Clinch River Nuclear Site

Early Site Permit Application

Part 5A

Emergency Plan

(Site Boundary EPZ)

Appendix A

Revision 1

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A.1 CLINCH RIVER NUCLEAR SITE AND EMERGENCY PLANNING ZONE DESCRIPTION

A.1.1 FACILITY AND SITE CHARACTERISTICS

A.1.1.1 Nuclear Power Facility

The Clinch River Nuclear (CRN) Site is located on the Clinch River Property and is used as the location to construct and operate Small Modular Reactors (SMRs).

A.1.1.2 Site Location and Description

The CRN Site Property covers an area of approximately 1,200 acres located adjacent to the Clinch River in Roane County, Tennessee. The CRN Site lies north of U.S. Interstate 40, approximately midway between the communities of Harriman and Farragut in the eastern portion of Tennessee.

Site Safety Analysis Report (SSAR) Chapter 2 provides additional information regarding the physical characteristics of the proposed site, including the preliminary site layout and potential hazards in the site vicinity. The Environmental Report provides detailed information addressing land use and other features of the proposed site and surrounding area.

A.1.2 EMERGENCY PLANNING ZONES

Section 50.47(c)(2) of 10 CFR 50 establishes two Emergency Planning Zones (EPZs) for consideration in nuclear power plant emergency planning. For the CRN Site, the plume exposure pathway (PEP) EPZ encompasses the same area as the CRN site boundary. The ingestion exposure pathway EPZ encompasses an area that is yet to be determined. TVA intends to address this in the CRN Site Combined License Application (COLA). Of particular interest regarding the CRN Site is the overlapping emergency planning zone for the U.S. Department of Energy (DOE) Oak Ridge Reservation.

Figure A.1-1 provides a map of the CRN Site.

Figure A.1-1 CRN Site Boundary Emergency Planning Zone

A.2 EMERGENCY ACTION LEVELS

Part 5A Section 4.2 indicates that, recognition of the emergency class is primarily a judgment matter for plant personnel. The initiating conditions (ICs) used for recognizing and declaring the emergency class are based on specific measurable values or observable conditions defined as Emergency Action Levels (EALs). These can be combinations of specific instrument readings (including their rates of change), annunciator warnings, and time periods during which certain conditions exist, etc. CRN Site Emergency Plan Implementing Procedures (CRN-EPIPs) provide details regarding instrument readings and parameters required for determination of these EALs. Tennessee Valley Authority (TVA) uses these EALs as thresholds for determining the emergency classifications. TVA develops the EALs based on industry guidance, engineering assessments, and insights provided by the reactor plant supplier.

A.3 SITE EMERGENCY ORGANIZATION (CONCEPT OF OPERATIONS)

TVA maintains an organization capable of responding to a radiological emergency. The on-shift staff is continually present on a 24-hour basis. TVA will specify on-shift staffing at COLA. The on-shift staffing would be evaluated pursuant to Section IV.A.9 of Appendix E of 10 CFR 50.

A.3.1 OPERATIONS

The minimum staff required to conduct routine and immediate emergency operations is maintained at the station consistent with 10 CFR 50.54(m) and the facility Technical Specifications. Staffing is described in SSAR Section 13.1. Site procedures provide the details of the normal site organization, including reporting relationships.

A.3.2 FIRE PROTECTION

The Fire Shift Operations is staffed by qualified personnel that meet the requirements established in the CRN Site Fire Protection Plan.

A.3.3 RADIATION PROTECTION (RP) / CHEMISTRY

The RP/Chemistry is staffed by qualified personnel that meet the requirements established in the CRN Site Technical Specifications.

A.3.4 SECURITY

Security is staffed by qualified personnel that meet the requirements established in the CRN Site Physical Security Plan.

A.3.5 MAINTENANCE

Maintenance is staffed by personnel who are available to respond to postulated events that could involve one or more of the three commonly recognized technical disciplines; mechanical, electrical, or instrumentation. Each maintenance team member has a background in one or more discipline(s). Team members may perform cross-disciplinary work if they have a background to perform the respective task/activity. The Maintenance team members provide a first response capability within the bounds of the actions required during the initial phase of a radiological emergency.

A.3.6 ONSITE EMERGENCY MANAGEMENT ORGANIZATION

CRN-EPIPs describe the duties and responsibilities of the Onsite Emergency Management Organization positions. Figure A.3-1 illustrates the organization for the Technical Support Center (TSC), including those positions that must respond within a prescribed period of time following an Alert or higher emergency declaration. The prescribed period of time for responding to the TSC will be addressed in the CRN Site COLA. Figure A.3-2 illustrates the organization for the Operations Support Center (OSC).

A.3.6.1 Site Vice President:

The Site Vice President:

- Serves as a corporate interface for the Site Emergency Director (SED), relieving them from duties which could distract from the SED primary purpose of plant operations and emergency mitigation activities.
- Provides assistance to the SED by providing TVA policy direction; directing site resources to support the SED in emergency mitigation activities; and providing a direct interface on overall site response activities with the U.S. Nuclear Regulatory Commission (NRC), the U.S. Department of Homeland Security (DHS), or other federal organizations responding to the site, Central Emergency Control Center (CECC) Director, or onsite media.
- At their discretion, may provide an interface at the appropriate offsite location on the overall site response activities with State and local agencies, NRC region/headquarters, or Joint Information Center (JIC).
- Provides support to other emergency operation centers as necessary.

