ATTACHMENT C

Quality Assurance Program

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1.0 ORGANIZATION

1.1 Project Manager

The Project Manager (PM) has overall responsibility for the safe conduct of the SFC Decontamination and Decommissioning Project. This individual provides senior project management oversight for implementation and execution of a project specific Quality Assurance Program, a project specific radiological health and safety program, and for compliance with all local, state, and federal regulations. The Project Manager has further assigned these responsibilities to the Director, Decontamination and Decommissioning Projects, the Manager, Health and Safety and the Quality Assurance Manager.

1.1.1 Experience and Qualifications

The Project Manager will hold a degree in science or engineering, and shall have a minimum 15 years experience, at least five years of which shall be in a project management role.

1.2 Director, Decontamination and Decommissioning Projects

The Director, Decontamination and Decommissioning Projects is responsible for the operation of facility equipment and systems, implementation and oversight of decontamination and decommissioning projects, including development of decommissioning plans, and related activities including waste management and fertilizer distribution programs. In addition, he is responsible for providing engineering support for the facility.

1.2.1 Experience and Qualifications

The Director, Decontamination and Decommissioning Projects shall hold a degree in science or engineering and have at least 5 years experience in a chemical processing or nuclear facility, including at least two years decontamination and decommissioning experience and at least five years supervisory or management experience. The individual shall have demonstrated through progressively more responsible positions the ability to manage complex technical and administrative programs similar to those found in a chemical processing plant or nuclear facility.

1.3 Manager, Health and Safety

The Manager, Health and Safety is responsible for the effluent monitoring program, training program, the respiratory protection program, the bioassay program, the health physics and safety programs, and the program for surveillance of all plant activities related to these areas. He shall be responsible for maintaining all radiation exposure and other health and safety records required by General Atomics, Sequoyah Fuels Corporation and by regulatory agencies. This individual and the cognizant Department Manager, or their designated representatives, shall document that each employee's on-the-job training and qualification has been adequate and that the employee is competent and qualified to perform his or her responsibilities.

1.3.1 Experience and Qualifications

The Manager, Health and Safety shall hold a degree in science or engineering and have at least 5 years experience in areas such as radiation protection, radiation monitoring, health physics, emergency preparedness and personnel exposure evaluation. He shall have demonstrated a proficiency to conduct specified radiation safety programs, recognize potential radiation safety problem areas in operations and advise operation supervision on radiation protection matters. He shall be capable of directing the surveillance activities of the Health and Safety Technicians.

1.4 Quality Assurance Manager

The Quality Assurance Manager is responsible for the implementation and execution of Quality Assurance and Control procedures and practices including supervision of the Project's Document Control procedures. This individual is also responsible for preparation, implementation, and oversight of the Self-Assessment and Audits procedures, including identification of deficiencies and improvements, corrective actions, and feedback.

1.4.1 Experience and Qualifications

The Quality Assurance Manager shall hold a degree in science or engineering and have a minimum of five years experience in management, with a minimum of two years experience in oversight and responsibility for quality assurance and quality control issues.

2.0 QUALITY ASSURANCE PROGRAM

2.1 Activities Affecting Quality

Decommissioning and decontamination activities will be performed under the provisions of the Sequoyah Fuels Corporation Quality Assurance Program (QAP). The requirements and guidance contained in the QAP are based on the principle that work shall be planned, documented, performed under controlled conditions, and periodically assessed to established work item quality and process effectiveness and promote improvement. The requirements described in the QAP reflect the responsibilities assigned to management and personnel of all departments and their responsibility for planning, achieving, verifying, and assessing quality and promoting continuous improvement. The QAP further delineates the quality contributions of all personnel and encourages their active participation in accomplishing the quality objectives.

