Incident Annex E - Radiological Emergency Preparedness

Primary Agencies: Alabama Emergency Management Agency
Alabama Department of Public Health, Office of Radiation Control

Support Agencies: Alabama Department of Agriculture & Industry
Alabama Department of Conservation
Alabama Department of Education
Alabama Department of Environmental Management
Alabama Department of Human Resources
Alabama Law Enforcement Agency
Alabama National Guard
Alabama Department of Transportation
American Red Cross

Federal Agencies: U. S. Department of Defense
U. S. Department of Energy
U. S. Department of Homeland Security
U. S. Environmental Protection Agency
U. S. Nuclear Regulatory Commission

I. Introduction

A. Authority (NUREG REF: A.1.a; A.2.b; C.1.c)

The Alabama Emergency Management Agency (AEMA) was established pursuant to section 4 of the Alabama Emergency Management Act of 1955 (Public Law 31-9), Act 47, June 1955.

AEMA is the lead coordinating agency within State government for emergency prevention, protection, mitigation, response, and recovery. The mission is to provide an organized and integrated capability for timely, coordinated response by State agencies to nuclear/radiological incidents at fixed facilities and along transportation corridors.

Alabama Department of Public Health (ADPH) has the mission to protect the public health and safety from excessive exposure to ionizing radiation. The Code of Alabama 1975, Title 22, Sec. 22-14-4, et seq. provides for a Radiation Control Agency (RCA) within the state health department with the State Health Officer (SHO) as the director and designates that agency to determine if a radiological emergency exists, and makes it responsible for issuing any order requiring action to be taken as is necessary to meet such radiological emergencies.

The development and implementation of Alabama's Radiological Emergency Preparedness annex is consistent with and pursuant to the applicable state, county and federal authorities.

Authority for this annex is contained in the Alabama Emergency Management Act No. 47, 1955, as amended; Alabama Executive Order 15, February 15, 1994; Alabama Act No. 582, September 16, 1963; Code of Alabama 1975, Section 2-13-81; Appendix E of 10 CFR 50, Code of Federal Regulations; Lauderdale County Commission Resolution, September 24, 1962 and April 10, 1984, as amended; Lawrence County Commission Resolution, August 28, 1961 and February 13, 1984, as amended; Limestone County Resolutions, March 28, 1963 and February 21, 1984, as amended; City of Athens Ordinance, June 24, 1963; Morgan County Commission Resolution, March 23, 1971 and Commission Resolution, April 04, 1984 as amended; City of Decatur, Ordinance No. 1208, 1961; Madison County Commission Resolution 12987, October 23, 1961 and Resolution adopted November 9, 1962, as amended and Commission Resolution, March 05, 1984 as amended; City of Huntsville, Ordinance No. 62-212, October 25, 1962, as amended; Houston County Resolution, February 14, 1972 and February 27, 1984, as amended; City of Dothan, Ordinance No. 4853, September 27, 1974. Henry County Resolution, Book "N", Page 161, February 1962 and Commission Resolution, February 12, 1980 as amended.

When implemented, this annex has the same force as an order from the Governor of Alabama.

B. Purpose

The purpose of this annex is to provide coordinated responses by State, County, and Federal agencies for emergency actions to protect the health and safety of the general public in Alabama and surrounding states in regards to an incident at a Nuclear Power Plant (NPP), transportation of radiological materials, and foreign, unknown, or unlicensed sources of radioactive materials.

C. Situation and Assumptions

1. Fixed Facility

There are two fixed nuclear power plants located in Alabama and one in Tennessee that could affect the public in Alabama:

- The Browns Ferry Nuclear Plant (BFNP) in Limestone County could affect the local population in Lauderdale, Lawrence, Limestone, and Morgan Counties. Additionally, crops, livestock, poultry, and dairy

products could be affected in other Alabama counties and the state of Tennessee.

- The Joseph M. Farley Nuclear Plant (FNP) in Houston County could affect the local population in Henry and Houston Counties in Alabama and Early County in Georgia. Additionally, crops, livestock, poultry, and dairy products could be affected in other Alabama counties and the states of Georgia and Florida.

- The Sequoyah Nuclear Plant (SNP) in Tennessee could affect crops, livestock, poultry, and dairy products in multiple counties in the State of Alabama.

- Designation of State Radiological Monitoring and Assessment Center (SRMACs):

  SRMACs
  - Alabama Department of Public Health, RSA Tower
    201 Monroe St. Suite 1250, Montgomery, Al

  - Browns Ferry Nuclear Plant – Morgan County Courthouse
    302 Lee St. NE, Decatur, AL

  - Farley Nuclear Plant – Dothan/Houston County EMA
    405 East Adam St., Dothan, AL

Assumptions

- The possibility exists that an incident could occur at a nuclear power plant (NPP) which may constitute a health hazard to the population through the release of radioactive materials into the environment.

- The Federal Emergency Management Agency (FEMA) is responsible for reviewing and assessing state and local emergency plans and for off-site radiological emergency planning and response for adequacy.

- The operators of the NPP will notify state and local governments of an incident in ample time for implementing warning and protective actions for the public.

- Each level of government (local, state, and federal) is responsible for the safety and welfare of the public to the extent of its capabilities. Each level possesses a certain degree of expertise and resources which will be utilized as necessary in supporting emergency response actions.

- The Nuclear Regulatory Commission (NRC) is responsible for on-site radiological emergency planning and for licensing the operation of a NPP. The NRC will review the FEMA findings and determinations on adequacy of implementation of state and local plans and will make the final determination with regard to the overall (on-site and off-site) state of emergency preparedness prior to licensing a NPP.

- There are too many possible contingencies associated with an incident at a NPP to provide detailed comprehensive coverage. Therefore, the purpose of this REP annex is to establish the framework and general guidelines for an effective initial response within the "Notice of an Unusual Event" to the "General Emergency" classifications of a nuclear incident. It also provides guidance for recovery after an incident has been stabilized. The State Emergency Operations Plan (SEOP) is the State of Alabama's All-Hazard Plan which contains an outline of the response actions from the State to recovery operations for incidents which may be common to any emergency.

- Two major exposure areas have been established to provide general boundaries within which emergency preparedness should be planned. The Plume Exposure Pathway encompasses an area most likely to require protective actions for the general public. This area is referred to as the Emergency Planning Zone (EPZ) which effects the population within a 10-mile radius of the NPP. The Ingestion Exposure Pathway is more far-reaching, encompassing a much larger area and is concerned with contamination of food and water. This area is referred to as the Ingestion Pathway Zone (IPZ) which effects the population with a 50-mile radius of the NPP.

- The most severe circumstances at a NPP could possibly require selective or general evacuation, including onsite individuals out of the EPZ. Provisions are established for conveying warning and appropriate instructions for contamination monitoring and sheltering. A comprehensive, well-coordinated public information program is a necessity for the successful execution of the REP annex.

- Madison County is located ***outside*** of the Browns Ferry Nuclear Plant 10-mile EPZ, and is ***not*** a risk county. It is included in this annex as a ***host*** county for evacuees from Limestone and Morgan Counties who have already registered at the "risk county" Reception Centers and, if applicable, successful monitoring and decontamination has been completed.

2. Transportation of Radioactive Materials

- The U. S. Department of Energy (DOE) transports shipments of radioactive waste material through the State of Alabama that may experience incidents which may cause a release of radioactive materials. This could happen at any time and could require state agencies to implement actions to protect the health and safety of the population.

- Radiological incidents may not be immediately recognized as such until the radioactive material is detected or the effects of radiation exposure are manifested in the population.

- Response to motor vehicle accidents involving radiological materials requires detection equipment and trained personnel to detect, contain, and limit the continued spread of contaminated materials.

- Radioactive materials shipped/transported by private carrier have markings but still can pose a hazard.

- Transportation of U. S. Department of Defense radioactive materials are not announced and may have armed escorts that are authorized to use deadly force.

Assumptions

Waste Isolation Pilot Program (WIPP) shipments are operated by the Department of Energy (DOE).

- First response to an incident will be by local agencies. Training programs are established along the identified routes for first responders. The SEOC and ADPH will be notified.

- DOE will be contacted and will be responsible for emergency operations and recovery.

Shipments by the Department of Defense (DOD)

- Shipments of nuclear materials are classified and will be responded to and managed by DOD.

- DOD will make notifications when a shipment has been involved in an incident. AEMA will notify ALEA, ADPH and county EMAs.

Commercial Radiological Shipments

- For commercial transportation incidents involving radioactive material, the SEOC and ADPH will be notified.

- The owner of the radioactive material is responsible for the clean-up which will be overseen by ADPH/ORC to ensure that the clean-up meets established standards. Cooperation and coordination of these actions will also take place between the local EMA and AEMA.

3. Foreign, Unknown, or Unlicensed radioactive materials

- Alabama Law Enforcement Agency (ALEA) is the primary agency for an incident involving foreign, unknown, or non-licensed radiological shipments.

- ADPH will provide personnel to support the incident if requested.

- Radioactive materials may come from several other sources; imported materials with radioactive contamination, foreign spacecraft, aircraft, ships, shipments of foreign-owned radioactive materials, and unknown sources (referred to as orphan sources) that include abandoned radioactive materials.

- Unknown types of radiological incidents may not be immediately recognized until responders and/or the general public received exposure.

II. Concept of Operations (NUREG REF: A.1.b)

A. Emergency Classification Levels (ECLs) for a NPP

Notification of Unusual Event (NOUE): NOUE is the least serious of the four classifications. This classification provides early and prompt notification that events are in progress or have occurred which indicate a potential degradation of the level of safety of the plant or indicate that a security threat to facility protection has been initiated. No releases of radioactive material requiring offsite response or monitoring are expected unless further degradation of safety systems occurs.

Alert: An Alert classification is indicated when events are in progress or have occurred which involve an actual or potential substantial degradation of the level of safety of the plant or a security event that involves probable life threatening risk to site personnel or damage to site equipment because of

HOSTILE ACTION. Any releases are expected to be limited to small fractions of EPA Protective Action Guideline exposure levels.

Site Area Emergency (SAE): A Site Area Emergency is declared when events are in progress or have occurred which involve an actual or likely major failures of plant functions needed for protection of the public or HOSTILE ACTION that results in intentional damage or malicious acts; (1) toward site personnel or equipment that could lead to the likely failure of plant functions; or (2) that prevent effective access to equipment needed for the protection of the public. Any releases are not expected to result in exposure levels which exceed EPA Protective Action Guideline exposure levels beyond the site boundary.

General Emergency (GE): A General Emergency is declared when events are in progress or have occurred which involve actual or imminent substantial core degradation or melting with potential for loss of containment integrity or HOSTILE ACTION that results in an actual loss of physical control of the facility. Releases can be reasonably expected to exceed EPA Protective Action Guideline exposure levels offsite for more that the immediate site area.

B. State Actions

State actions taken during these phases are based solely on a Radiological Incident and may vary depending upon the analysis of ADPH/ORC, SEOC, the NPP operator, and local response request for support of resources. Actions directed by this annex are designed to integrate the efforts of the various state and volunteer agencies. When the NPPs, state, and counties are in normal operations, organizations will perform their primary missions and will continue to plan, train, and exercise. The operations involved are divided into phases:

Phase 1 – Emergency Response: This phase includes the immediate actions taken by the emergency response organizations to mitigate the consequences of the incident, to implement the EOP with all of its support functions and annexes, while the utility works to restore the plant to a safe, stable condition. Actions executed under this phase will be defined in one of four State Emergency Operation Center levels: **(NUREG REF: D.3)**

- **Level IV** includes readiness in normal day-to-day operations and may also encompass a **"Notice of an Unusual Event"** at a NPP. The SEOC, ADPH, and County Emergency Management Agencies will maintain a 24-hour communication system with the NPPs. When the operator of a NPP has determined that an incident has occurred and classified the incident, they will provide appropriate details to the SEOC and ADPH. The Director of Response Operations will activate the SEOC to an appropriate Level as he/she determines fit and it will

remain activated to the degree necessary until the incident is terminated.

- **Level III** may normally begin upon notification of an **"Alert"** at a NPP. An incident at a NPP may necessitate activating the State Radiological Monitoring Assessment Center (SRMAC), AEMA Field Divisions/Division Coordinators, and staffing the Joint Information Center (JIC). The Division liaison to SRMAC provides support between the ADPH/ORC, SEOC, and the affected counties. The JIC provides a consolidated location for the utility, federal, state, and county agencies to issue news releases, hold press conferences, and provide information to the public if determined necessary at this classification.