A.3.6.2 Site Emergency Director

The Site Emergency Director (SED) is located in the TSC and:

- Directs onsite emergency mitigation activities.
- Consults with the CECC Director, and Senior Site Executive on significant events and their related impacts.
- Identifies onsite protective actions.
- Apprises the NRC with regard to emergency mitigation actions being taken.
- Makes final decision on personnel entrance to radiologically-hazardous areas when Radiological (Rad) Protection recommends against the entry.
- Initiates long-term 24-hour per day emergency mitigation operations.
- Determines the emergency classification.

The SED or Control Room staff is responsible for making initial notifications to the appropriate State organization. The SED is also responsible for emergency dose authorizations for personnel under their direction and control (these responsibilities cannot be delegated).

A.3.6.3 Operations Manager

The Operations Manager is located in the TSC and:

- Directs operational activities.
- Keeps the SED informed on plant status and operational problems.
- Performs damage assessment as necessary.
- Assures the Control Room is aware of the emergency assessment and response.
- Recommends solutions and mitigating action for operational problems.

A.3.6.4 Technical Assessment Manager

The Technical Assessment Manager is located in the TSC and:

- Provides information, evaluations, and projections to the SED.
- Coordinates assessment activities with the CECC.
- Keeps the Technical Assessment Team informed of plant status.
- Assesses effluents.
- Directs the Technical Assessment Team.
- Projects future plant status based on present conditions.

The Technical Assessment Manager provides pertinent information to appropriate organizations via a continuously used and monitored telephone communications hookup.

A.3.6.5 Nuclear Security Manager

The Nuclear Security Manager is located in the TSC and:

- Directs activities of Nuclear Security Services personnel.
- Controls access to site and Control Rooms.
- Reports on site accountability/evacuation as defined in CRN-EPIPs.

A.3.6.6 Radiological Protection Manager

The Radiological (Rad) Protection Manager is located in the TSC and:

- Assesses in-plant and onsite radiological conditions.
- Directs onsite Rad Protection activities.
- Coordinates additional Rad Protection support with the CECC.

- Recommends protective actions for onsite personnel to the SED.
- Maintains radiological conditions status information.
- Coordinates assessment of radiological conditions with the CECC.
- Maintains the in-plant radiological status boards.
- Assists the Maintenance Superintendent in briefing maintenance teams.
- Assigns appropriate Rad Protection support to maintenance teams.
- Makes final recommendation to the SED for personnel entry to radiologically hazardous environments.

A.3.6.7 Chemistry Manager

The Chemistry Manager is not a minimum required staff position. When this position is staffed, the Chemistry Manager is located in the TSC and:

- Coordinates assessment of effluents with the CECC.
- Coordinates post-emergency sampling activities.
- Directs radiochemical lab activities.
- Assesses effects on radwaste and effluent treatment systems.

A.3.6.8 OSC Manager

The OSC Manager is located in the Operations Support Center and:

- Directs repairs and corrective actions in coordination with the TSC.
- Performs damage assessment.
- Directs activities of OSC.
- Coordinates maintenance teams and ensures they have received proper briefings and are accompanied by a Rad Protection Technician, as necessary.

A.3.6.9 OSC Rad Protection Representative

The OSC Rad Protection Representative is located in the TSC and:

- Directs activities of the Rad Protection lab.
- Ensures Rad Protection coverage of damage repair teams.

- Verifies habitability of the TSC, OSC, and Control Room.
- Briefs the OSC Manager and TSC on Rad Protection status.

A.3.6.10 Other OSC Representatives

Other OSC representatives are located in the OSC and provide support to the OSC Manager within their respective technical disciplines. Responsibilities include:

- Providing and supervising personnel and other resources within their respective disciplines.
- Providing pre-job and post-job briefings to personnel.
- Communicating technical information to personnel located in the TSC.