2.2 Summary of QA Policies

It is the policy of SFC management to perform its decommissioning work professionally and consistently to achieve a level of quality that meets or exceeds facility license termination requirements. As part of accomplishing this management requirement, all personnel are required to comply with the elements of the Quality Assurance Program, implementing directives and project specific addenda in the day-to-day performance of their work. Suggestions on improvements to the Quality Assurance Program and its elements are encouraged, and should be directed to the Decommissioning Project Manager or the Quality Assurance Manager.

The Quality Assurance Program and its sub-tier functional area directives are designed to implement applicable requirements of the NRC's radiation program regulations applicable to fuel cycle facilities and their decommissioning for license termination.

All employees of SFC and its contractors are responsible for assuring the quality of the work that they perform and for compliance with the requirements of this program and applicable regulations.

The Decommissioning Project Manager has the overall responsibility for ensuring that the Quality Assurance Program is implemented and maintained. The Quality

Assurance Manager is designated as the position responsible for implementing and assessing the scope, status, implementation and effectiveness of the Quality Assurance Program.

2.3 Program description

The Quality Assurance Program outlines the requirements and controls applied to Sequoyah Fuels Corporation activities which provide reasonable assurance that activities conform to NRC license requirements, federal and state regulations, and corporate policies and procedures. Authority to stop work is assigned to the Director of Regulatory Affairs. This authority includes further processing of unsatisfactory work or further processing of unsatisfactory items. Inherent in this process is the authority to order resumption of work when the cause of the work suspension has been brought under control. Stop work conditions include:

1. Serious safety threat to employees or surrounding community.
2. Violation of Sequoyah Fuels Corporation License.
3. Violation of government regulation.
4. Gross contractual negligence.

2.4 Management Reviews

SFC officers, directors, managers, and supervisors shall be responsible for assuring that personnel are provided the proper training, tools, skills, and information to properly perform their assigned tasks.

2.5 Procedural Controls

Decommissioning activities that generate results essential to decommissioning (e.g. radiological surveys, waste generation and disposal, and radiation exposure data) shall be controlled using approved, written procedures.

The preparation, issue, and change of the procedures that specify quality requirements or prescribe activities affecting quality, safety, or handling of licensed material shall be controlled to assure that correct procedures are being employed. Such procedures, including changes thereto, shall be reviewed for adequacy and approved for release by authorized personnel (Plant Review Committee).

The procedure control system shall be controlled by written, approved procedures, and shall provide for:

1. Identification of procedures to be controlled and their specified distribution;
2. Identification of assignment of responsibility for preparing, reviewing, approving, and issuing procedures;
3. Review of procedures for adequacy, completeness, and correctness prior to approval and issuance; and
4. Identification of essential criteria (quantitative and qualitative) for work activities with quality assurance requirements.

The procedure changes shall be reviewed and approved by the same organizations that performed the original review, unless other organizations are specifically designated. Some minor procedure changes, such as inconsequential editorial corrections, shall not require that the revised procedures receive the same review and approval as the original procedure. The type of minor changes that do not require such a review and approval are delineated in written procedures.

The Plant Review Committee (PRC) shall be responsible for determining the need for and the amount of training to be conducted prior to implementing new or revised operating procedures.

2.6 Program Changes

Changes to the key elements of the Quality Assurance Program will be submitted to the NRC for review and approval prior to implementation.

The NRC will be notified of any changes to the organizational elements within 30 days after the announcement of the change is made.

Editorial changes or personnel reassignments or a nonsubstantive nature do not require NRC notification.

2.7 Management Assessment of Program Effectiveness

The effectiveness of the Quality Assurance Program will be monitored and assessed through the Audit and Surveillance Program and the Corrective Action Program. Audit findings and deficiencies identified through the Corrective Action Program will be tracked and trended through the commitment tracking system.

Audit findings and their responses and Condition Reports and their resolutions will be reviewed by the Plant Review Committee.

2.8 Instructions to Personnel

Sequoyah Fuels Corporation officers, directors, managers, and supervisors shall be responsible for assuring that personnel are provided the proper training, tools, skills, and information to properly perform their assigned tasks.

