CONTINGENCY PLAN

FOR

SEQUOYAH FACILITY,

SEQUOYAH FUELS CORPORATION

GORE, OKLAHOMA

DOCKET NO. 40-8027

SOURCE MATERIAL LICENSE NO. SUB-1010

Revision No. 7, 11/89

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which contribute to limiting exposure to, or release of, radioactive or hazardous chemical materials. Brief descriptions of the subsequent seven chapters are summarized in the following paragraphs.

Event Classification: Emergencies are categorized into four classes: Unusual Event, Alert, Site Area Emergency, and General Emergency. The facility's condition, the magnitude of the event, and the degree of the actual or potential onsite and/or offsite hazard are key elements in determining the classification of the event. The lowest class, in order of severity, is Unusual Event. This class of emergency describes an event involving some potential degradation of the overall level of plant safety, but no hazard presently exists. The Alert class deals with events representing a significant actual or potential degradation in plant safety, but if hazardous conditions exist, they are usually limited to small, noncritical areas of the site. A Site Area Emergency declaration indicates a substantial degradation of plant safety. Serious hazards could exist onsite. The General Emergency class denotes that a major release of radioactive and/or hazardous materials is imminent or ongoing. Hazardous conditions are anticipated offsite for some distance beyond the site boundary (Protected Area). Figure 0-1 is an event sequence flow chart illustrating Plan implementation.

Organization: The principal organizational structures important to this Plan are the Normal Shift Organization, the Onsite Contingency Response Organization, and the Offsite Response Organization. Direction and control of the Onsite Contingency Response Organization is the responsibility of an Onsite Emergency Director; an Offsite Emergency Director is responsible for directing the Offsite Response Organization. Onsite, the Senior Shift Supervisor is initially responsible for assessing an emergency situation, taking appropriate mitigating actions, activating this Plan, and notifying the appropriate personnel and offsite agencies. He will be succeeded as Onsite Emergency * Director by the Vice President, Administration or an alternate, as provided in the appropriate implementing procedure. Once fully activated, the onsite organization includes the following coordinators and their groups: Operations; Hazards Assessment & Control; Damage Control & Repair; Technical Support; Administration and the Senior Shift Supervisor. Should conditions warrant, further staff augmentation is accomplished by recall of additional off-shift personnel.

Table 1-1
1980 Census Population Data
For Plant Area

County or City	Direction	Distance	Population
Sequoyah County			30,749
Vian	East	6 mi.	1,500
Gore	Northwest	2.5 mi.	600
Muskogee County			66,939
Webbers Falls	West	3 mi.	485

The Carlile School building is located about one mile due east of the plant. Sequoyah Fuels Corporation has leased the building for 5 years with an additional 5 year option (as of January 24, 1986) for use as a training center, emergency response center, and environmental laboratory. Between 10 and 40 people are estimated to be in the building at any one time during normal working hours. Based on the results of a detailed population density study, there are an estimated 65 permanent residents within one mile of the plant site and 1170 within three miles. Transient population enters the area within a 10-mile radius of the plant for recreational purposes. Other transient population is represented by the 9600 vehicles per day (in 1985) which pass about one mile to the south of the plant on Interstate Highway 40.

b. Land Use:

Prior to construction of the Sequoyah Facility, farming and ranching were the primary economic activities in the area. Some cotton is raised in the bottom lands adjacent to the Arkansas River, and corn, wheat, soybeans, oats, and sorghum are occasionally grown in small patches, chiefly to the west of the facility in the Arkansas River bottom lands. At the time of site acquisition, a soybean field was located at the western edge along the Illinois River and a wheat field was located in the area now occupied by the plant; the balance of the site was in pasture and woodland.

4.0 CONTINGENCY RESPONSE ORGANIZATION

4.1 Normal Plant Organization

The Sequoyah Facility has a formal organizational structure for both normal and off-normal (back shifts, holidays, and weekends) hours. Figure 4-1 is a block diagram of the Sequoyah Fuels Corporation organization and illustrates levels of responsibility within the facility. A full personnel complement is available Monday through Friday during the day shift. Figure 4-2 shows the shift organization which comprises the normal personnel complement during back shifts, holidays, and weekends. Initial emergency response duties are the responsibility of this group during off-normal hours.