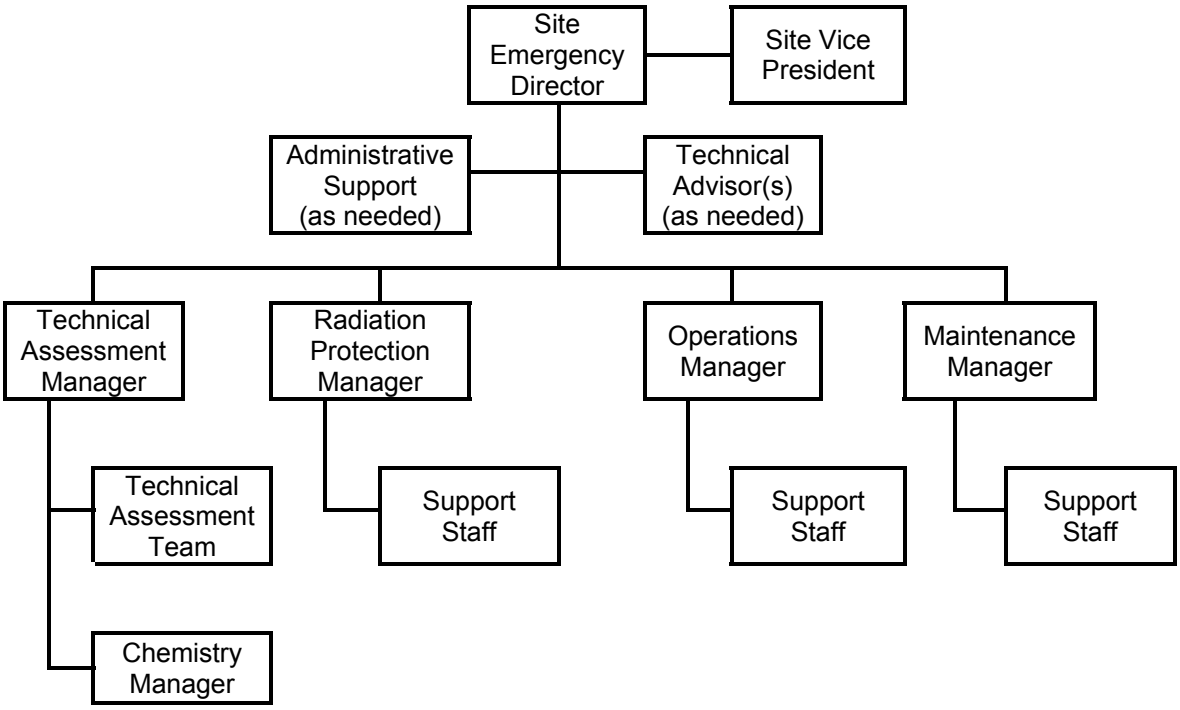

Figure A.3-1 Technical Support Center Organization

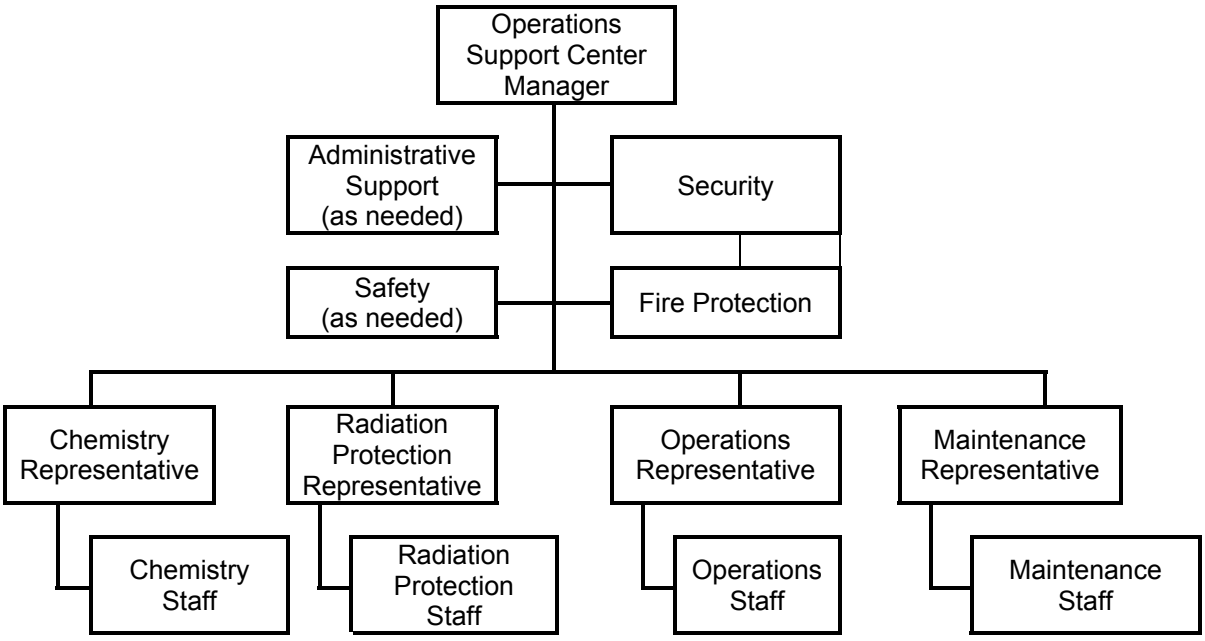

Figure A.3-2 Operations Support Center Organization

A.4 EMERGENCY RESPONSE FACILITIES, EQUIPMENT, AND SUPPLIES

Specific plant areas, onsite and offsite facilities, and equipment are selected and provided for use during a radiological emergency at the CRN Site. The preselection, allocation, and inclusion of emergency facilities assure that needed services and equipment are available for use during emergency conditions.

A.4.1 TECHNICAL SUPPORT CENTER

The CRN Site is equipped with a Technical Support Center (TSC). The TSC is part of the emergency response facilities provided for emergency response to accidents. The TSC is established consistent with NUREG 0696, "Functional Criteria for Emergency Response Facilities" (NUREG-0696), as described below.

Function

The TSC provides plant management and technical support personnel (including the appropriate number of NRC personnel) with a facility from which they can assist plant operating personnel located in the Control Room during an emergency. The SED and the NRC representative are located in the same general area to promote proper communications.

Location

The TSC has the ability to retrieve plant data and displays available in the Control Room and is equipped with sophisticated communications systems. This precludes the need for frequent face to face interchange between the TSC and Control Room personnel.

Staffing and Training

The level of staffing and training is described in the Emergency Plan. The TSC accommodates the required personnel to support an emergency affecting the CRN Site. The level of staffing may vary according to the severity of the emergency condition.

Size

The TSC provides working space, without crowding, for the personnel assigned to the TSC at the maximum level of occupancy. The working space is sized for a minimum of 25 persons. Minimum size of working space is approximately 75 ft^2 per person.

Structure

The TSC is designed in accordance with the Uniform Building Code (UBC) to withstand earthquakes and high winds.