- **Level II** may normally begin at **"Site Area Emergency"**, which could include Protective Action Decisions (PADs). ADPH/ORC, using plant and off-site monitoring data, will advise the State Health Officer (SHO) or designee if necessary PAD/Health Orders need to be implemented. ADPH/ORC will notify the SEOC to initiate a State Coordinating Group Call (SCG) with ADPH/ORC, SEOC, utility, state response partners, FEMA Region IV, NRC, and the emergency management agencies of the affected counties and adjoining states to discuss implementation of the PAD/Health Orders. The SEOC will request federal assistance for non-radiological support of this annex, and ADPH/ORC will request federal radiological support.

- **Level I** typically starts at **"General Emergency"**, which includes Protective Action Recommendations (PARs) issued from the utility followed by Protective Action Decisions (PADs) from the SHO. Should conditions at the plant indicate eminent or actual release of radiological material into the atmosphere, the operator of the NPP will declare a "General Emergency". The same procedures will be used for notification. The ADPH/ORC will determine appropriate protective actions for residents in the 10-mile EPZ and if not already accomplished will dispatch monitoring teams to identify the quantity and location of the radiological contamination. The SEOC will ensure that the counties have activated PNS and have issued EAS messages. ADPH/ORC will continue to analyze the situation and will prepare health orders for residents in the plume pathway to take shelter, evacuate, or other appropriate actions. State and County EOCs may stay at different levels of activation based on the situation. If a situation of such magnitude occurs that the NPP operator declares a "General Emergency-Fast Breaker" without the phased-in buildup described above, the operator will immediately notify the affected county EMAs and then will complete a follow-up notification to the SEOC and ADPH/ORC. The county EMAs will, as soon as possible,

activate the PNS and issue an EAS message outlining PARs by the NPP operator, and activate their EOCs. The ADPH/ORC and Director of Response Operations at the SEOC will take the necessary actions to generate a response capability.

REP OPERATIONAL MATRIX **(NUREG REF: II, D.3;)**

The REP Operational Periods have been established primarily for checklist guidance and to create a relationship between the NRC emergency levels and terminology in use in the State. Intelligent assessment of the degree of severity and the accident potential associated with a particular nuclear incident will determine specific status and action level to be taken.

NRC ECLs	Level IV	Level III	Level II	Level I
Notice of an Unusual Event	X			
Alert		X		
Site Area Emergency			X	
General Emergency				X

Phase 2 – Ingestion Phase
The areas deemed to be affected by the radioactive plume after the emergency phase will be outlined on the Ingestion Exposure Pathway 50-mile map for the facility in question. The ADPH/ORC will determine the ingestion exposure pathway based on all data available including aircraft survey data and Radiological Field Monitoring Team (RFMT) survey data.

Phase 3 – Re-Entry/Relocation/Recovery
Actions during this phase may entail developing detailed surveys and mapping of contaminated areas, developing decontamination procedures and, in general, preparing the area for a deliberate return of evacuated personnel. This phase may include the following activities: Re-entering evacuated areas to determine the extent of damage, to measure radiation and contamination levels, and to determine access routes to and from the affected area.

Phase 4 - Long Term Recovery and Return
This phase commences when the plant is in a safe, stable condition and no further radioactive releases to the environment are expected. This phase also consists of developing and implementing a long term monitoring plan to

include activities such as environmental monitoring, recommendations regarding acceptable levels of radioactivity and radiation in the environment, preparation of health and safety advice and information for the public, and estimated effects of radioactive release on human health. Inhabitants may be allowed to return to their areas previously evacuated from with provisions and restrictions as issued by ADPH/ORC.

The very nature of a radiological incident requires the utmost in technical knowledge and civil action judgment. Therefore, the concept of a normal sequence of events outlined above must be considered as a guide only. The actual situation at the time of an incident will dictate actions which may vary from the normal procedure. Actions required in any given situation will be based on information received from the NPP operator and the good judgment of ADPH/ORC and supported by SEOC.

All federal and state non-radiological agencies responding to an emergency shall assign a representative who has decision making authority to the SEOC. All federal radiological requests for support will go through the SRMAC. **(NUREG REF: II, A.1.d; N.1.d)**

III. Emergency Organizations

Primary state organizations supporting the counties during a radiological incident at a nuclear power plant are listed below. Additional state agencies will be added, as deemed necessary. **(NUREG REF: II, A.1.a; C.4; P.3)**

A. Tasked Organizations

Organizations	Principal in Charge of Emergency Response
Governor, State of Alabama	Governor's Liaison
ESF-1, Alabama Dept. of Transportation	Director
ESF-5, Alabama Emergency Management Agency	Director
ESF-6, American Red Cross	Disaster Services Coordinator
ESF-6, Alabama Dept. of Education	Superintendent of Schools
ESF-6, Alabama Dept. of Human Resources	Commissioner
ESF-8, Alabama Dept. of Public Health (ADPH)	State Health Officer (SHO)
ESF-10, Alabama Dept. of Environmental Management	Director
ESF-11, Alabama Dept. of Agriculture & Industry	Commissioner
ESF-11, Alabama Dept. of Conservation	Director
ESF-13, Alabama National Guard	State Adjutant General
ESF-13, Alabama Law Enforcement Agency	Secretary

- Due to specialized training requirements for responders from these State agencies, a representative may be assigned to AEMA Division Offices to coordinate with the SEOC.

- It is the responsibility of each organization that supports this annex to perform prudent staff actions to prepare for the full implementation of the annex.
- County organizations responding to a radiological incident at a NPP are listed in the County specific plans and are tailored for minor differences between counties. **(NUREG REF: II, A.1.a)**

B. Responsibilities **(NUREG REF: II, A.1.d, A.2.a; A.2.b; C.1.a; C.4; D.4)**

- The Federal Emergency Management Agency (FEMA) is responsible for reviewing and assessing state and local emergency plans and for off-site radiological emergency planning and response for adequacy. The Nuclear Regulatory Commission (NRC) is responsible for on-site radiological emergency planning and for licensing the operation of a NPP. The NRC will review the FEMA findings and determinations on adequacy of implementation of state and local plans and will make the final determination with regard to the overall (on-site and off-site) state of emergency preparedness prior to licensing a NPP.

- Government officials at all levels share responsibility for the planning necessary to protect the health and safety of the public during a nuclear incident at a NPP. This planning should provide for immediate response and recovery capability to alleviate problems associated with an incident. Responsibilities for emergency actions and the direction and control of emergency operations rest with the executive heads of government. Departments and agencies at all levels of government are required to develop and maintain an effective response capability to support emergency operations.

- The Governor of the State of Alabama has overall responsibility for emergency preparedness and response concerning an incident at a NPP. Alabama law designates the Alabama Radiation Control Agency (RCA) as the agency responsible for issuing any protective action decision or order requiring actions to be taken necessary to protect the health and safety of the public. In day- to- day operations this function is fulfilled by the Alabama Department of Public Health, Office of Radiation Control under the direction of the State Health Officer or designee. The Governor has charged the Alabama Emergency Management Agency Director with the responsibility of coordinating the activities of all departments, agencies and organizations of state government and local emergency management agencies to carry out emergency functions relating to a NPP incident. These assigned responsibilities merge in the joint development and co-issuance of this annex by ADPH and AEMA.

- Utilities **(NUREG REF: II, B)**
  Establish and maintain an onsite emergency organization that performs the functions required by NUREG 0654. For the purpose of this annex the focus of the utility's efforts will be on clear, accurate, and rapid reporting of conditions to ADPH. The utilities will establish and maintain communications with the various headquarters activated by the county and state agencies.

C. Departmental/Agency Responsibilities
(NUREG REF: II, A.1.a; A.2.a; 1.11; J.2)

ESF-1, Alabama Department of Transportation

- Provide technical assistance to the SEOC and Divisions to include barricade materials, signs and communications support.

- Support county highway/road departments in securing and installing barricades, signs, and other necessary equipment needed for traffic control.

- Coordinate data collection and assessment activities regarding road and bridge closures and re-openings.

- Coordinate and assist with evacuation and re-entry planning.

ESF-5, Alabama Emergency Management Agency (AEMA)
(NUREG REF: II, A.1.e; P.5)

- The State Liaison Officer (SLO) as appointed by the Governor is currently the AEMA Director. It is the responsibility of the SLO to notify all state and county agencies of unusual events, incidents, or emergencies which may be of public interest.

- Coordinate with all state agencies for emergency planning activities and ensure the development of an up-to-date coordinated state radiological annex.

- Publish and distribute the radiological annex based on updated information from ADPH and other state and local agencies that support the annex in their area of expertise. AEMA, in cooperation with ADPH, will identify authorship responsibility and revision schedules for this annex.

- Coordinate with licensees, other states and federal agencies on all non-radiological matters concerning the development and implementation of the radiological annex.

- Provide communication capabilities by use of existing public and private systems to assure continuous exchange of information between SEOC, County EOCs, and the NPP on a 24-hour a day basis.

- Establish policy, plans, and methods of communicating Public Health Orders and for disseminating Emergency Public Information.

- Plan, develop, and conduct training for the non-radiological aspects of the REP annex.

- Establish and direct staff activities of the SEOC and Field Operations at the SRMAC and AEMA Division office locations.

- Notify the Governor of potential and actual requests for the use of state military forces or request for federal resources.

- Coordinate and disseminate news releases. **(NUREG REF: II, J.10.a)**

ESF-6, Alabama Department of Human Resources (ADHR)

- Assure emergency provision of regular ongoing services of ADHR to meet the needs in the affected areas.

- Work with AEMA Divisions to ensure the location and coordination of local reception/mass care (shelter and feeding) centers.

- Provide planning and technical assistance to the local government through the REP annex and liaison with state agencies.

ESF-6, Department of Education

- Provide training, sheltering, and evacuation of school children in the 10-mile Emergency Planning Zone around NPPs.

- Provide transportation as requested by SEOC.

ESF-8, Alabama Department of Public Health (ADPH)

- Maintain liaison with NPP operators, other states, and federal agencies for radiological operational purposes.

- Determine the protective actions needed to protect the public from excessive exposure to radiation and issue Public Health Orders requiring such actions are taken.

- Conduct off-site radiation monitoring and control activities, and coordinate radiation data with the licensee, federal agencies, and SEOC.

- Provide prompt, regular notification to the Governor and the legislature concerning the status of the radiation hazard.

- Provide technical information to the state staff on all aspects of radiation (i.e., determine the level of radiation, health hazards, food contamination, evacuee decontamination procedures, and re-entry guidelines).

- Provide medical and technical support to local governments, ADPH districts and District Offices.

- Request federal radiological assistance when state resources are exhausted or otherwise not available.

ESF-11, Alabama Department of Agriculture and Industries (AGI)

- Condemn and seize foods which are unwholesome for human consumption.

- Restrict the feeding of certain feeds to farm animals to prevent the contamination of food products.

- Coordinate activities with local USDA personnel.

- Coordinate with the State Health Officer to determine the degree of contamination of food products.

ESF-13, Alabama National Guard

The Alabama National Guard (ALNG) will provide perimeter security and be prepared to conduct other support operations at each plant as necessary. The ALNG will respond with the requested capabilities from the local area units and build capacity as required to meet the needs of AEMA or other requesting agencies.

Support the local governments on a mission-type basis as required, including:

- Facilitation of all possible support to civil authorities.

- Protection of life and property PIO of the people of Alabama.

- Safeguard National Guard personnel and facilities.

- Provide security and control of the evacuation zone.

- Assist with personnel and equipment monitoring when requested.

- Being able to deploy and sustain Task Forces at both nuclear power plants while retaining adequate forces to respond to any additional Defense Support Civil Authorities (DSCA) missions.

ESF-13, Alabama Law Enforcement Agency (ALEA)

A. Alabama Department of Public Safety

- Provide law enforcement, traffic control, and fire and rescue support, as requested by the SEOC or Division.

- Assist in communications, as may be required.

- Support local officials in the evacuation of designated areas.

B. Alabama Marine Police

- Provide support to local governments for evacuation of citizens from water.

- Coordinate patrol activities with the Department of Public Safety for security purposes.

- Coordinate evacuation and water safety practices with the U.S. Coast Guard and local rescue teams.

C. Alabama Fusion Center

- Provide intelligence to support incident response.

- Distribute intelligence directly to partner agencies on a need-to-know basis.

Other Departments and Agencies (NUREG REF: II, D.4; P.10)

- All additional State departments and agencies will assist and make resources available as required by the SEOC.