Management of the normal operating organization is provided by * the three Vice Presidents (Operations, Administration, and | Business Development) and a secondary echelon of managers who direct facility activities in the areas of:

Operations
* Maintenance
Health and Safety
* Engineering
Nuclear Licensing and Environmental Compliance
Waste Treatment and Disposal Operations
Laboratory
* Human Resources and Administration
Procedures and Training
* Materials Management

Should one of these permanently assigned individuals be absent, the positional responsibilities are delegated to another competent individual.

The Senior Shift Supervisor is in the immediate onsite position of authority and responsibility for the safe and proper operation of the facility. He is responsible for the initial evaluation of any abnormal situation and for directing the appropriate response. If an abnormal situation falls within the realm of the emergency classification system described in Section 3 of this Plan, the Senior Shift Supervisor will declare the event at the appropriate classification level. The Senior Shift Supervisor will then assume the position of Onsite Emergency Director. For events classified at the Alert level * and above, upon arrival of the Vice President, Administration (or alternate), and following an adequate briefing, the Senior Shift Supervisor will turn over the responsibilities of Onsite Emergency Director in accordance with the applicable Contingency Plan Implementing Procedure (CPIP).

4.2 Onsite Contingency Response Organization

The Sequoyah Facility has a formal Onsite Contingency Response Organization, including provisions for direction and coordination of response resources during normal and off-normal hours. Figure 4-3 illustrates the Onsite Contingency Response Organization, and Table 4-1 shows major functional responsibilities as related to members of the organization.

4.2.1 Onsite Emergency Director

The Onsite Emergency Director has overall responsibility for execution of the Contingency Plan. During emergency conditions, the Senior Shift Supervisor will initially * assume this position, until relieved by the Vice President, Administration (or alternate), in accordance with the applicable CPIP. The Senior Shift Supervisor will normally go to or remain in the Control Room unless it is necessary that he leave the Control Room to perform necessary assessment, corrective, or protective actions. The order of succession for the position of Onsite Emergency Director is as follows:

* 1. Vice President, Administration
2. Vice President, Operations
3. Manager, Health and Safety
4. Manager, Maintenance
5. Manager, UF_6 Area
6. Manager, Engineering

The position of Onsite Emergency Director carries with it the authority to commit whatever resources and actions are necessary to mitigate the situation.

The Senior Shift Supervisor, acting as Onsite Emergency Director, will perform the following actions:

a. Identify, verify the existence of, and initially classify the emergency as an Unusual Event, Alert, Site Area Emergency, or General Emergency.
b. Activate the Onsite Contingency Response Organization as appropriate, and initiate appropriate measures to mitigate the event.
c. Determine if releases of radioactive and/or hazardous materials have occurred, and, if so, assess the potential onsite and/or offsite hazards involved.
d. Initiate notification of appropriate offsite agencies and response groups.

e. Ensure that all significant actions and events are documented.

* Following notification of an alert or higher event, the Vice President, Administration (or alternate), will proceed to the Control Room. After a comprehensive briefing on the status of the facility, potential or actual onsite and offsite hazards, and the state of the Contingency Plan implementation, he will assume the responsibilities of Onsite Emergency Director from the Senior Shift Supervisor. The Onsite Emergency Director will continue implementation of the Contingency Plan and relevant CPIP's, and, as appropriate:

a. Assess and verify the situation and assure that appropriate mitigating and corrective actions are underway.
b. Review the initial event classification and alter the classification, if appropriate.
c. Continue the assessment of the actual or potential onsite and/or offsite hazard.
d. Continue the notification process.
e. Augment the onsite response organization with additional personnel as required.
f. Establish additional communications as necessary and provide current status information to offsite authorities.
g. Ensure that all appropriate implementing procedures are being executed and that all significant events and actions are documented.

4.2.2 Operations Coordinator

The Operations Coordinator reports to the Onsite Emergency Director. His responsibilities include:

a. Supervise the Senior Shift Supervisor and the operating crew.
b. Supervise the execution of assigned CPIP's.
c. Supervise the facility Fire and Rescue Team.
d. Coordinate post-event assessment.