Habitability

The ventilation system is operated in accordance with approved procedures and is manually controlled from the TSC. In addition, portable radiation monitors are available to personnel in the TSC. Equipment and supplies are provided in accordance with the Emergency Plan. The

ventilation system includes high efficiency particulate air (HEPA) filters and charcoal filters. The ventilation system is designed to maintain exposures at or below (5 rem total effective dose equivalent (TEDE) as defined in 10 CFR 50.2 for the duration of an emergency. The TSC structure, shielding, and ventilation system are designed to protect the TSC personnel from radiological hazards.

Communications

The TSC has reliable voice communications to the Control Room, the OSC, the CECC, and the NRC. Provisions for communications with State and local operations centers are also provided in the TSC. The communications facilities include the means for reliable primary and backup communication.

Instrumentation, Data System Equipment, and Power Supplies

The TSC is provided with reliable power and backup power supplies. Lighting is powered by the normal and backup electrical supply system. An emergency battery operated lighting system is installed. Power for vital information systems is provided by reliable power supplies including a battery backed Uninterruptible Power Supply (UPS) system.

Technical Data and Data System

Within the TSC, technical and operational data and information is available for each unit. Support facilities are located within the TSC to support long term operation of the TSC. The TSC is equipped with a computer system which provides source term and meteorological data and technical data displays to allow TSC personnel to perform detailed analysis and diagnosis of abnormal plant conditions, including assessment of any significant release of radioactivity to the environment. Human Factors Engineering (HFE) is incorporated into the design of the TSC related to the display and availability of plant data.

Records Availability and Management

The TSC has ready access to plant records. The documents maintained in the TSC include:

- Technical Specifications.
- Plant Operating Procedures.
- Emergency Operating Procedures.
- Final Safety Analysis Reports.
- System piping and ventilation diagrams and heating, ventilation, and air conditioning (HVAC) flow diagrams.
- Piping area diagrams.
- Records needed to perform the functions of the CECC when it is not operational.

In addition, copies of the above-listed documents and the following documents are available in CRN Site Document Control:

- Plant operating records.
- Plant Review Board records and reports.

The above records are updated as necessary to maintain currency and completeness. Operations at this facility are directed by the SED when the TSC is operational.

CRN-EPIPs describe the staffing and operation of the TSC.

A.4.2 OPERATIONS SUPPORT CENTER

The site is equipped with an OSC. The OSC provides a centralized area and the necessary supporting resources for the assembly of designated operations support personnel during emergency conditions. The OSC provides the resources for communicating with the Control Room and the TSC. This permits personnel reporting to the OSC to be assigned to duties in support of emergency operations.

Designated plant support personnel assemble in the OSC to provide support to both the Control Room and TSC. The primary function of the OSC staff is to dispatch assessment, corrective action, and rescue personnel to locations in the plant, as directed by the TSC and Control Room. TVA provides for an OSC assembly area separate from the Control Room and the TSC. Personnel reporting to the OSC can be assigned duties in support of emergency operations.

The OSC is not designed to remain habitable under all projected emergency conditions; however, implementing procedures make provisions for relocating the OSC as needed, based on ongoing assessments of plant conditions and facility habitability. The SED directs relocation of the OSC, if required.

CRN-EPIPs describe the staffing and operation of the OSC.

A.4.3 LABORATORY AND EQUIPMENT

TVA provides laboratory facilities adequate for chemical and radiological analyses of relevant sample media, including solid, liquid, and air samples. The laboratory equipment provides capabilities to perform isotopic analyses of samples to identify radionuclides present in the samples and their concentrations per unit mass or volume, as appropriate.

A.4.4 ONSITE MONITORING SYSTEMS AND EQUIPMENT

Information regarding onsite monitoring systems and equipment is addressed in the COLA.

A.4.4.1 Natural Phenomena

In the event an emergency is the result of a natural phenomenon, there is instrumentation to monitor its severity. The Environmental Data Station is located onsite and contains instruments capable of measuring wind direction, wind speed, and temperatures. Seismic instrumentation is

available in the plant to monitor acceleration levels of ground movement. Hydrological monitoring systems are installed to supply flow and level information. Meteorological and seismic instrumentation have readily accessible readout in the Control Room.

In the event of a failure of the onsite natural phenomena monitoring systems, TVA maintains access to back-up data sources. These back-up sources include telephone and web-based contact with federal government data sources and alternative sources, including university and news media sources.

A.4.4.2 Radiological Monitors

The installed Radiation Monitoring System consists of process monitors and area monitors. Additional information regarding this system is addressed in the CRN Site COLA.

A.4.4.2.1 Process Monitors (Radiological)

The process system continuously monitors selected lines containing or possibly containing radioactive effluents. The system's function is to warn personnel of increasing radiation levels, to give early warning of a system malfunction, and to record and control discharges of radioactive liquids and gases to the environment.

A.4.4.2.2 Area Radiation Monitors

Area monitors are placed at specific locations in the plant.

A.4.4.2.3 Portable Monitors

Portable radiation detection equipment consists of low-range and high-range instruments to measure gamma dose rates. Instruments for alpha, beta-gamma, and neutron radiation measurements are available. Sampling equipment is available to collect and analyze air samples. The Counting Room has appropriate equipment for isotopic analysis of sample media.

A.4.4.3 Process Monitors (Non-radiological)

The Control Room provides a central, protected location for placement of the necessary instrumentation to assess plant systems status, including reactor coolant system pressure and temperature, containment pressure and temperature, liquid levels, flow rates, fire detection equipment, and meteorological instrumentation.