D. Administrative Responsibility **(NUREG REF: II, P.1; P.3)**

The Alabama Emergency Management Agency (AEMA) and the Alabama

Department of Public Health (ADPH) are jointly responsible for the overall administration of this annex. The Directors, ADPH and AEMA are jointly responsible for developing, reviewing, updating, coordinating, and exercising this annex. These individuals will be trained, as appropriate, in the technical and planning aspects of nuclear incidents necessary to fulfill their joint responsibilities. AEMA and ADPH will jointly develop and issue this annex and both will annually certify its validity.
(NUREG REF: II, P.2; P.3; P.4; P.5)

- AEMA will publish and distribute all revisions to this annex and ensure that proper accountability procedures are established.

- Each State Department and Agency is responsible for its internal administration and logistical operations to support the requirements of this annex.

- Emergency Operations are funded through the budget of each agency at all levels of government. Complete and accurate accounts of emergency expenditures in support of a NPP incident must be maintained by each state agency for compilation by AEMA.

- Departments supporting this annex will update rosters of key personnel and telephone numbers on a quarterly basis. These updates will be provided to AEMA. **(NUREG REF: II, P.10)**

- Each Department and Agency of State and Local Government which has personnel tasked to participate in emergency response shall make provisions to ensure that each individual receives radiological emergency response training. All radiological training will be developed and conducted by ADPH/ORC, AEMA, and coordinated with the appropriate departments, agencies, Division, and utility.

IV. Direction and Control (NUREG REF: II, C.1.a; C.1.c; P.2)

Mission:

The mission is to provide direction and control of emergency operations at the State level to manage an incident at a Nuclear Power Plant (NPP) and support local response actions.

A. Situation

The population in the vicinity of a NPP will likely experience a high degree of concern and unrest in association with a nuclear incident. They will require ample notification, information and positive assurance that the responsible

authorities are capable of and are taking appropriate action to protect their health and safety.

- An incident at a NPP will require strong and positive direction and control exemplified by coordinated operations and effective decision making under pressure.

- An incident could develop into a situation requiring evacuation, resulting in the mass movement of all or part of the population surrounding the facility or the evacuation of facility employees. This would require the utmost in coordinated effort between State and Local governments. Local governments are the lead first responders with state assets available to assist in any situation.

- Direction and control are most efficient and effective for any given operation when they operate from one location. Overall State EMA control for support of a NPP incident will be exercised from the SEOC, located in Clanton, AL. Radiological control of a NPP will be exercised from the State Radiological Monitoring and Assessment Center (SRMAC), located in Montgomery and/or Morgan or Houston County. The SRMAC is comprised of ADPH and/or AEMA representatives and will be staffed at the "Alert" emergency classification level depending on the severity and potential of the incident.

- NPP incidents may last for an extended period of time. Therefore, the SEOC and local EOCs in REP counties must be capable of operating 24-hours a day for extended periods. In case an EOC is rendered inoperable or uninhabitable, an alternate capability and location is needed in order to continue operations throughout the period of the incident.

B. Concept of Operations (NUREG REF: II, A.1.b; A.2.a)

- The Governor of the State of Alabama will assume overall authority and responsibility for emergency operations and actions concerning a nuclear incident at an NPP. The State of Alabama Health Officer and/or designee will issue an order requiring actions to be taken necessary to meet the emergency. The ADPH/ORC will provide analysis and recommendations to the State Health Officer. The AEMA Director will coordinate the activities of all state agencies for carrying out emergency functions relating to a NPP incident.

- ADPH/ORC will maintain a liaison with each utility operating an NPP within the State and those operating in adjacent states which could affect the health and safety of Alabama residents. Each utility will notify the SEOC and ADPH/ORC of any incident involving nuclear materials at a plant.

- The ADPH/ORC will verify the details of a radiological emergency, issue necessary Public Health Orders, and provide advisories and situation reports to the SEOC throughout the time period of an incident. The SEOC will disseminate information and coordinate with affected departments and agencies.

- AEMA will take actions as outlined in the SOG Master Checklist Guide to coincide with the class of the incident and the current situation. In all cases, the EMA Director in each affected county will be notified of an incident. If primary notification contact at any level of an incident cannot be made within five minutes, alternate notification procedures will be initiated.

- The SEOC may be activated for an "Alert" or higher emergency classification level. The staffing level for the SEOC will be based on an evaluation of the situation by ADPH/ORC and AEMA.

- Communications in the SEOC will be used to receive and evaluate information, disseminate instructions, coordinate operations, and advise local, state, and federal agencies.

C. Responsibilities

Direction and Control

Control of emergency operations will be vested in the Governor. He and/or she will be advised by SEOC staff and may delegate specific responsibilities as he/she desires, pursuant to state law.

Radiation Control Agency (RCA)

RCA will be responsible for evaluating radiation hazards, ordering protective actions as necessary, advising state and local agencies, coordinating radiological technical assistance, and disseminating information to ensure the health and safety of the population.

State Emergency Operations Center (SEOC)

(NUREG REF: II, A.1.e; A.4; C.2.a; H.3; H.4)

The AEMA Director will be responsible for maintaining and operating a SEOC capable of continuous (24-hour) operations for an extended period. Operating procedures, displays, communication equipment, physical arrangements, etc., will be adequate to accommodate the situation. This also includes the requirements for the AEMA liaison's portion within the SRMAC.

Emergency Direction and Control Staff
Coordination of emergency staffing will be the responsibility of the State and Local Emergency Management Directors. This includes maintaining liaisons with agencies at local, state, private, and federal levels.

Resources
Each agency will be responsible for maintaining overall control of its resources during an incident at a NPP, and also providing normal support of its resources as required.

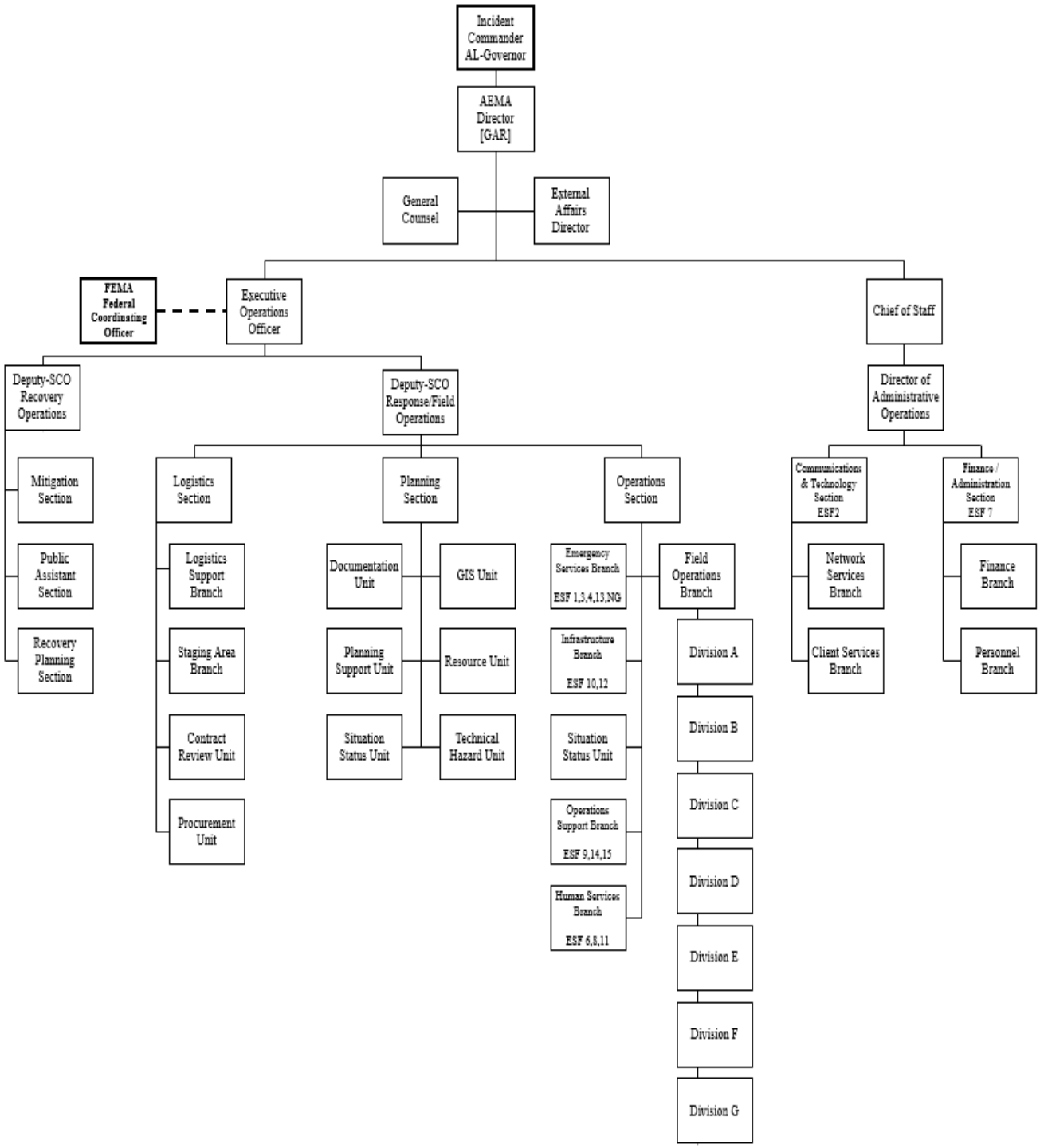
Communications
The primary means of initial communications for notification and warning by the utilities to the State will be the following: Emergency Communication Notification System (ECNS) telephone for TVA's NPP (Browns Ferry Nuclear Plant/BFNP); Emergency Notification Network (ENN) for the Southern Nuclear Operating Company's NPP (Farley Nuclear Plant/FNP), with commercial telephone as backup. Notification to State and local agencies will be by commercial telephone. A dedicated direction and control circuit between the State and affected counties within the 10-mile EPZ of BFNP will be activated when the SEOC is activated. A dual-use direction and control and radiological information circuit used for initial notification will be similarly used for FNP. The in-state National Warning Systems (NAWAS) and the Radio Amateur Civil Emergency Services (RACES) may be used for emergency backup with Southern Linc and email as supporting, if required.

D. Organizational Structures for All Organizations (NUREG REF: II, O.4.a)

Alabama Emergency Management Agency (AEMA) Organizational structure is located in this section. The counties will have organizational structures included in each of the individual county plans.

SEOC Organizational Structure

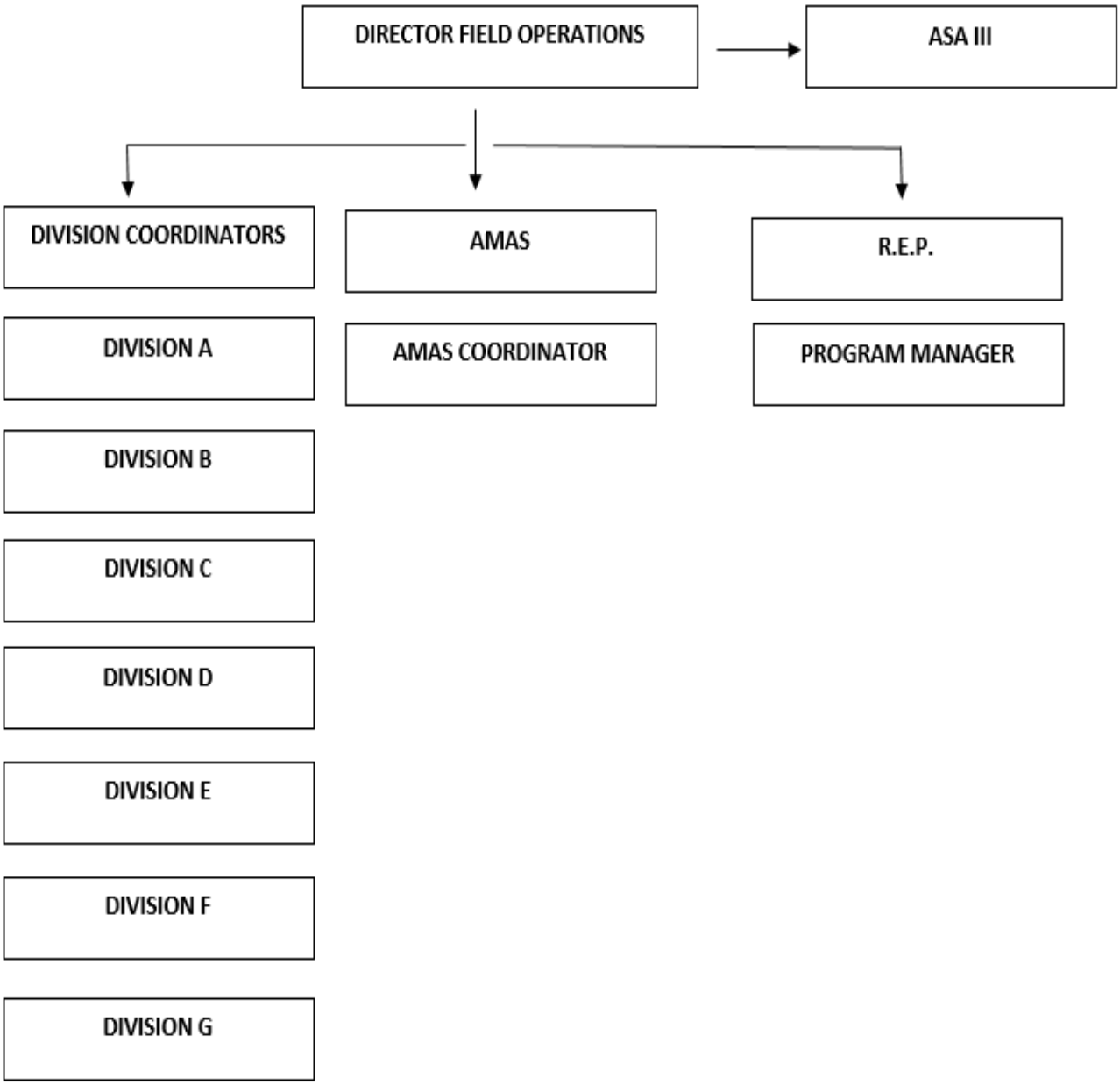
(NUREG REF: A.1.c)