4.2.3 Hazards Assessment and Control Coordinator

The Hazards Assessment and Control Coordinator reports to the Onsite Emergency Director. His responsibilities include:

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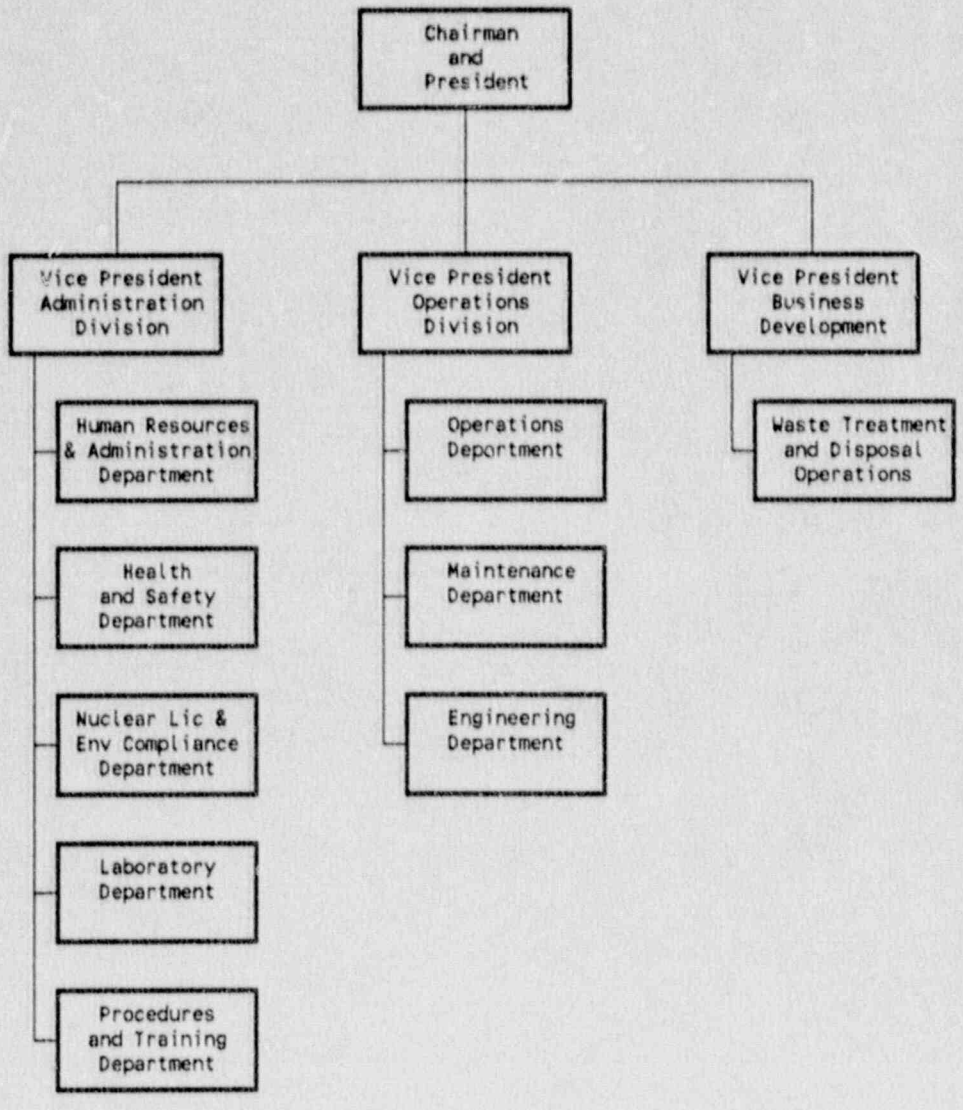

FIGURE 4 - 1

* Revised

5.0 RESPONSE MEASURES

As described in Chapters 2.0 and 3.0, safeguards are provided throughout the Sequoyah Facility processes and procedures to ensure a safe operation. Recent modifications provide further assurance that a major accident (such as the rupture of a UF_6 cylinder or a fire) resulting in a significant airborne release of potentially harmful chemicals is very unlikely to occur. However, if such an accident should happen, mitigative, corrective, and protective actions must be well planned and rapidly implemented. Sufficient time is not likely to be available for complicated calculations of dose projections or complex decision-making related to protective action. Therefore, response measures have been developed and personnel trained to assure expeditious action to protect employees and the public and to minimize environmental consequences from any of the four classifications of abnormal occurrences that could take place at the Sequoyah Facility.