A.4.4.4 Safety Parameter Display System (or equivalent)

The plant is equipped with the capability to display information required for a Safety Parameter Display System (SPDS) or an equivalent system.

A.4.4.5 Emergency Response Data System

The Operations Duty Specialist (ODS) activates the Emergency Response Data System (ERDS), which transmits selected plant monitoring data to the NRC, within one hour of the declaration of an Alert or higher level emergency classification.

A.4.4.6 Fire Protection

The plant's fire protection system provides extinguishing agents with the capability of extinguishing any single or probable combination of simultaneous fires that might occur. TVA controls the use of combustible materials.

A.4.4.7 Environment

Facilities available for assessing the impact of plant operations on the environment include atmospheric monitoring stations, direct gamma radiation detectors, and water sampling capabilities. TVA maintains this equipment for use in the routine environmental radiological monitoring program and the equipment is available for use in the event of a radiological emergency condition.

The atmospheric monitoring network is divided into three subgroups. Local air monitors are located at or adjacent to the CRN Site Boundary in the directions of predominant wind flow. Perimeter monitors are located farther from the plant in areas of relatively high population densities and/or in the direction of predominant air flow. Remote monitors (controls) are located at greater distances from the site.

Primary dosimeters are placed at selected sites around the plant. These dosimeters are located typically in each of the meteorological sectors at or near the CRN Site Boundary and at greater distances.

In addition to these facilities, established sampling points for milk, vegetation, soil, fish, and sediment are located in the vicinity of the plant. TVA may collect samples from these stations on a non-routine basis as needed.

A.4.5 EMERGENCY EQUIPMENT

The CRN Site maintains supplies of emergency equipment located in designated storage locations. The CRN Site implements site-specific procedures to ensure required calibrations are carried out on a routine basis. Reference Appendix A, Attachment 2 for additional information regarding emergency equipment and supplies.

A.4.5.1 Emergency Communications Equipment

Information regarding the CRN Site Emergency Communications Equipment is addressed in the CRN Site COLA.

A.4.5.2 First Aid and Medical Facilities

A.4.5.2.1 Decontamination Facilities

The site maintains supplies and equipment as needed to establish a temporary decontamination area for the purpose of gross radiological decontamination and injured person evaluation and stabilization. Equipment and materials for decontamination and first aid, including a stretcher, are available.

A.4.5.2.2 First Aid Stations and Supplies

Emergency medical equipment is strategically located throughout the plant, with trauma kits and other specified equipment available for use by the Medical Emergency Response Team (MERT).

Emergency Medical Technicians (EMTs) provide first aid for injured individuals. Medical supplies and treatment for minor injuries are available. First aid treatment is available 24 hours a day.

Rad Protection stores and controls potassium iodide (KI) tablets for onsite personnel. CRN-EPIPs provide usage information, including information addressing authorization for use and dispersal of tablets.

A.4.5.2.3 Receiving Hospitals and Supplies

TVA maintains arrangements with local medical facilities to receive patients from the CRN Site.

A.4.5.2.4 Ambulance Service

TVA maintains an ambulance, staffed in conjunction with the MERT, at the site. TVA also maintains arrangements for offsite ambulance assistance to the CRN Site.

A.4.6 ADDITIONAL LOCAL SUPPORT

A.4.6.1 Fire

TVA maintains arrangements for local firefighting support upon request. The senior offsite fire official responding to the CRN Site coordinates response activities with the TVA Incident Commander. The CRN Site is responsible for providing radiological protection and proper safety clearance in affected areas.

A.4.6.2 Law Enforcement

TVA maintains agreements with local law enforcement agencies to provide law enforcement support when necessary.

A.4.6.3 Vendor Support

If necessary, the Nuclear Steam Supply System (NSSS) vendor will be contacted by the Central Emergency Control Center (CECC) to provide assistance in the form of manpower, equipment, and technical backup. Other vendors will also be contacted if their assistance is needed.

A.4.7 ASSEMBLY/ACCOUNTABILITY ALARM

TVA maintains warning signals to alert onsite personnel of hazards and the need for assembly or evacuation.

A.4.8 LOCAL RECOVERY CENTER

The CRN Site has a Local Recovery Center (LRC) which is a pre-designated facility dedicated for use by offsite TVA and NRC personnel that may be assigned to the CRN Site for recovery operations. In addition, the LRC may be used by the NRC during the event as an area near the site for assessment and assistance and has the capability to communicate offsite. Personnel in the LRC have access to necessary drawings and documents. Meteorological information is available in the LRC. The LRC may serve as an alternate emergency response facility, as needed, and during an emergency, may be used as a staging location for personnel prior to dispatch to the CRN Site.

Personnel in the LRC have access to necessary drawings, manuals, procedures and documents. Meteorological information and dose rate calculations are available in the LRC. The LRC has telephone communications capabilities to enable personnel to communicate with the CECC and the CRN Site TSC. The LRC is able to send and receive data and document production / reproduction equipment is available.

The location, function, and capabilities of the LRC is addressed in the CRN Site COLA.

A.5 MAINTAINING EMERGENCY PREPAREDNESS

A.5.1 RESPONSIBILITY FOR THE EMERGENCY PREPAREDNESS EFFORT

The Site Vice President maintains overall authority and responsibility for radiological emergency response planning. The Director, Emergency Preparedness is assigned responsibility for coordinating emergency preparedness efforts, including activities related to the development of emergency plans and procedures and coordinating the plans and procedures with supporting organizations to ensure the overall effectiveness of the program.