AEMA Division Organizational Chart

(NUREG REF: A.1.c)

FIELD OPERATIONS BRANCH



V. Communication and Notification
(NUREG REF: II, A.1.e; A.4; E.1; E.6; F.1.a; F.1.c; F.1.d; J.10.c)

Mission:

The mission is to provide a communication and notification capability for coordinating operational and radiological matters and to provide prompt notification of the general public in the 10-mile EPZ in case of a nuclear incident at either of the NPPs.

A. Situation

- An incident at a NPP will generate a requirement for an immediate and uninterrupted communications link between State and local governments, the utility, and within the local governments. This capability is necessary to provide notification and the direction and control needed to protect the health and safety of the population.

- A communication system capable of immediate and sustained support of operational functions during an incident at a NPP must be operational at all times. Periodic tests of the system must be conducted to verify and ensure its serviceability. Situations can change rapidly and conditions can vary greatly between incidents; this precludes establishing a communications network after an incident has occurred.

- Houston County's prompt notification of the public within the 10-mile EPZ of FNP will be provided by fixed sirens with Code Red as a backup. The Emergency Management Director of Houston County will be responsible for activating the Prompt Notification System.

- Browns Ferry Counties' prompt notification of the public within the 10-mile EPZ of BFNP will be provided by fixed sirens and tone alert radios. The Emergency Management Directors of Lauderdale, Lawrence, Limestone, and Morgan Counties will activate the portion of the system that is physically located within their respective county.

B. Concept of Operations

- The Emergency Communication Notification System (ECNS) will be the primary means through which TVA notifies the State of an incident. Southern Nuclear Operating Company will use the Emergency Notification Network (ENN) and Web EOC for initial notification.

- The initial call will be made to the 24-hour SEOC Communication Center in Clanton and will be relayed onto ADPH/ORC and the effected counties.

ADPH/ORC will collect additional details from the utility and forward the information onto the SEOC and effected counties.

- Duty officers are scheduled by their respective organizations to provide a 24-hours per day, 7 days per week coverage capability. **(NUREG REF: II, A.1.e)**

- After the SEOC is activated, the dedicated circuit will become the primary means of communications and warning between the utility, state, and applicable local governments. The statewide radio network will be primarily for general intrastate communications. Commercial telephones will be used as backup. The in-state National Warning System (NAWAS) and the Radio Amateur Civil Emergency Services (RACES) may be used for emergency backup. **(NUREG REF: II, A.1.e)**

- Each state agency with communications gear will operate and maintain its own equipment. Communications requirements in the SEOC and for the Divisions during an incident should be coordinated with the Emergency Management Communications Officer, ESF-2.

- Communications with federal agencies and other states will be conducted primarily via commercial telephone with a hard copy follow-up. A dedicated FEMA circuit will be used for backup.

C. Responsibilities (NUREG REF: II, A.2.a; A.4; F.1.c; F.1.e; F.2; O.4.j)

Alabama Emergency Management Agency

- Provide for emergency communications for state agencies in the SEOC and for the Divisions during an incident at a NPP.

- Coordinate emergency communications requirements with local Emergency Management organizations and with the utilities.

- Coordinate with ADPH/ORC to establish communications and notification procedures between utilities, state agencies, and local government.

- Advise adjacent states and FEMA of the incident and actions being taken.

- Ensure quarterly check of communications systems supporting this plan with FEMA Region IV and adjacent states.

Alabama Department of Public Health, Office of Radiation Control (ADPH/ORC)

- Coordinate with AEMA to establish communications and notification procedures between utilities, state agencies, and local government.

- Coordinate radiological actions with adjacent states and federal authorities.

Other State Agencies Involved in an Incident

- Establish a communication system adequate to support responsibilities outlined in this plan.

All State Agencies Tasked in this Plan

- Operationally check communication systems used in support of this plan on a monthly basis.

Fixed and Mobile Communication

- All provider service ground ambulances shall have two forms of communication capabilities that provide vehicle-to hospital communications and for entry of patients. Additionally, all ground ambulances shall have radio communication capabilities with the following Very High Frequencies (VHF) to be used for mutual aid and disaster responses. Over staff responsibility for this requirement rests with the Department of Public Health, EMS Division.

Notification and Communications Charts

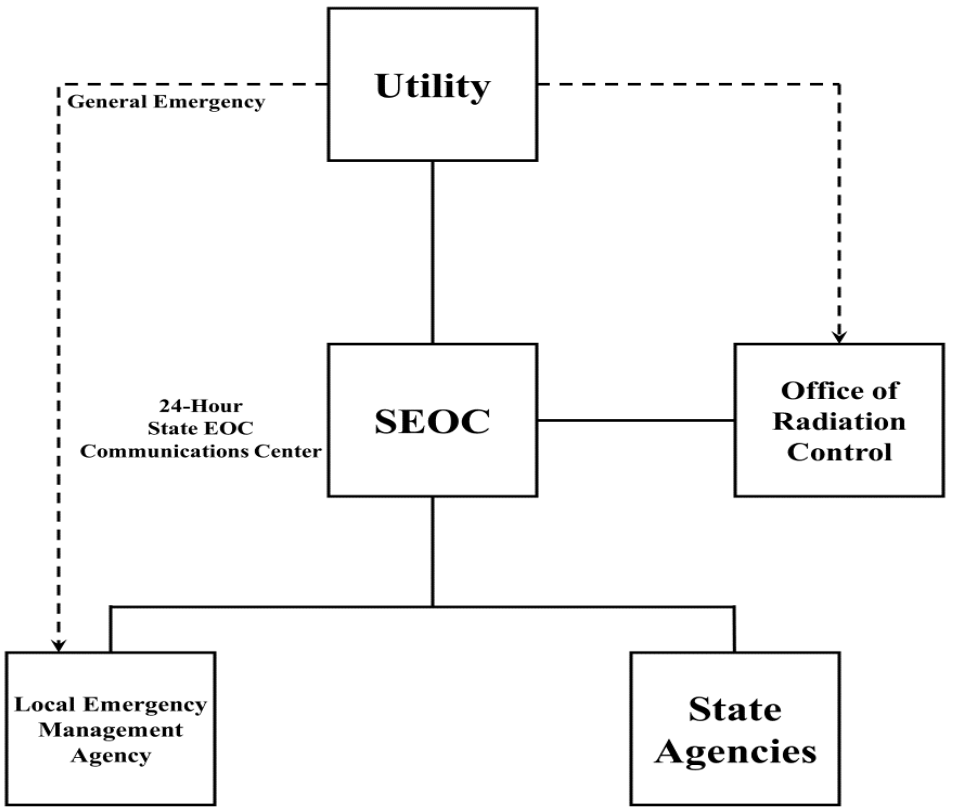
Notification Chart **(NUREG REF: II, A.1.e; A.2.a; A.4; E.2; E.5; F.2)**

SEOC Communications Chart
(**NUREG REF: II, A.1.e; A.4; E.5; F.1.c.d.e;F.2)**

SRMAC Communications Chart **(NUREG REF: II, A.4; F.1.d; F.2)**

SEOC Checklist

Fixed Facility Incident Notification Chart



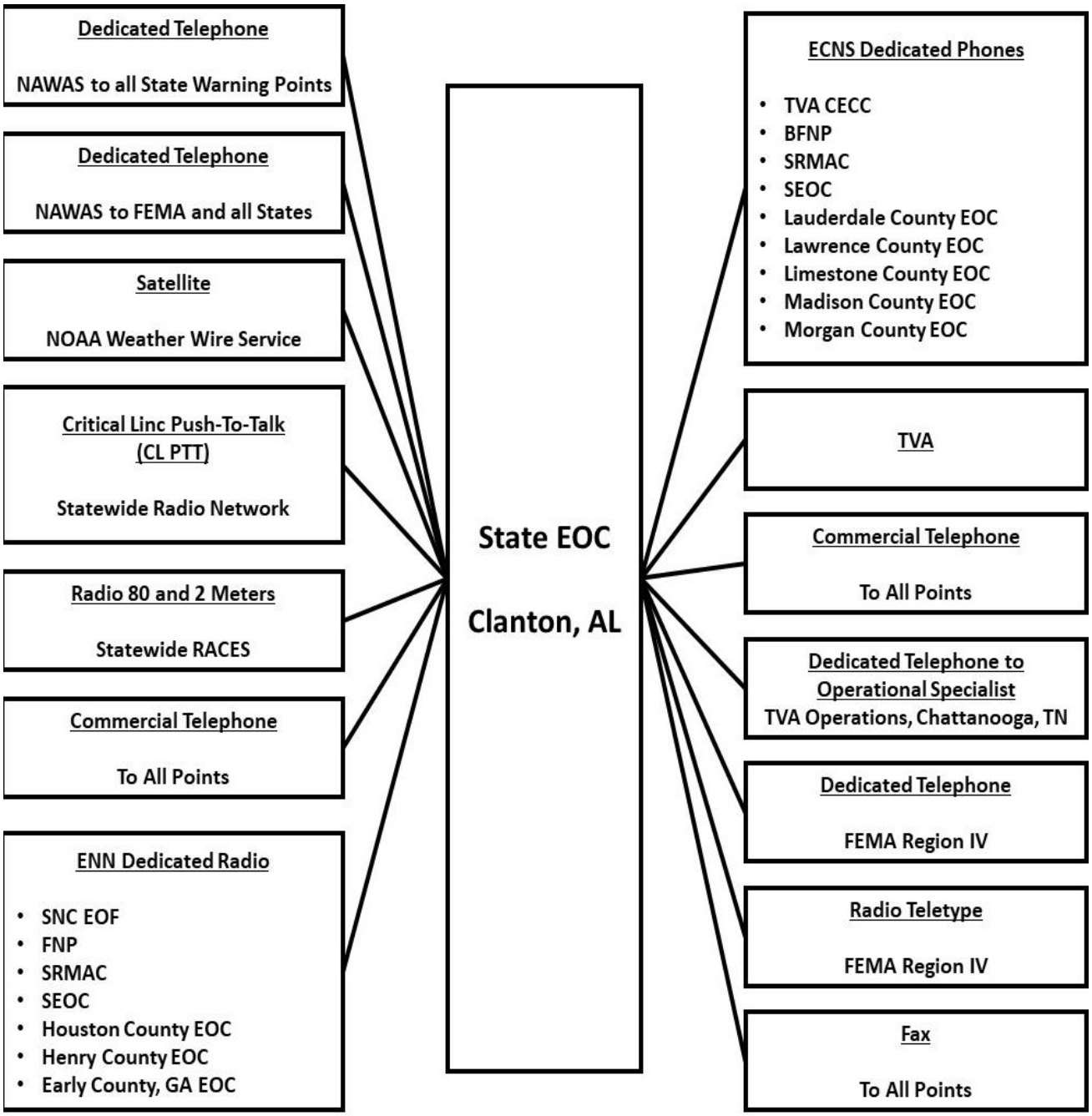
Note 1: The utility will contact county emergency management agencies in addition to the SEOC directly if General Emergency is the initial emergency classification level. The utility will establish contact with the SEOC within fifthteen (15) minutes under any condition.