5.1 Activation of Contingency Response Organization

Primary and alternate activation notification systems provide assurance of a 24 hour per day notification capability. Notification of on-shift and onsite personnel will routinely be accomplished by the facility public address system. Backup capability is provided by the Operator-Control Room FM radio system and the facility commercial telephone system. Offsite notification of members of the Onsite Contingency Response Organization during back shifts, weekends, and holidays will be performed using an automatic commercial telephone system. The alternate means of notification will be the existing commercial telephone system. Notification of the Offsite Response Organization, key corporate personnel and offsite support groups and agencies will occur using the same methods.

An Emergency Call List has been established as an attachment to the Contingency Plan Implementing Procedure (CPIP) for each emergency classification level. Each call list provides the names of those positions, organizations, and agencies to be contacted for each specific classification level. Telephone numbers are found in Emergency Notification Books located in the Control Room, at the Carlile Training Center, and in the North and South Guard House.

5.1.1 Unusual Event

Upon declaration of an Unusual Event, the Senior Shift Supervisor assumes the Onsite Emergency Director role, and the on-shift response organization is activated. The Control Room is the principal response center. The Emergency Call List for Unusual Event directs * notification of the Vice President, Administration and the Vice President, Operations, or their designated alternates.

6.0 EQUIPMENT AND FACILITIES

The Sequoyah Facility has specific facilities, equipment, and supplies designated for use during an emergency. Response centers are established to act as control, communications, and assembly centers during an event. Communications systems provide the vital capability to transmit and receive information throughout the course of the emergency. Facilities are designated for use in post-accident assessment, first aid, and personnel decontamination. Emergency monitoring equipment is available to effectively monitor releases.

6.1 Response Centers

6.1.1 Control Room

The Control Room is located on the second floor of the Process Building, and is the initial control center for directing the onsite response effort to an event. The Control Room is sealed to prevent entry of external contamination from the Process Area. Automatic dampers located in the air supply ducts close when smoke is sensed at the inlets. The Control Room contains those controls, instruments, and communications equipment necessary for operation of the plant under both normal and emergency conditions. Access to the Control Room is controlled by the Senior Shift Supervisor. During a declared emergency, the personnel within the Control Room shall be limited to the operating shift complement, support personnel authorized access by the Senior Shift Supervisor, the Operations Coordinator, the Onsite Emergency Director, and a representative of the Nuclear Regulatory Commission (NRC).

6.1.2 Onsite Emergency Center

The Onsite Emergency Center (OEC) is located in the Control Room. However, should habitability problems arise, the Onsite Emergency Director may decide to move the OEC to the Carlile Training Center (offsite). The OEC becomes the principal onsite center for direction and control of the onsite response effort once the Vice President, Administration (or alternate) assumes Onsite Emergency Director duties from the Senior Shift Supervisor. The OEC serves as the primary communications center for the facility during an

Building sprinkler foam system. The air horn signal * system is backed up by 120 VDC emergency battery power. The public address system is backed up by 120 VAC supplied by an emergency generator.

* The Offsite Emergency Notification System, comprised of | the offsite sirens and automatic telephone systems, is used to alert the offsite public to take protective actions in the event of a General Emergency at Sequoyah Facility. The system is activated from the Control Room or the South Guard House, either by, or at the direction of, the Onsite Emergency Director (Senior Shift Supervisor until relieved). The automatic telephone system is designed to provide backup to the offsite sirens, and both are activated simultaneously.