A.5.2 PROCEDURES

The CRN Site maintains a range of emergency plan implementing procedures (CRN-EPIPs) that provide instructions for implementing the emergency response measures described in the site Emergency Plan. Part 5A Section 16 provides a description of the CRN-EPIP document control, approval and revision processes.

A.5.3 INDEPENDENT REVIEWS OF EMERGENCY PREPAREDNESS

TVA's independent Quality Assurance organization performs, or oversees the performance of, periodic independent audits of the emergency preparedness program consistent with the requirements of 10 CFR 50.54(t). The audits include, at a minimum, the following:

- The Emergency Plan.
- EPIPs and practices.
- The emergency preparedness training program.
- Readiness testing (e.g., drills and exercises).
- Emergency response facilities, equipment, and supplies.
- Interfaces with State and local government agencies.
- Required records and documentation.

TVA's independent Quality Assurance organization documents audit results and improvement recommendations and reports these results to the CRN Site and TVA management. TVA establishes and maintains the frequency of the periodic audits based on an assessment of performance as compared to performance indicators; however, the audit frequency is not less than once every 24 months. In addition, TVA conducts a program audit as soon as reasonably practicable after a change occurs in personnel, procedures, equipment, or facilities that potentially could adversely affect emergency preparedness, but no longer than twelve months after the change.

TVA makes those portions of the audits that address the adequacy of interfaces with State and local governments available to the affected governments.

A.6 ALERT AND NOTIFICATION SYSTEM (NOT APPLICABLE)

A.7 TRAINING AND DRILLS

A.7.1 TRAINING PERSONNEL

Personnel with specific duties and responsibilities in the CRN Site Radiological Emergency Preparedness (REP) program receive instruction in the performance of their duties and responsibilities in accordance with CRN Site training procedures, and as required in ESPA Part 5A Section 15.

A.7.2 DRILLS AND EXERCISES

TVA conducts drills and exercises to develop and maintain the key skills that are required for emergency response. TVA may conduct the drills identified in ESPA Part 5A Section 14 individually or as part of a REP exercise.

A.8 EMERGENCY PLAN IMPLEMENTING PROCEDURES

The range of actions needed to implement the contents of this Plan are found in the CRN-EPIPs, which, at a minimum, address the following topics:

- Emergency Classification
- Notifications Associated with Emergency Conditions
- Emergency Communications
- Onsite Protective Action Recommendations
- Activation of the Emergency Response Organization
- Staffing and Operation of Emergency Response Facilities
- Site Assembly, Accountability, and Evacuation
- Core Damage Assessment
- Radiation Protection Under Emergency Conditions
- Plume Tracking and Assessment of Radiological Conditions
- Respiratory Protection and Distribution of Radioprotective Drugs
- Personnel Monitoring
- Decontamination
- Obtaining and Analyzing High Activity Samples Under Emergency Conditions
- Emergency Media Relations
- Recovery and Reentry

Additional plant procedures address various activities that are required to support the ongoing maintenance of the EP program. These supporting procedures are not included within the body of the EPIPs. These supporting procedures address, at a minimum, the following topics:

- Emergency Equipment and Communications Systems Inventory and Operational Tests
- Conduct of Emergency Drills and Exercises
- Emergency Plan Training
- Maintaining Emergency Preparedness

Attachment 1

STATE MULTIJURISDICTIONAL RADIOLOGICAL EMERGENCY RESPONSE PLAN

The State of Tennessee Multijurisdictional Radiological Emergency Response Plan is maintained in the CECC and the CRN Site TSC.

Attachment 2

EMERGENCY EQUIPMENT AND SUPPLIES

TVA establishes and maintains inventories of emergency equipment and supplies for use by emergency response personnel in the emergency response facilities and by TVA field monitoring teams. The actual inventories are based on the activities that occur in, or are dispatched from, each individual facility. Actual inventories are established in inventory lists in accordance with EPIPs. Emergency kit inventories typically include the following:

- Radiation survey instrument(s).
- Surface contamination control and survey supplies.
- Air sampling equipment and sampling media.
- Scaler(s) or other appropriate radio-analytical counting instrument(s).
- Protective clothing.
- Contamination control and decontamination supplies.
- Respiratory protection equipment.
- Radiological control posting and warning supplies.
- Personnel monitoring equipment (record and instantaneous reading dosimeters).
- Radioiodine blocking agent.
- Emergency lighting equipment.
- Appropriate maps.
- Computer equipment.
- Administrative and recordkeeping supplies.
- Plans, procedures, and drawings.
- Communications equipment.
- Batteries and other expendable supplies.
- First aid supplies (e.g., bandages, stretchers, splints, topical ointments).