Note 2: If contact in the notification chain at State and local level cannot be established within five (5) minutes, by-pass procedures will be initiated to notify next in line or designated alternative.

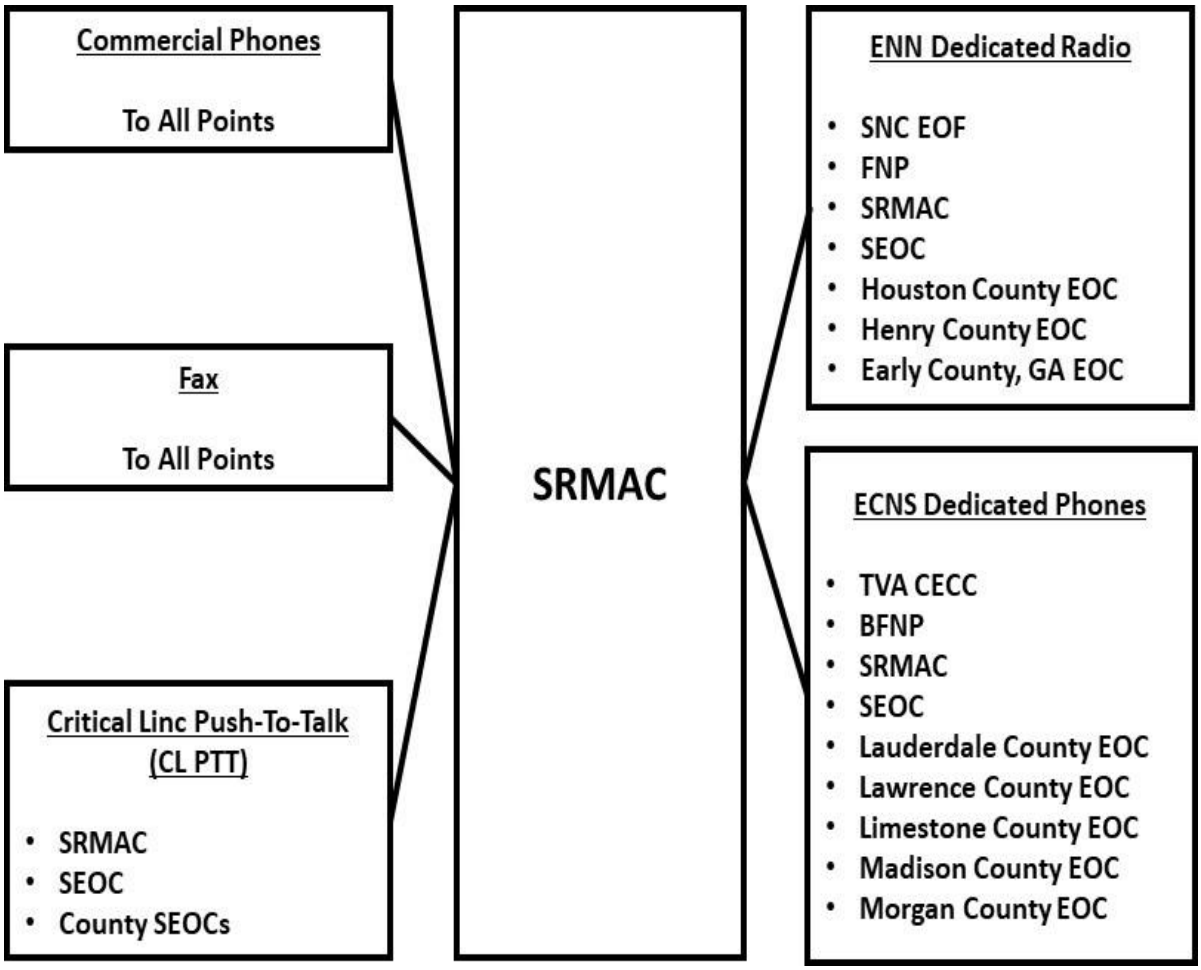
Note 3: County EOC Communications charts can be found in each of the County REP Plans.

SEOC Communications Chart

(NUREG REF: A.1.e, A.2.a, F.1.a; F.1.e)



SRMAC Communication Chart



D. Field Operations Communications

If determined that a Division Coordinator will be located at the SRMAC, they will serve as a liaison between the County, Division, and the SEOC. Communications between Field Operations is primarily by commercial telephone and email with the Critical Linc Push-To-Talk (CL PTT) radio as backup.

E. Houston County Communication and Notification

Concept of Operations **(NUREG REF: II, A.1.b.; E.6)**

- SEOC will notify local Emergency Management Agencies of an incident at FNP which could affect the health and safety of the population. During non-duty hours SEOC will notify the local 24-hour warning point. Southern Nuclear Operating Company will make direct contact with the county in case of a "General Emergency". **(NUREG REF: II, F.1.a)**

- The Emergency Notification Network (ENN), a dedicated phone line, in conjunction with WebEOC will be the primary means of initial notification. Back-up communications will be through the CL PTT Statewide Radio Network, commercial telephone, and Radio Amateur Civil Emergency Service (RACES).

- County alerting and warning of the population will be by a combination of fixed sirens with Code Red when necessary as a back-up. Coordination and control of this action will be directed from the County Emergency Operations Center. Procedures have been established with local TV and radio stations to broadcast continuous updated EAS messages concerning evacuation routes, sectors to be evacuated, Reception and Care Centers that are open, and other information pertaining to the general status of the emergency. When the County decides to activate the Prompt Notification System, the County Emergency Management Director will ensure the TV and radio stations designated to broadcast emergency information are either on the air or will be on the air for notification of the public. Once the station is manned, the PNS for Henry and Houston Counties will be activated. The initial notification will be sounded in a timely manner after the local EMA Director coordinates with appropriate agencies and the decision has been made to activate the system. The system is designed to provide notification to all residents within the 10-mile EPZ within a timely manner of activation. **(NUREG REF: II, F.1.b; G.3.a; G.4.b; G.5)**

- Communication systems will be tested in accordance with the following schedule:

Emergency Notification Network (ENN)	Monthly
CL PTT State-wide radio network	Monthly
Radio Amateur Civil Emergency Service (RACES)	Semi-annually and during drills
iPhone communication check	Monthly

Farley NPP Counties:

- Provide for emergency communications for local agencies in the EOC during a nuclear incident at FNP.
- Coordinate emergency communications requirements with AEMA.
- Coordinate emergency notification procedures with the news media.
- Coordinate emergency notification actions within the 10-mile EPZ for Houston and Henry Counties.
- Provide space in the EOC for SRMAC communications equipment.
- Activation of the Prompt Notification System (PNS) for FNP may occur when:
    - Notification of an ECL that would require a protective action to be taken
    - Notification by a FNP operator of a declared "General Emergency" at the plant.
- Operationally check communications and PNS on a monthly basis.

F. BFNP Counties Communication and Notification

Concept of Operations **(NUREG REF: II, A.1.b; A.1.e; E.6; J.10.c; N.1.b)**

- SEOC will notify local Emergency Management Agencies of an incident at BFNP which could affect the health and safety of the population. During non-duty hours SEOC will notify the local 24-hour warning point. TVA will make direct contact with the county in case of a spontaneous "General Emergency".
- TVA ECNS will be the primary means of initial notification to the counties. Back-up communications will be through the CL PTT Statewide Radio Network, commercial telephone, Radio Amateur Civil Emergency Service (RACES) and the National Warning Systems (NAWAS).
- County alerting and warning of the population will be by a combination of fixed sirens, tone alert radios, and NOAA weather alert radios. Should it become necessary, house-to-house back-up route alerting will be executed. Coordination and control of this action will

be directed from the County Emergency Operations Center. Procedures have been established with local TV and radio stations to broadcast continuous updated messages concerning evacuation routes, sectors to be evacuated, Reception and Care Centers that are open, and other information pertaining to the general status of the emergency. When the risk counties activate the Prompt Notification System, the individual risk county Emergency Management Coordinator/Director will ensure that a local radio station broadcasts the Emergency Alert System (EAS) message. **(NUREG REF: II, F.1.b)**

- The initial notification will be sounded in a timely manner after the risk counties have coordinated and made the decision to activate the PNS/EAS. Madison County EMA will coordinate the initial sounding as well as all subsequent activations via ECNS phone, CL PTT "BFNPP AEMA" talk group, or State Coordination Group call. The NWS Huntsville will send the designated EAS message to the county radio stations for transmittal.

- Communication systems will be tested in accordance with the following schedule:

National Warning System (NAWAS)	Weekly
Emergency Communication Notification System (ECNS)	Weekly
CL PTT State-wide radio network	Monthly
Radio Amateur Civil Emergency Services (RACES):	Semi-annually and during drills
iPhone Communications Check	Monthly

<u>BFNP Counties:</u>

- Provide for emergency communications for local agencies in the EOC during a nuclear incident at BFNP.

- Coordinate emergency communications requirements with AEMA.

- Coordinate emergency notification procedures with the news media.

- Morgan County Emergency Management provides leased space in the Courthouse for SRMAC communications equipment.

- Notify industries, schools, nursing homes, and other institutions with large numbers of people that are located within the 10-mile EPZ. Keep them informed of the situation and advise them of actions they need to take.

- Activation of the Prompt Notification System (PNS) for BFNP may occur when:
    - Notification of an ECL that would require a protective action to be taken
    - Notification by a FNP operator of a declared "General Emergency" at the plant.

- Operationally check communications and PNS on a monthly basis.

VI. Radiological Emergency Response Training (NUREG REF: II, A.1.b; H.4; O.5; O.1.b; O.4.d; O.4.f)

Mission:
The mission is to provide Radiological Emergency Response Training to personnel at the state and local level who may have an emergency response assignment in case of a radiological incident at a NPP.

A. Situation

An initial training program, plus annual refresher training, is required by NRC and FEMA and will be provided to all emergency response personnel.

B. Concept of Operations (A.3)

General

Personnel who work to support the population in the event of a radiological accident at either of the NPPs in Alabama may be exposed to radiation. These individuals require technical training in the use of instruments and procedures to protect themselves and to assist in the protection of exposed citizens. The level of training required depends on the tasks these workers are expected to perform. There are four basic categories of workers who require technical training under this annex.

Training by Category

Emergency Workers:

- Required participants are personnel who perform their assigned task in areas that could become contaminated. Examples of such people are police, firemen, rescue crews, and officials needed to assist the population during an evacuation.

- Initial course is two to three hours (2-3hrs) and covers the following subjects:

- Interaction of Utility, Federal, State, and Local Personnel
- Emergency Classifications of NPP
- Emergency and Protective Actions
- Radiation Hazards
- Operational Guides
- Exposure Control
- Dose Limits
- Dosimetry
- Recordkeeping
- Decontamination
- Potassium Iodide (KI)

- Annual refresher training will be two to three hours (2-3hrs).

- Training will be done through a cooperative effort by qualified instructors from ADPH/ORC, the County EMA, and if available, the utility and AEMA.

- County EMAs will assure that adequate numbers of participants are trained as emergency workers.

Personnel and Equipment Monitors: (NUREG REF: H.10)

- Required participants are personnel who use instruments to monitor evacuees for contamination at reception centers, issue dosimeters to emergency workers, and monitor those emergency workers when they return from a task.

- The initial course is three to four hours (3-4hrs) and covers the following:

  - Interaction of Utility, Federal, State, and Local Personnel
  - Emergency Classifications of NPPs
  - Emergency and Protective Actions
  - Radiation Hazards
  - Operational Guides
  - Exposure Control
  - Dosimetry
  - Dose Limits
  - Portable Radiation Survey Instruments
  - Portable Portal Monitors (where applicable)
  - Monitoring Techniques
  - Decontamination
  - Recordkeeping
  - Potassium Iodide (KI)

- Annual refresher training will be three to four hours (3-4hrs).

- Training will be done through a cooperative effort by qualified instructors from ADPH/ORC, the County EMA, and if available, the utility and AEMA.

- County EMAs will assure that adequate number of participants is trained as personnel & equipment monitors.

Radiological Field Monitoring Teams (RFMTs): **(NUREG REF: I.7)**

- Required participants are County Health Departments and ADPH/ORC personnel who are assigned the task of taking measurements in and around the EPZ to detect radiation.

- The initial course is four hours and covers the following subjects:

    - Interaction of Utility, Federal, State, and Local Personnel
    - Emergency Classification of NPPs
    - Emergency and Protective Actions
    - Radiation Hazards
    - Operational Guides
    - Exposure Control
    - Dosimetry
    - Portable Radiation Survey Instruments
    - Air Sampling Equipment
    - Counting Techniques in the Field
    - Dose Limits
    - Sampling Techniques
    - Monitoring Techniques
    - Decontamination
    - Plant Familiarization
    - Communications
    - Recordkeeping
    - Potassium Iodide (KI)

- Annual refresher training will be four hours

- Training will be done through a cooperative effort by qualified instructors from ADPH/ORC and, if available, the utility.