2.9 Training and Qualification

SFC 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:

General Employee Training

General Employee Training consists of classroom lectures and demonstrations for all new hires. Topics covered include radiation protection, emergency requirements, and procedures, as appropriate to the individual's position.

Decontamination and Decommissioning Technician Training and Qualification

Decontamination and Decommissioning Technician Training consists of classroom lectures and on-the-job training modules for specific functions. Before being permitted to perform the requirements without direct supervision, technicians are qualified based upon successful completion of required classroom and on-the-job training. The qualification system is promulgated in an operating procedure, which is reviewed and approved by the Plant Review Committee.

Retraining

Refresher training is conducted each calendar year for all employees whose normal duties expose them to licensed or hazardous materials, and includes such subjects as health physics, safety, hazard communications, and specified procedures.

Development and Approval of Training Materials

Development and approval of training materials is conducted by the department under whose cognizance the subject matter falls. New training materials and revisions to existing training materials are approved by the cognizant Department Manager.

2.10 Formal Training and Qualification Programs

Documentation of formal training and qualification shall include the objectives and content of the program, the attendees, date of attendance, and test scores, as applicable.

2.11 Self-Assessment Program

The Self-Assessment Program is implemented through the Audit and Surveillance Program and the Corrective Action Program. Results of audits and surveillances are forwarded to the cognizant Department Manager, as well as to the Plant Review Committee.

2.12 Independence of Self-Assessment Personnel

Personnel performing self-assessment shall be independent of the activities being observed, and shall be qualified by education, experience and training, as appropriate.

2.13 Organizational Responsibilities

An organizational structure, functional responsibilities and qualifications, levels of authority, and lines of communication for activities affecting quality shall be established and documented. The management organization that is responsible for assuring that decommissioning and subsequent license termination requirements are met is established in Chapter 2 of Source materials License, SUB-1010.

2.14 Acceptance Criteria

Quality-related activities shall be prescribed by and accomplished in accordance with documented and approved instructions, procedures, or drawings. These instructions, procedures and drawings shall contain the necessary detail required by the activity and include or reference appropriate acceptance criteria.

3.0 DOCUMENT CONTROL

Documents that specify quality-related requirements and instructions are identified, reviewed, approved, issued, distributed, and maintained as controlled documents in accordance with written procedures. A listing of the types of documents to be maintained as controlled documents is contained in a Controlled Document List**.** The Controlled Document List will be updated as needed, to ensure it is comprehensive, current, and complete.

Changes to controlled documents are reviewed and approved by the same organization that reviewed and approved the documents originally, or by other designated qualified organizations. Disposition of superseded or modified documents is controlled in accordance with written procedures. A master list of controlled documents is maintained to identify the current revision number of instructions, procedures, specifications, drawings, and procurement documents. The list is distributed periodically to those individuals or organizations responsible for maintaining the applicable controlled documents, to prevent the use of outdated or obsolete documents.

Appropriate controlled documents are available in work areas before initiation of and during the performance of activities affecting quality. This availability is verified periodically by Quality Assurance. Changes or revisions to controlled documents are verbally communicated to affected individuals and a required reading program assures awareness of the change.

4.0 CONTROL OF MEASURING AND TEST EQUIPMENT

4.1 Equipment Used

Personnel will use appropriate procedures to ensure adequate control of measuring and test equipment that affect site characterization and the quality of design, construction, or operation. Procedures describe calibration technique, frequency, maintenance, and control of measuring and test equipment.

Standards for calibration are determined with appropriate reference to nationally accepted standards, manufacturers' instructions, intended uses, and other factors. If national standards do not exist, the basis for calibration is documented. Calibrations

are performed immediately prior to use when such action is necessary to maintain or ensure accurate measurements and tests.

Documented calibration records are maintained as Quality Assurance records, in accordance with applicable procedures. Calibration instructions are maintained as controlled documents.