The offsite sirens are powered by offsite AC power with the control circuit powered by site AC power backed up by emergency generator-supplied power. The automatic telephone system operates independently of site electrical power. The offsite system is backed up by both offsite emergency battery and diesel generator supplied power.

6.3.2 Response Center Communications Scheme:

Figure 6-1 provides an example of primary and alternate communications methods among the various response centers, as well as the means available to communicate with plant operators, other facility personnel, and the offsite public.

6.3.3 Surveillance Testing

Emergency communications equipment that is not otherwise in normal use will be operationally checked monthly, and after each use. The Contingency Plan Coordinator ensures that operational checks are properly performed and documented.

6.4 Assessment Team Facilities

Onsite assessment personnel are located in the OEC. The OEC may be moved to alternate locations if habitability problems arise (6.1.2). During normal conditions, the OEC area (Control Room) is adjacent to the facility engineering offices. Therefore, a comprehensive library of plant procedures, plant drawings, and

6.6.2 Air Monitors

Air sampling monitor stations that would be used to assess concentrations of material (radiological and chemical) being released to the unrestricted area are:

a. Protected area fence line samplers located at each of the cardinal points of the compass.

b. Offsite air samplers are located in areas of higher population densities, at the nearest residence, and also at the point of maximum downwind concentration based on available meteorological history.

6.6.3 Meteorological Monitors

Facility meteorological measurement systems are comprised of wind speed and direction equipment located at an elevated position on the Main Process Building roof. The data this equipment provides are recorded on a strip chart recorder in the Control Room.

6.6.4 Portable Monitoring Equipment and Emergency Equipment

Portable monitoring equipment and supplies are stored at strategic locations onsite and offsite. These locations * are: 1) the First Aid Room, 2) the North Guard House, 3) the South Guard House, and 4) the Carlile Training Center. Each location has the following equipment available:

- Portable Radiation Survey Instruments:
  Alpha Detection Instrument: Range: 0-500 K cpm; Efficiency: 30% Beta-Gamma G-M Survey Instrument: Range: 0-700 K cpm; Gamma Sensitivity: 3000 cpm per mR/hr; Beta efficiency: 10%

- Self Contained Breathing Apparatus: *
  Two each in the North Guard House, the South Guard House, and the Carlile Training Center. One in the First Aid Room.

- Anti-Contamination Clothing:
  (hoods, coveralls, shoe covers, PVC gloves and rain suits).

- Portable Air Sampling Equipment: *
  (North Guard House and South Guard Houses only, have 12 V.D.C. samplers; First Aid Room and Carlile Training Center have A.C. samplers).

- Standard First Aid Supplies as recommended by the American Red Cross and HF acid treatment supplies including but not limited to:

  Alcohol, Rubbing
  Bacitracin Ointment USP
  Adhesive bandages, assorted sizes
  Compresses (sterile assorted sizes)
  Cotton Balls
  First Aid Spray
  Hydrogen Peroxide
  Labstix #28810 (Test for pH, Protein, Glucose and Blood in urine)
  Cotton Swabs
  Roll of Gauze (assorted sizes)
  Surgical Scissors
  2.5% Calcium Gluconate Gel
  Adhesive Tape

- Bioassay Sampling Supplies.

- Fire Extinguisher:
  Dry chemical, CO_2, pressurized water, or Halon (laboratory).

- A Water Supply with a water spray hose and other decontamination supplies (soap, wash rags, brushes, towels and clean clothing).

- Barricade rope, multipurpose radiation warning signs with inserts and tape.

- A Tool Kit containing screw drivers, pliers, assorted crescent wrenches, masking tape, flash lights with spare batteries, and knives

- A Copy of the Contingency Plan, CPIP's, and Emergency Procedures.

7.0 MAINTENANCE OF PREPAREDNESS

A constant state of contingency preparedness is maintained at the Sequoyah Facility through sound management and administrative controls. The maintenance program is comprised of three distinct but closely related efforts: 1) periodic review and revision of the Contingency Plan, Contingency Plan Implementing Procedures (CPIP's), and facility Emergency Procedures; 2) a comprehensive Contingency Plan training program for all facility employees, with performance-based training for those individuals having specific response assignments; and 3) a program of periodic drills to exercise and evaluate the Plan. Changes to the Contingency Plan and CPIP's that affect offsite agencies will be implemented in coordination with those agencies.