Emergency Plan Training: (NUREG REF; G.5)

- Required participants are directors, coordinators and other key personnel of the local response organizations, local emergency

management personnel, and selected personnel responsible for transmission of emergency information and instructions.

- Training will be accomplished prior to the annual exercise of the NPP. The briefing will be given to key players at the state and local levels and will cover the following topics:

  - Overview of the total emergency plan
  - Implementing procedures
  - Duties and responsibilities of emergency response
  - Organizations and their personnel
  - Identification and reporting of emergencies
  - Emergency classifications
  - Facilities that will be activated for specific emergencies
  - Communications
  - Potassium Iodide (KI)

- Each agency will be responsible for their own briefings.

C. Certification of Training

Upon successful completion of training, all trained Emergency Workers, Personnel and Equipment Monitors, RFMTs, and medical personnel in hospitals & ambulance services will receive a certificate and wallet-size card which will be valid for 15 months. A new card will be issued upon completion of the refresher course. It is the responsibility of the ADPH/ORC with the cooperation of the County EMAs to ensure each trainee is issued the appropriate card.

NOTE:
Training of medical personnel in hospitals and ambulance services who may have contact with contaminated individuals will be conducted by ADPH/ORC.

VII. MASTER CHECKLIST GUIDE

A. ESF-5, Alabama Emergency Management Agency (AEMA) (NUREG REF: II, A.3;D.4; E.1;E.2; J.10.a; N.1.d)

Response
This State response planning effort is designed to cope with a variety of potential radiological emergencies at a nuclear power plant that could have a public health impact. Each county has the primary responsibility for responding to a radiological emergency with their resources and when necessary, for requesting additional assistance from other jurisdictions. These resources are contained in each county plan.

The SEOC 24-hour Communications Center will ensure that the incident notification message is received by the State, according to the State Communication Center Procedures.

The SEOC 24-hour Communications Center will notify impacted County EMAs, AEMA personnel, primary state agencies, FEMA, and adjacent states of the incident so they can take appropriate measures. Notifications will be made to these agencies through designated modes of communication as outlined in the SEOP, and NPP SOGs.

The SEOC and Division(s) will be activated at the appropriate level as recommended by the Director of AEMA. Assessment of the degree of severity and the radiological incident potential will determine the specific activation and staffing levels to be taken.

A State Coordination Group call will be established between the state leadership and the primary and support state agencies to discuss potential impacts from a radiological incident. ADPH/ORC will request a SCG call prior to issuance of a PAD/Public Health Order for group consensus on ability to implement the order. AEMA will send out the call information and preparation time will be given when the situation allows, however during a no-notice event the call may be established quickly. ADPH/ORC will provide the initial situation briefing for the call and at the conclusion a course of action will be established.

In the case of a radiological release, SEOC will verify that PNS systems are activated by the affected counties including the coordinated use of EAS to disseminate information to the public in the 10-mile Emergency Planning Zone (EPZ) when as appropriate.

The SEOC will direct and monitor the mobilization of state emergency response resources as requested in support of the Divisions and impacted County EMAs.

AEMA in partnership with ADPH/ORC will disseminate public information/public health orders from the SEOC, SRMAC, and/or JIC.

The SEOC will acquire and analyze information on the risk area environment including status of relocation and sheltering as appropriate, operation of essential facilities, status of transportation routes, and response activities.

B. ESF-8, Alabama Department of Public Health (ADPH) (NUREG REF: G.1; I.7)

Response

Activate SRMAC if necessary and alert key emergency response personnel.

Provide updates to SEOC of any situational information and participate in the SCG call.

Determine protective actions needed and as directed by SHO, issue appropriate Public Health Orders.

Provide timely official public information on all radiological matters pertaining to a radiological incident, accident, or emergency. Normally this will be through the SEOC, SRMAC, or JIC, and will be considered as the official state position on the subject. **(NUREG REF; G.1; I.7)**

Alert field monitoring personnel.

Keep all agencies and contiguous states advised of the radiological status of the incident, and the type and extent of protective actions ordered.

Direct and coordinate radiological monitoring programs. Provide information for accident assessment and environmental protection.

Request federal assistance if needed through the National Response Framework (NRF) Department of Energy (DOE) Radiological Assistance Program (RAP) Team/Federal Radiological Monitoring and Assessment Center (FRMAC).

Monitor and coordinate protective actions for food crops, milk distribution, and water supplies if necessary.

Exercise staff supervision of area hospitals and rescue teams to facilitate emergency medical care of victims.

Recovery

Inform all agencies, to include FEMA, when radiation levels are acceptable for return and rescind evacuation orders and/or sheltering orders.

Continue to monitor milk supplies, and coordinate their distribution.

Monitor and advise all state and local agencies of any Public Health Orders regarding the potential use of contaminated land, food, and water.

Supervise and coordinate actions to overcome any Public Health or sanitation situations that may have resulted from the incident.

VIII. Task/Functional Assignments (NUREG REF: II, A.1.a; A.2.a)

The following matrix identifies the Emergency Support Function (ESF) and the State organization that has primary responsibility (P), support responsibility (S), and coordination responsibility (C) for each task/function.

P = Agency Primarily Responsible for the Function

S = Agency with a Supporting Role

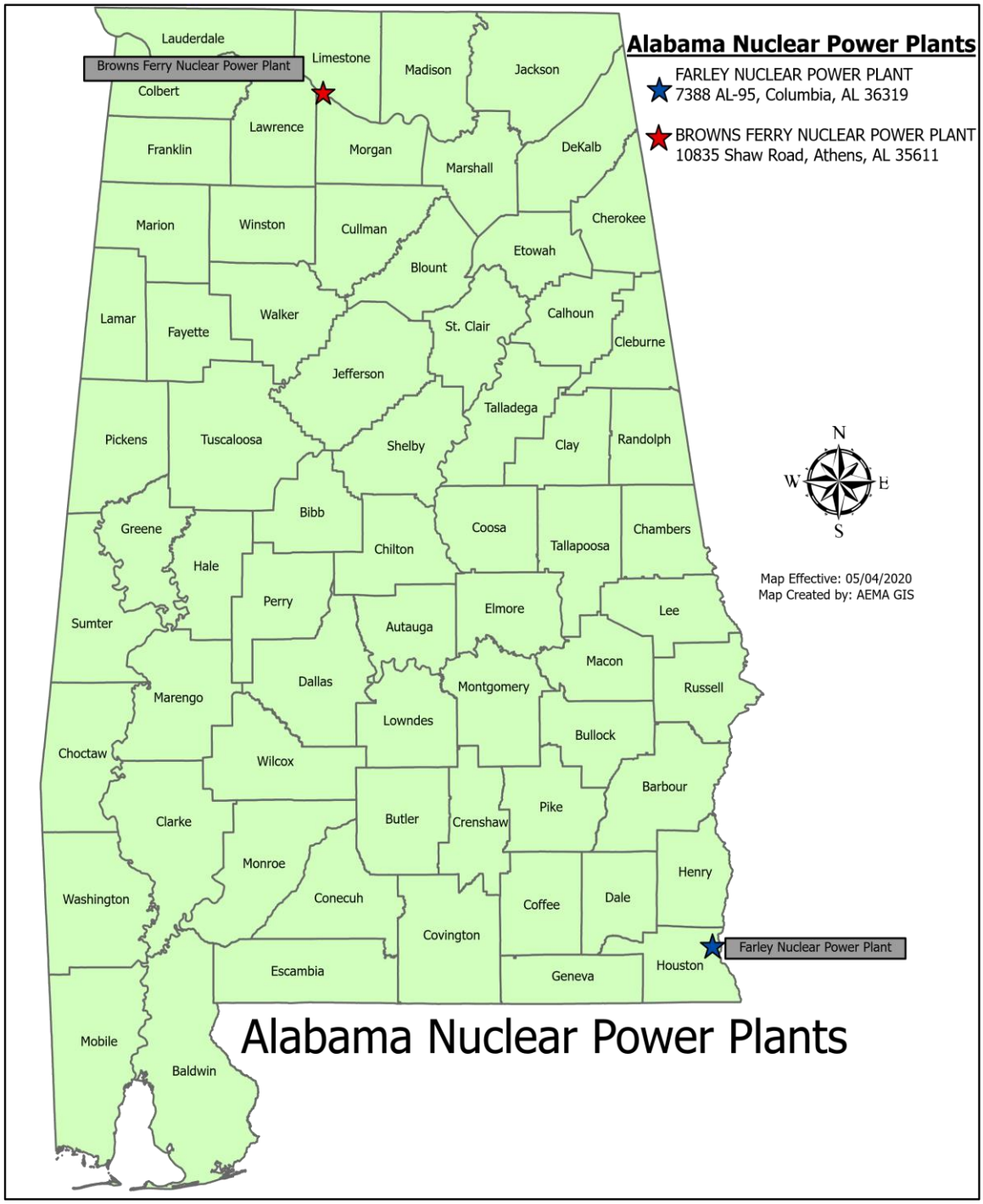
C = Agency that will be Coordinated with to Ensure Completion of the Function
(Coordination will be made by primary agency at a minimum.)

State of Alabama Functional Assignments P = Primary S = Support C = Coordinating **State Agency**	Emergency Support Function	1. Transportation	2. Telecommunications/Information	3. Public Works & Engineering	4. Fire Fighting	5. Emergency Management	6. Mass Care, Housing, and Human Services	7. Resource Support and Logistics Management	8. Public Health and Medical Services	9. Urban Search and Rescue	10. Oil and Hazardous Materials Response	11. Agriculture	12. Energy	13. Public Safety and Security	14. Economic Stabilization, Community Recovery and Mitigation	15. External Affairs
ACJIC						S		S						S		
ADECA						S		S					P		S	
ADEM		S		S		S		S			P	S				
AEMA		S	P		S	P	S	P	S	P	S	S	S		S	S
Agriculture and Industries		S			S	S		S			S	P	S		S	S
Alabama Power Company						S		S					S			S
Alabama Sheriff's Association						S		S		S				S		
American Red Cross						S	S	S								S
Board of Funeral Services						S		S	S	S						
Board of Pardons and Paroles						S		S						S		
Civil Air Patrol		S	S			S		S		S						
Dept. of Conservation		S	S	S	S	S		S		S	S			S		
Dept. of Corrections		S	S	S	S	S		S		S				S		
Dept. of Education		S				S	S	S				S				
Dept. of Forensic Sciences						S		S	S	S						
Department of Homeland Security			S			S		S						S		S
Dept. of Human Resources						S	P	S	S			S	S		S	
Dept. of Mental Health						S	S	S	S							
Dept. of Public Health				S	S	S	S	S	P		S	S				S
Alabama Law Enforcement Agency		S	S		S	S		S	S	S	S		S	P	S	S
Dept. of Senior Services						S	S	S								
Dept. of Transportation		P	S	P	S	S	S	S		S						
Emergency Alert System			S			S		S								S
Finance Dept.		S	S			S		S					S		S	
Forestry Commission		S	S	S	P	S		S		S				S		
Governor's Office						S		S					S		P	P
Insurance Dept.					S	S		S			S					
LPG Board						S		S			S		S			
Alabama National Guard		S	S	S	S	S	S	S	S	S		S	S	S	S	S
Public Service Commission		S				S		S					S	S	S	
RACES/ARES			S			S		S								
Rural Electric Co-ops						S		S					S			
Tennessee Valley Authority						S		S					S			