4.2 Equipment Calibration

Measuring and test equipment is labeled, tagged, or otherwise identified and documented to indicate the next calibration due date, as well as to provide traceability to calibration test data. Before measuring and test equipment is used, it is checked by the user to have a current calibration. Equipment is calibrated at specific intervals based on manufacturer's recommendations or on required accuracy and equipment history of drifting, precision, purpose, or any other characteristics that could affect accuracy. If a piece of equipment is found to be out of calibration, evaluations are made to determine the validity and acceptability of any measurements performed subsequent to the last calibration. If items are measured with equipment found to be out of calibration, the items will be reinspected.

4.3 Daily Calibration Checks

Instruments in use shall be verified (checked) daily when in use to ensure that the instrument is in proper working condition. An instrument shall be removed from service if the source check is not within ±20 percent of the initial post-calibration value. Laboratory instruments used for radioactivity measurements are evaluated daily before use via check sources and efficiency checks. Maintenance or repair shall be performed if the daily source or background checks are not within prescribed ranges.

4.4 Documentation

Documentation will be maintained to demonstrate that only properly calibrated and maintained equipment was used during the decommissioning.

1. Tools, gauges, instruments, and other measuring and test equipment used for specified activities affecting quality shall be controlled and at specified periods calibrated and adjusted to maintain accuracy.
2. Out-of-calibration devices shall be tagged or segregated and not used until they have been re-calibrated.

3. Records shall be maintained to indicate calibration status.

5.0 CORRECTIVE ACTION

5.1 Corrective Action Procedures

Corrective actions are accommodated through written procedures that implement a corrective action program. Conditions adverse to quality are evaluated via the corrective action program, and if found to be significant, are investigated to determine root causes, to decide on immediate corrective actions, to project preventive actions, and to define follow-up needs. The evaluations are documented within the corrective action program.

5.2 Documentation

Follow-up verification by the Quality Assurance Manager or designee ensures that the corrective actions have been implemented in a timely manner and are effective. The Quality Assurance Manager monitors progress and closes corrective actions in a timely manner.

The Quality Assurance Manager reports on corrective actions pending and closed, and on trends related to Condition Reports, at each Plant Review Committee meeting.

Documentation will be maintained of Condition Reports, action taken to resolve the condition, and any follow-up audits or actions.

6.0 QUALITY ASSURANCE RECORDS

6.1 QA Records Management

A records management system for items with quality assurance requirements includes, in part, the following; operating logs, results of reviews, inspections, tests, audits, monitoring of work performance, and material analyses. Records also include closely related data such as qualifications of personnel, training, procedures, equipment records (including calibrations), evaluations and analyses of a quality-related nature.

The types and locations of quality assurance records are identified in a subject-oriented records list. Individual records are classified, designated, validated, and stored in accordance with written procedures. Quality Assurance documents are traceable to

relevant items and activities, and are identifiable and retrievable. Record retention is in accordance with applicable regulatory requirements.

6.2 Records Storage

Records will be stored in a manner that prevents damage due to reasonable anticipated events. All permanent records will be protected against larceny and vandalism. Records will be placed in either lockable file cabinets or in rooms that are lockable when the area is unattended.

7.0 AUDITS

7.1 Audit Program

Audits and surveillances are planned and scheduled according to the type and status of work being performed. Unannounced audits and surveillances are performed as necessary.

7.2 Audit Documentation

The results of audits and surveillances shall be documented. Quality Assurance is responsible for ensuring that audit findings and observations are monitored and closed out in a timely manner. Audit results are documented and reviewed by management personnel who are responsible for the audited area.

7.3 Follow-up Activities

Management personnel take appropriate action to identify root causes, correct deficiencies, prevent recurrences, and determine impacts of audit findings in their area of responsibility. Follow-up actions are performed as necessary to ensure that appropriate corrective actions have been implemented in a timely manner and are effective.