Attachment 3

CROSS REFERENCE TO REGULATIONS AND GUIDANCE

Requirements	NUREG-0654, Rev. 1, Evaluation Criterion	Corresponding Early Site Permit Application Emergency Plan Provisions
10 CFR 52.17(b)(1)	N/A	No known physical characteristics / impediments to development of emergency plans.
10 CFR 52.17(b)(2)(i)	N/A	All (major features emergency plan)
10 CFR 52.17(b)(3)	N/A	Emergency Preparedness Inspections, Tests, Analysis and Acceptance Criteria (EP-ITAAC)
10 CFR 52.17(b)(4)	N/A	16.5
10 CFR 50.72(a)(4)	N/A	A.4.4.5
10 CFR 50.72(c)(3)	N/A	3.2, 6.4, 8.1.1, 8.2
10 CFR 50.47(b)(1) 10 CFR 50 App E.IV.A	A.1.a	3.3, 3.3.24, 3.3.25, 3.3.26, 3.3.27, A.4.5.2, A.4.6
	A.1.b	2.3, 3.1, 3.2, 3.3, A.3
	A.1.c	Figure 3-1, Figure A.3-1, Figure A.3-2
	A.1.d	3.2, A.3
	A.1.e	3.2, 5.2, A.3
	A.2.a	N/A
	A.2.b	N/A
	A.3	16.5
	A.4	3.2, A.5.1
10 CFR 50.47(b)(2) 10 CFR 50 App E.IV.A 10 CFR 50 App E.IV.H	B.1	3.2, A.3
	B.2	3.2, A.3.6.2
	B.3	3.2

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	B.4	3.2, A.3.6.2
	B.5	3.1.1, 3.2, 3.3, Figure 3-1, A.3, Figure A.3-1, Figure A.3-2
	B.6	Figure 3-1, Figure A.3-1, Figure A.3-2
	B.7	3.2, A.3
	B.7.a	3.3.23
	B.7.b	13.0
	B.7.c	3.2, A.3.6.1
	B.7.d	3.3.1, 3.3.13, 7.0, 7.1, 7.2, 7.3, 7.4
	B.8	3.3.26, A.4.6.3
	B.9	Figure 2-1, 3.3.24, 12.2, 12.3, 12.4, A.4.5, A.4.6
10 CFR 50.47(b)(3) 10 CFR 50 App E.IV.A	C.1.a	2.4
	C.1.b	2.4, 3.3.25
	C.1.c	1.0, 6.0, 6.1, 6.2, 6.4, 6.7, 6.8, 8.1, 13.3, A.4.8
	C.2.a	N/A
	C.2.b	3.3.7, 5.2.3, 5.2.4
	C.3	9.2.2, 9.2.3, A.4.3
	C.4.	2.4, 3.3.24 – 3.3.26, 9.2, 12.4, 16.5, A.4.6,
10 CFR 50.47(b)(4) 10 CFR 50 App E.IV.B	D.1	4.1, 4.2, A.2
	D.2	A.2
	D.3	N/A

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	D.4	N/A
10 CFR 50.47(b)(5) 10 CFR 50 App E.IV.C 10 CFR 50 App E.IV.D	E.1	5.0, 5.1, 5.2 (all), Figure 5-1
	E.2	3.3.5, 3.3.6, 5.0, 5.1, 5.2 (all), Figure 5-1
	E.3	5.0, 5.2
	E.4	5.0, 5.2 (details described in EPIPs)
	E.4.a	5.0, 5.2 (details described in EPIPs)
	E.4.b	5.0, 5.2 (details described in EPIPs)
	E.4.c	5.0, 5.2 (details described in EPIPs)
	E.4.d	5.0, 5.2 (details described in EPIPs)
	E.4.e	5.0, 5.2 (details described in EPIPs)
	E.4.f	5.0, 5.2 (details described in EPIPs)
	E.4.g	5.0, 5.2 (details described in EPIPs)
	E.4.h	5.0, 5.2 (details described in EPIPs)
	E.4.i	5.0, 5.2 (details described in EPIPs)
	E.4.j	5.0, 5.2 (details described in EPIPs)
	E.4.k	5.0, 5.2 (details described in EPIPs)
	E.4.l	5.0, 5.2 (details described in EPIPs)
	E.4.m	5.0, 5.2 (details described in EPIPs)
	E.4.n	5.0, 5.2 (details described in EPIPs)
	E.5	N/A
	E.6	N/A
	E.7	N/A

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10 CFR 50.47(b)(6) 10 CFR 50.72(a)(3)	F.1.a	3.2, 5.2, 6.0, 6.1, 6.2, 6.4, 6.7, A.3, A.4.5.1,
	F.1.b	3.3.4, 6.4, A.4.5.1
	F.1.c	3.2, 6.4, A.4.5.1
	F.1.d	6.0, 6.1, 6.2, 6.4, 6.7, A.4.5.1
	F.1.e	6.5, 6.6, A.4.5.1
	F.1.f	6.0, 6.4, A.4.5.1
	F.2	6.0, 6.1, 6.2, 6.4, 6.8, A.4.5.1
	F.3	6.0, 6.4, A.4.5.1
10 CFR 50.47(b)(7) 10 CFR 50 App E.IV.D	G.1	7.0, 7.1, 7.2, 7.2.4, 7.5
	G.2	7.0, 7.1, 7.2, 7.2.4, 7.5
	G.3.a	3.3.13, 7.0, 7.1, 7.2.1 – 7.2.4, 7.3, 7.4
	G.3.b	7.3
	G.4.a	3.3.13, 7.2.1 – 7.2.4
	G.4.b	7.4
	G.4.c	7.7
	G.5	7.8
10 CFR 50.47(b)(8) 10 CFR 50 App E.IV.E	H.1	8.0, 8.1, A.4, A.4.1, A.4.2
	H.2	Figure 8-1, 8.2
	H.3	N/A
	H.4	Figure 3-1, 3.3, 6.0, 6.3, 6.5, 6.6
	H.5	A.4.4
	H.5.a	9.2.4 (all), A.4.4.1