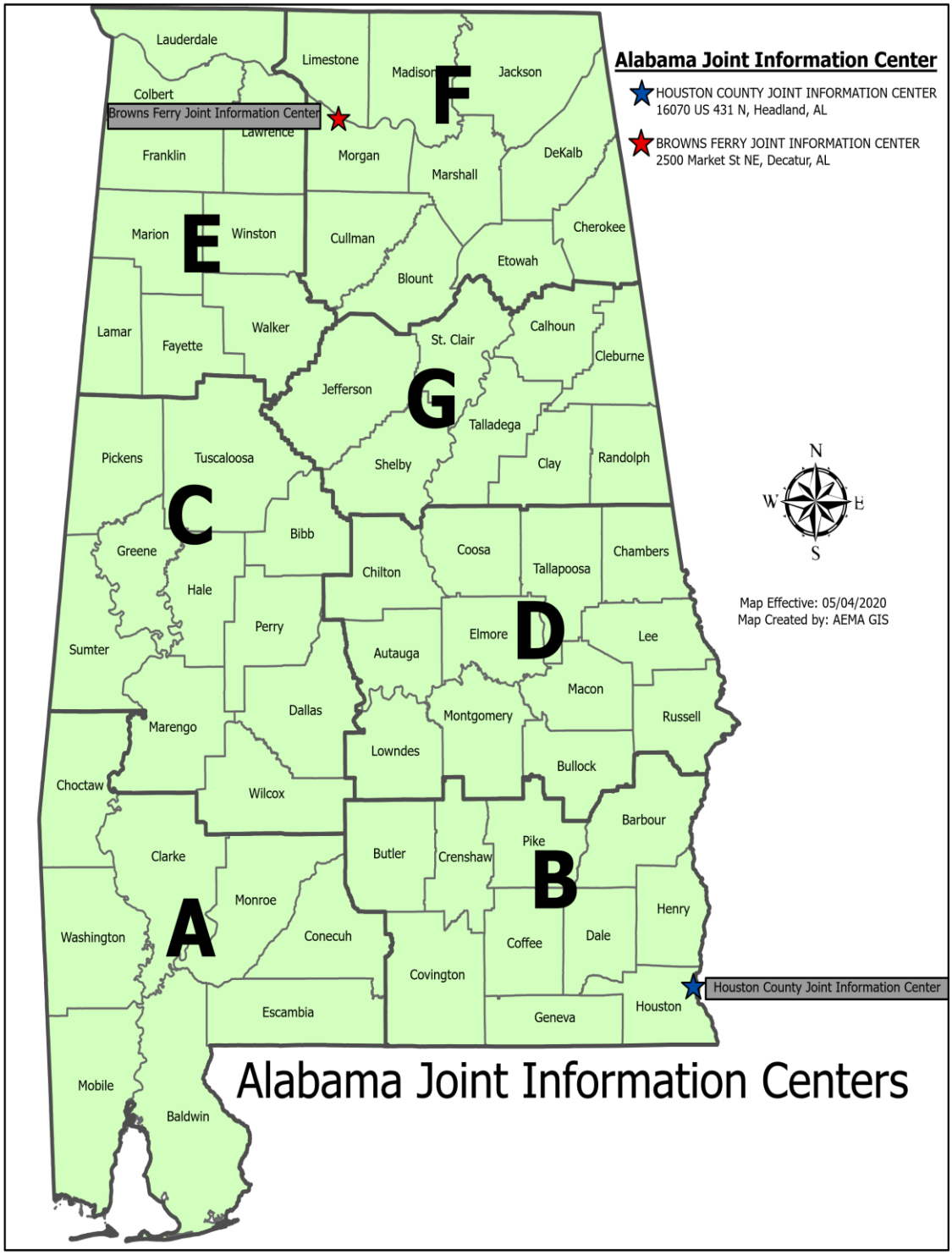
IX. Supporting Plans and SOGs (NUREG REF: II, A.3; P.6)

PLANS	SOURCES
Alabama Emergency Operations Plan	Alabama Emergency Management Agency
National Response Framework	Department of Homeland Security
Browns Ferry Nuclear Plant Radiological Emergency Plan	Tennessee Valley Authority
Farley Nuclear Plant Radiological Emergency Plan	Southern Nuclear Company
Sequoyah Radiological Emergency Plan	Tennessee Emergency Management Agency
Local Emergency Response Plans and Local SOPs/SOGs	Affected Counties: Henry, Houston, Lauderdale, Lawrence, Limestone, Madison and Morgan
AEMA Farley Nuclear Plant SOG	Alabama Emergency Management Agency
AEMA Browns Ferry Nuclear Plant SOG	Alabama Emergency Management Agency

Nuclear Power Plant Locations



Joint Information Center Locations
(NUREG REF: G.4.c; G.3.a)

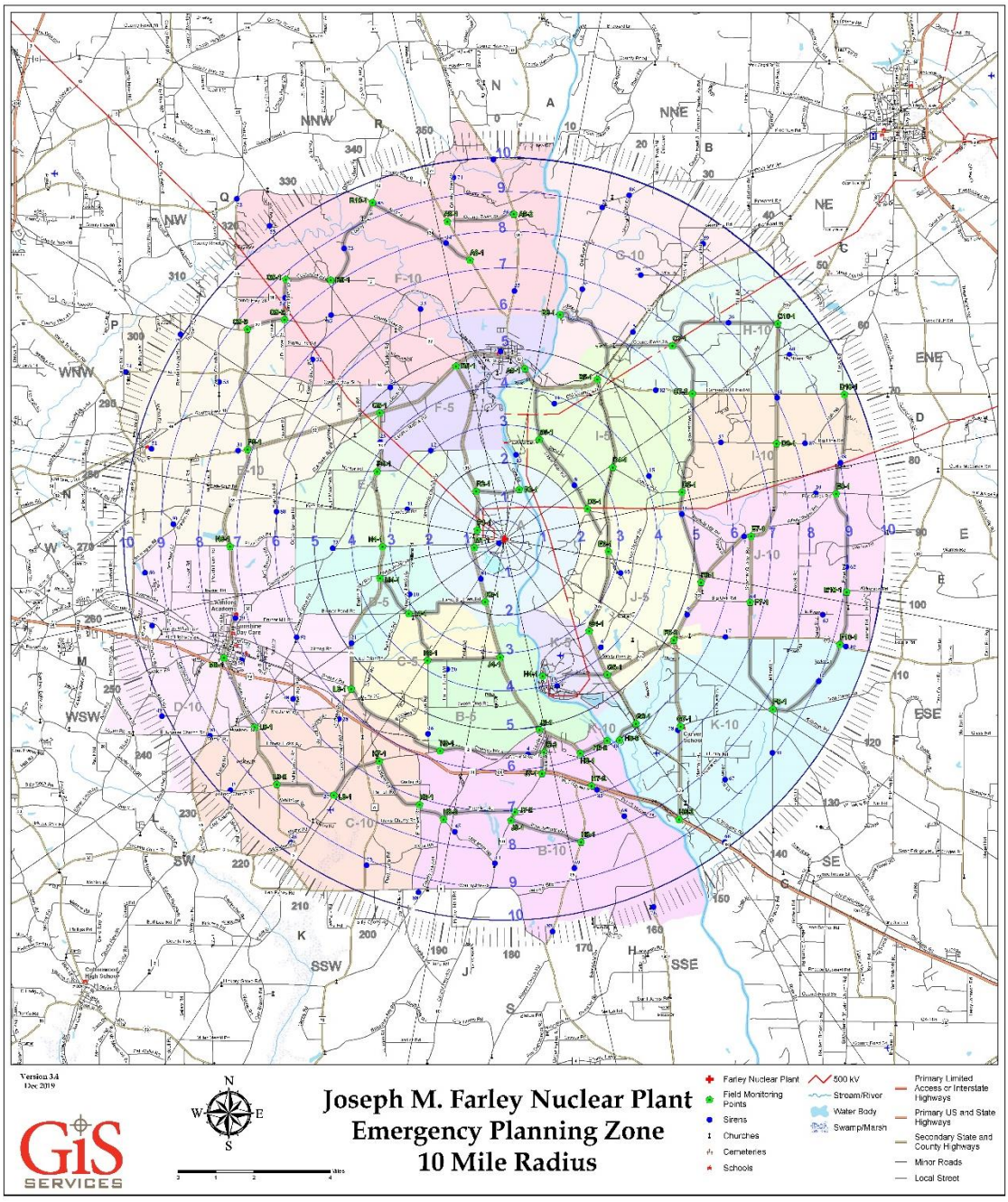


Appendix 1
To
ALABAMA REP Annex

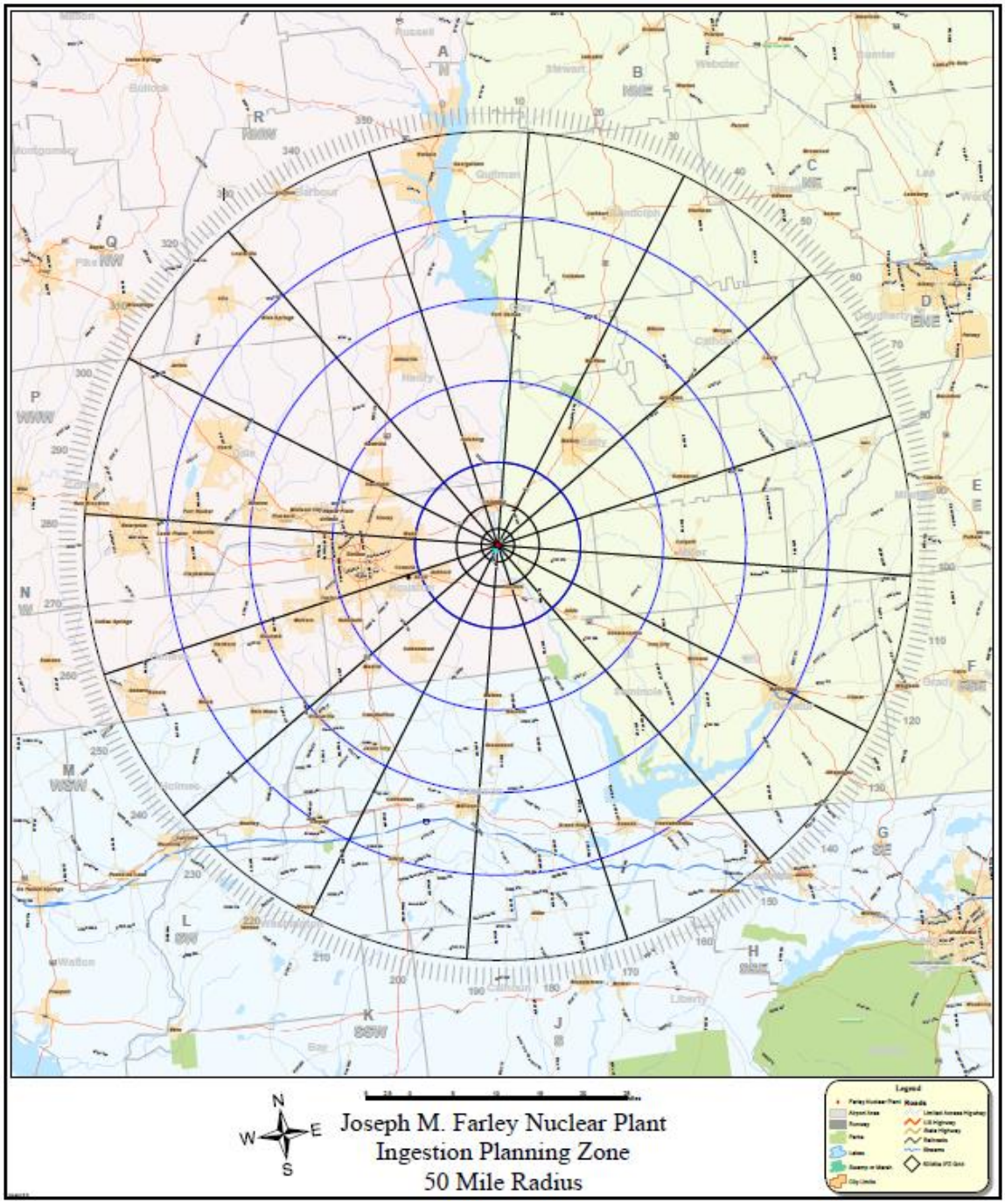
HOUSTON COUNTY RESPONSIBILITIES
FARLEY NUCLEAR PLANT (FNP)

See Henry and Houston County plans for tasks, responsibilities, concept of operations, and communications regarding FNP.