7.1 Contingency Plan and Procedures

A Contingency Plan Coordinator is assigned to ensure the periodic review and update of the Contingency Plan, CPIP's, and related Emergency Procedures. He will ensure that all proposed changes are reviewed by key individuals responsible for implementation of affected areas of the Plan. Any disagreement or uncertainty with respect to duties, responsibilities, action levels, and actions that are to be taken by each group or individual will be addressed with the Contingency Plan Coordinator. The final authority for matters relating to onsite * and/or offsite response will be the President, Sequoyah Fuels Corporation.

7.2 Training

The facility Training Program is designed to train all facility personnel and members of the Onsite Contingency Response Organization in the safe handling of uranium and hazardous materials, as well as the effective operation of systems and equipment at the Sequoyah Facility. The training consists of both classroom instruction and in-plant training in four basic program elements: (1) Radiation and Chemical Safety, (2) Plant Operations, (3) Equipment Operations, and (4) the Contingency Plan, Emergency Procedures, and CPIP's.

Medical support personnel at offsite medical treatment facilities will receive initial and annual refresher training as described in Table 7-5.

7.3 Exercises and Drills

In order to maintain proficiency in emergency response, periodic exercises and drills will be conducted to test all or part of the overall contingency response capability at the Sequoyah Facility. The Contingency Plan Coordinator is responsible for implementing the exercise and drill program.

An exercise is designed to measure the integrated capability and a major portion of the elements of the Contingency Plan. An exercise will be conducted for onsite personnel initially and annually thereafter. Initially and every five years thereafter SFC will conduct an exercise with both onsite personnel and offsite personnel. SFC will cooperate with offsite response groups should they desire to participate in this later exercise. The exercise will be accomplished through a formal, detailed scenario, using observation and control personnel. A post-exercise critique will be conducted, deficiencies identified, and remedial action responsibility assigned.

A drill is a supervised instruction period to test, develop, and maintain skills in emergency response. Drills will be conducted as follows:

a. Communications drills are held monthly. Communications systems not used daily will be tested.
b. Fire drills are conducted three times per year.
c. A medical emergency drill involving a contaminated victim is conducted annually.
d. A radiological monitoring drill is conducted annually.
e. Onsite hazards control and assessment drills are conducted semi-annually for liquid and airborne releases.

During drills and exercises, dedicated emergency equipment and supplies will be used.

7.4 Review and Updating of the Plan and Procedures

The Contingency Plan, CPIP's, and Emergency Procedures will be reviewed and updated as required on an annual basis. The review will be coordinated by the Contingency Plan Coordinator and changes will be reviewed by the Plant * Operations Review Committee and approved by the Vice President, Administration. In addition to the annual review, this Plan will be reviewed whenever changes occur in processes, kinds of materials processed, facility organization, or other key factors affecting response

8.2 Records of Preparedness Assurance

Records will be kept on file at the Sequoyah Facility that confirm the maintenance of preparedness to respond to contingencies as described in Section 3.2. These will include the following:

a. Training Records - Include names of individuals, course material, duration of instruction, and test results.

b. Records documenting drills and exercises - Include scenarios, the results of critiques, and commitment to make needed changes.

c. Inventory records - Include the types, quantities and locations of emergency equipment and supplies.

d. Records documenting maintenance, surveillance, and testing of emergency equipment and supplies.

e. Records documenting reviews and updates of the Contingency Plan and CPIP's.

8.3 Reporting

8.3.1 Notification

Upon declaration of an event under this Plan, the Onsite Emergency Director will direct the Emergency Communicator to make the following notifications using the communications systems described in Section 6.3.

a. Unusual Event:

* - Vice President, Administration (or alternate)
* - Vice President, Operations (or alternate)

b. Alert:

- Hazardous Materials Emergency Response Commission of Oklahoma
- U.S. Nuclear Regulatory Commission
- Onsite Contingency Response Organization (activate)
- Offsite Response Organization (standby alert)

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 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.