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	H.5.b	A.4.4.2 (all)
	H.5.c	A.4.4.3
	H.5.d	A.4.4.6
	H.6.a	9.2.4 (all), A.4.4.1
	H.6.b	11.0, Appendix A (Attachment 2)
	H.6.c	9.2.3
	H.7	9.2.2
	H.8	9.2.4 (all), A.4.4.1
	H.9	8.1.2, A.4.2
	H.10	A.7 (EPIP list), Appendix A (Attachment 2)
	H.11	Appendix A (Attachment 2)
	H.12	8.2, 8.3
10 CFR 50.47(b)(9)	I.1	9.0 (all)
	I.2	9.1
	I.3.a	9.2.5
	I.3.b	9.2.5
	I.4	9.2.4, 9.2.5
	I.5	9.2.4
	I.6	9.2.5
	I.7	9.2.2
	I.8	9.2.2
	I.9	9.2.2

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	I.10	9.2.2, 9.2.5
	I.11	N/A
10 CFR 50.47(b)(10)	J.1.a	10.1, A.4.7
	J.1.b	10.1, A.4.7
	J.1.c	10.1, A.4.7
	J.1.d	10.1, A.4.7
	J.2	10.1, A.4.7
	J.3	10.1
	J.4	10.1
	J.5	10.1, A.4.7
	J.6.a	10.1, 11.0 (all)
	J.6.b	10.1, 11.0 (all)
	J.6.c	10.1, 11.0 (all)
	J.7	10.3, Figure 10-1
	J.8	N/A
	J.9	N/A
	J.10.a	N/A
	J.10.b	N/A
	J.10.c	N/A
	J.10.d	N/A
	J.10.e	N/A
	J.10.f	N/A

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	J.10.g	N/A
	J.10.h	N/A
	J.10.i	N/A
	J.10.j	N/A
	J.10.k	N/A
	J.10.l	N/A
	J.10.m	N/A
	J.11	N/A
	J.12	N/A
10 CFR 50.47(b)(11)	K.1.a	12.0, 12.1, 12.2 (all), 12.4
	K.1.b	12.0, 12.1, 12.2 (all), 12.4
	K.1.c	12.0, 12.1, 12.2 (all), 12.4
	K.1.d	12.0, 12.1, 12.2 (all), 12.4
	K.1.e	12.0, 12.1, 12.2 (all), 12.4
	K.1.f	12.0, 12.1, 12.2 (all), 12.4
	K.1.g	12.0, 12.1, 12.2 (all), 12.4
	K.2	11.0, Table 11-1, Table 11-2
	K.3.a	11.0
	K.3.b	11.0
	K.4	N/A
	K.5.a	11.0, 12.1, 12.2.3, A.4.5.2.1
	K.5.b	11.0, 12.1, 12.2.3, A.4.5.2.1

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	K.6.a	11.0
	K.6.b	11.0
	K.6.c	11.0
	K.7	11.0, 12.2.3, A.4.5.2.1
10 CFR 50.47(b)(12)	L.1	12.4
	L.2	12.1, A.4.5.2.2
	L.3	N/A
	L.4	12.3, A.4.5.2.4
10 CFR 50.47(b)(13) 10 CFR 50 App E.IV.H	M.1	13.1, Figure 13-1, 13.2 (all), 13.3, 13.4, A.4.8
	M.2	Figure 13-1, 13.2 (all)
	M.3	13.1
	M.4	N/A
10 CFR 50.47(b)(14)	N.1.a	14.2, A.6.2
	N.1.b	14.2, A.6.2
	N.2.a	14.1.7, A.6.2
	N.2.b	14.1.6, A.6.2
	N.2.c	14.1.1, A.6.2
	N.2.d	14.1.2, A.6.2
	N.2.e(1)	14.1.3, A.6.2
	N.2.e(2)	14.1.4, A.6.2
	N.3.a	14.3, A.6.2
	N.3.b	14.3, A.6.2

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	N.3.c	14.3, A.6.2
	N.3.d	14.3, A.6.2
	N.3.e	14.3, A.6.2
	N.3.f	14.4, A.6.2
	N.4	14.4, A.6.2
	N.5	14.4, A.6.2
10 CFR 50.47(b)(15) 10 CFR 50 App E.IV.F	O.1	15.0, 15.1, 15.2, 15.3, A.6.1
	O.1.a	15.2, A.6.1
	O.1.b	N/A
	O.2	15.1, A.6.1
	O.3	15.1, A.6.1
	O.4.a	15.0, 15.1, A.6.1
	O.4.b	15.0, 15.1, A.6.1
	O.4.c	15.0, 15.1, A.6.1
	O.4.d	15.0, 15.1, A.6.1
	O.4.e	15.0, 15.1, A.6.1
	O.4.f	15.0, 15.1, A.6.1
	O.4.g	15.0, 15.1, A.6.1
	O.4.h	15.0, 15.1, A.6.1
	O.4.i	15.0, 15.1, A.6.1
	O.4.j	15.0, 15.1, A.6.1
	O.5	15.0, 15.1, 15.2, A.6.1

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10 CFR 50.47(b)(16) 10 CFR 50 App E.IV 10 CFR 50 App E.IV.G	P.1	15.3, A.6.1
	P.2	A.5.1
	P.3	A.5.1
	P.4	A.5.1, A.5.2
	P.5	16.1, 16.2 (all)
	P.6	Appendix A (Attachment 1)
	P.7	9.2.1, A.7
	P.8	Table of Contents (Generic Part), Table of Contents (Appendix A), Appendix A (Attachment 3)
	P.9	16.4, A.5.3
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