

Leon E. McCoy, Supervisor, Waste Treatment and Disposal Operations,
New Sequoyah Fuels Corporation

Education

Diploma, Vian High School, Vian, Oklahoma.

Experience

1/90- Supervisor, Waste Treatment and Disposal Operations, New Sequoyah Fuels Corporation.

4/88-1989 Supervisor, Waste Treatment and Disposal Operations, Sequoyah Fuels Corporation.

1986-1988 Staff Operations Advisor, Sequoyah Facility, Sequoyah Fuels Corporation.

1979-1986 Area Supervisor, Sequoyah Facility, Sequoyah Fuels Corporation.

1970-1979 Shift Supervisor, Sequoyah Facility, Kerr-McGee Corporation.

1969-1970 Control Room Operator, Sequoyah Facility, Kerr-McGee Corporation.

Cecil (Butch) G. Garner, Supervisor, Waste Treatment and Disposal Operations, New Sequoyah Fuels Corporation

Education

BS Marketing and Business Administration, Northeastern State University

Experience

1/90- Supervisor, Waste Treatment and Disposal Operations, New Sequoyah Fuels Corporation.

1989 Supervisor, Waste Treatment and Disposal Operations, Sequoyah Fuels Corporation.

1984-1989 Manager, Ranch Operations, Sequoyah Facility, Sequoyah Fuels Corporation/Kerr-McGee Corporation.

1983-1984 Ranch Manager, Sheffield Farms, Webbers Falls, Oklahoma.

1973-1983 Supervisor, Cattle Research, Farmers Hybrid Co., Inc., Subsidiary of Monsanto Chemical Co., St. Louis, MO.

License No. SUB-1010
Amend. No. Revision

Docket No. 40-8027
Date 12/21/89

Page
II. 11-33

Reggie Cook, Controller, New Sequoyah Fuels Corporation

Education

BBA, Accounting Major, University of Oklahoma.

Experience

1/90- Controller, New Sequoyah Fuels Corporation.
11/88-1989 Controller, Sequoyah Fuels Corporation.
1986-1988 Group Supervisor, Coal/Uranium Accounting, Kerr-McGee Corporation.
1981-1986 Supervisor, Coal/Uranium Accounting, Kerr-McGee Corporation.
Joint Venture Coordinator, Nuclear Accounting, Kerr-McGee Nuclear Corporation.
(March-August 1981).
1979-1981 Assistant Supervisor, Retail Accounting, Kerr-McGee Corporation.
1978-1979 Refinery Accountant, Refining Accounting, Kerr-McGee Corporation.
1976-1978 TBA Inventory Control, Refining Accounting, Kerr-McGee Corporation.

License No. SUB-1010
Amend. No. Revision

Docket No. 40-8027
Date 12/21/89

Page
II. 11-34

CHAPTER 12. RADIATION PROTECTION PROCEDURES AND EQUIPMENT

This chapter describes the radiation protection programs, equipment and procedures used at the Sequoyah Facility to protect employee and public health and safety. (See Chapter 3.0 for specific requirements.)

12.1 Radiation Protection Procedures

The protection of employees and the public from radiation and hazardous materials was a principal concern in the design and construction of the facility. The philosophy that each individual is responsible for his and his fellow worker's safety is supplemented by an aggressive health and safety program to assure that conditions in the facility and in the surrounding environs are safe.

Operating procedures are strictly enforced and process equipment is designed to prevent excessive personnel exposure to radiation and radioactive materials. Radiation instruments are utilized to detect and measure radiation or contamination and prompt corrective action is taken where appropriate.

12.1.1 ALARA

The management of New Sequoyah Fuels Corporation maintains a Health and Safety program designed to maintain exposures to radiological hazards "as low as is reasonably achievable" (ALARA). There are several aspects to this ALARA commitment:

- a. A written company policy and a corporate Radiation Health and Safety Standard have been promulgated. These documents, as well as facility procedures, are used to make personnel aware of management's commitment to ALARA. Each individual is required to implement ALARA on the job.
- b. The Corporate Manager, Health Physics, periodically performs or directs a formal ALARA audit, including such items as operating procedures, emergency procedures, survey and monitoring records, bioassay data, training records, past exposure records, incident reports, inspection reports, proposed process or operational changes, and environmental data. In addition, the activities of the Health and Safety staff are reviewed.

The audit findings are documented in a report which is distributed to the ALARA committee members and others as appropriate. ALARA committee members submit their comments and recommendations to the Corporate Manager, Health Physics. The Corporate Manager, Health Physics (Chairman)

TABLE I
ESTIMATED PROCESS STREAM ACTIVITIES

UF₆ REDUCTION PLANT

NEW SEQUOYAH FUELS CORPORATION SEQUOYAH FACILITY

Stream Name	Physical Nature	Activity	
		uCi/g	uCi/ml
Dissociated Ammonia	Gas (Nitrogen & Hydrogen)	Nil	Nil
UF ₆ to Premixer	Gas (UF ₆)	3.22 x 10 ⁻¹	6.2 x 10 ⁻³
Reactor Feed (1200°F)	Gas (UF ₆ , N ₂ , H ₂)	3.10 x 10 ⁻¹	7.0 x 10 ⁻⁴
Reactor Discharge	Gas with entrained UF ₄ HF	3.10 x 10 ⁻¹	9.0 x 10 ⁻⁴
UF ₄ Product Streams	Solid Powder	3.61 x 10 ⁻¹	1.11
Off-Gas from Sintered Filters	Gas (trace of UF ₄ , HF)	8.0 x 10 ⁻⁷	7.8 x 10 ⁻¹⁰
Off-Gases to HF Recovery	Gases with HF	8.0 x 10 ⁻⁷	6.4 x 10 ⁻¹⁰
Recovered Anhydrous HF	Liquid	1.4 x 10 ⁻⁹	1.5 x 10 ⁻⁹
Off-Gases to Burner & Scrubber	Gas	5.5 x 10 ⁻⁸	5.4 x 10 ⁻¹¹
Spent Cooling Water (CWSD)	Water	Nil	Nil
Stream Condensate to Out Fall	Hot Water	Nil	Nil
Autoclave Condensate to Out Fall	Water	Nil	Nil
Dust Collector Discharge	Air	5.4 x 10 ⁻⁸	5.4 x 10 ⁻¹¹

Reference is made to Drawing 800-M-1401, "Depleted UF₄ Flow Sheet." The above listed activities are calculated for the expected nitrogen purges of 15 pounds per hour.