Attachment 1
To
Appendix 1
ALABAMA REP Annex
10-Mile EPZ of FNP
(NUREG REF: G.2; J.10.a)



Attachment 2
To
Appendix 1
ALABAMA REP Annex
50-Mile IPZ of FNP



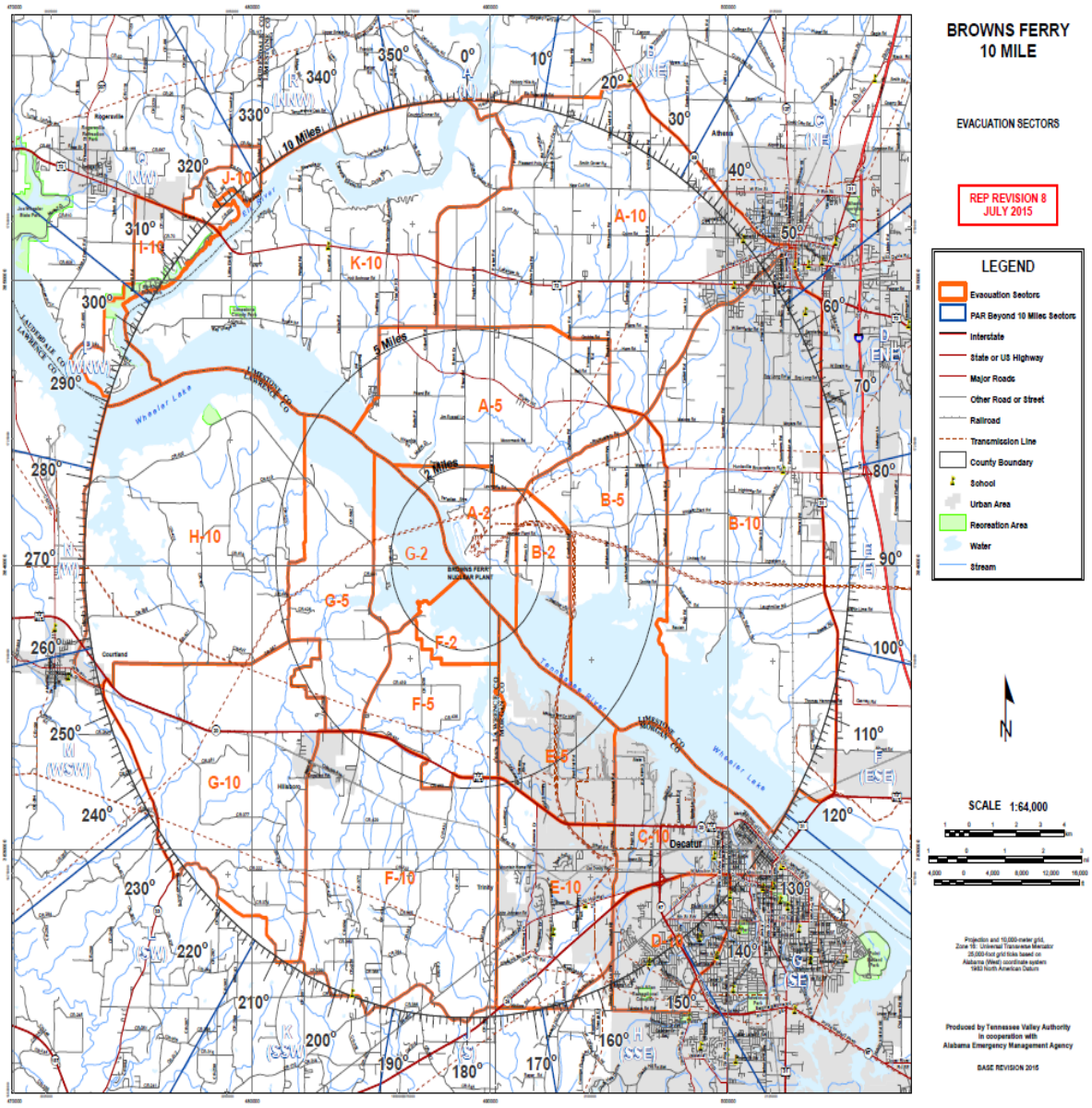
Appendix 2
To
ALABAMA REP Plan

LAUDERDALE, LAWRENCE, LIMESTONE, MADISON, AND MORGAN
COUNTY RESPONSIBILITIES
BROWNS FERRY NUCLEAR PLANT (BFNP)

See Lauderdale, Lawrence, Limestone, Madison, and Morgan County plans for tasks, responsibilities, concept of operations, and communications regarding BFNP.

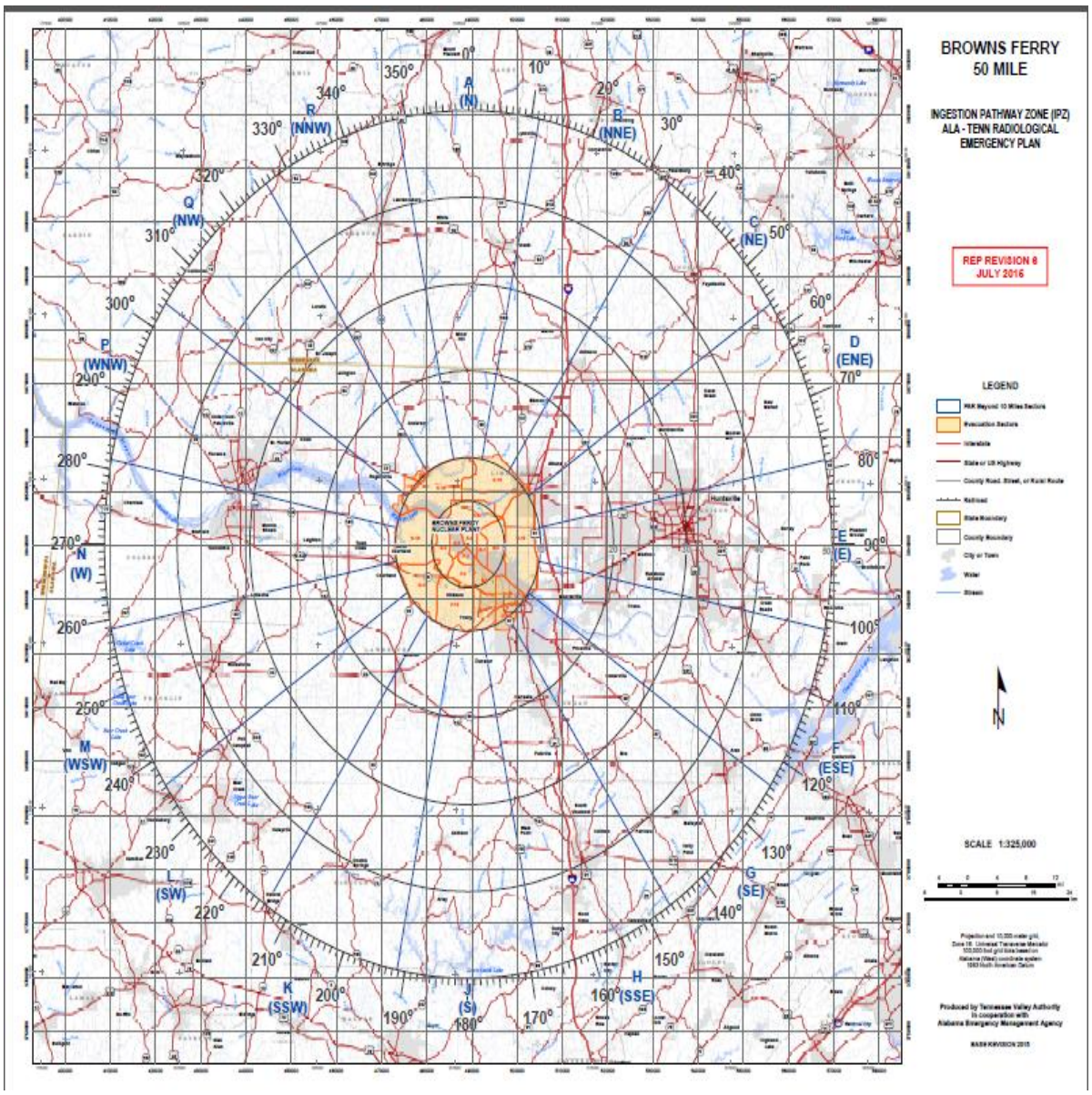
Attachment 1
To
Appendix 2
ALABAMA REP Annex

10-MILE EPZ of BFNP



Attachment 2
To
Appendix 2
ALABAMA REP Annex

50-mile IPZ for BFNP



Appendix 3
To
ALABAMA REP Annex

EXERCISES AND DRILLS

I. Mission:

To establish the framework for exercising the emergency response capabilities of the state and local governments to be better prepared to cope with a nuclear incident at a nuclear power plant (NPP).

II. Situation:

Each State with a nuclear power plant is required to have an emergency response plan acceptable to NRC/FEMA. Various aspects of the plan must be tested and updated periodically to ensure a capability exists to protect the public health and safety. This capability has been successfully exercised in the past through state and utility initiated exercises. In addition, actual onsite incidents have exercised and tested the validity of the communications and notification systems on more than one occasion at each power plant.

Although the probability of a nuclear incident that would require evacuation is still considered remote, it is incumbent upon all responsible agencies of government to ensure that the state has a current and workable emergency response plan to cope with the most serious incident.

III. Concept of Operations

A. Exercise Categories (NUREG REF: G.5)

Exercises conducted under this annex will be based on one of the following operational concepts:

- Communication Drill
  This is designed to test the communications systems, notification systems and procedures and the response of primary agencies through acknowledgment (as opposed to reaction). Its primary purpose is to keep the system responsive and maintain the communications line. Minimum participation would include the applicable nuclear power plant, the ADPH/ORC, AEMA, the applicable local warning point and Emergency Management Agency and other appropriate state and local agencies/departments depending upon the nature of the exercise. Communications Drills are scheduled by the utility and coordinated with off-site response organizations to include the impacted counties, ADPH/ORC, and AEMA. (NUREG REF: II, N.1.a; N.2.a.; N.1.b)

Communications with state and local governments within the plume exposure pathway Emergency Planning Zone shall be tested monthly. Communications with Federal emergency response organizations and states within the Ingestion Pathway shall be tested quarterly. Communications between the nuclear facility, state and local emergency operations centers and field assessment teams shall be tested annually.

- Tabletop Exercises are discussion-based and may test single or multiple scenarios and outcomes plus the decision making capabilities of the participants, without an overt commitment of resources. AEMA, ADPH/ORC and the affected counties may use tabletop exercises to assess key elements of the plan for maintaining accuracy, training purposes, and for developing improved operational procedures. Tabletop exercises may be used in conjunction with a licensee's annual exercise, or used as a separate training or planning event as deemed necessary.

- Full-Scale Exercises engage all entities in real-time hands-on response activities. The full-scale exercise validates the adequacy of the state plans and procedures for formal FEMA plan approval. This annex will be exercised by a Full-Scale Exercise each year with one of the nuclear power plants in the state. The scenario will be varied each year to ensure that all major functions and organizations are tested during each eight-year period. The primary purpose is to determine if tasked agencies can meet the responsibilities outlined in this annex to function at each level of the plant's condition.

- Medical Service Drills (**NUREG REF: II, N.2.c)**
  A medical service drill (MSD), which involves a simulated contaminated individual as well as local medical service agencies (i.e., ambulance, hospitals, etc.) will be conducted annually. A drill will be evaluated by FEMA every year per site.

- Radiological Monitoring Drills **(NUREG REF: II, N.2.d)**
  Plant environs and radiological monitoring drills shall be conducted annually. These drills shall include collection and analysis of all sample media (i.e., water, grass, soil and air) and provisions for communications and record keeping.

- Health Physics Drills **[NUREG REF: II, N.2.e.(1); N.3]**
  Health Physics drills shall be conducted annually which involve response to, and analysis of simulated elevated airborne and liquid samples and direct radiation measurements in the environment.

IV. Exercise and Training Responsibilities

ESF-5, State Emergency Management Agency (NUREG REF: II, A.2.a; N.1.a; N.3.e; N.4; N.5)

- Coordinate the development, execution, and participation of inter-agency exercises and drills of this REP. (This does not prohibit any agency from conducting intra-agency exercises or drills.)

- Observe, evaluate and critique exercise operations whenever possible. A record of lessons learned and corrective action plan will be kept for each exercise.

- Maintain a record of inter-agency exercises and drills and the critiques. Follow up on areas requiring improvement and ensure corrective action have been incorporate in SOGs and revisions to this annex.

- Provide FEMA with scenarios, and extent-of-play.

ESF-8, Department of Public Health, Office of Radiation Control (ADPH/ORC)

- Prepare all radiological aspects of REP exercises and drill scenarios and coordinate with the utility in this regard.

- Advise NRC of exercise plans and liability period. Coordinate any NRC exercise requirements to ensure inclusion in the exercise.

- Initiate and coordinate all radiological state and federal resources.

- Develop special Department of Public Health exercise requirements. Coordinate with Emergency Management for incorporation or addition with basic exercise scenario.

- Participate in exercise and drill planning, coordination, and execution.

- Observe, evaluate and critique those aspects of an exercise concerning Radiation Control. Provide inputs to County Emergency Management Agencies on operational aspects of exercise. Follow up on areas requiring improvement and ensure corrective action is taken.

V. Administration (NUREG REF: P.4)

AEMA and the ADPH/ORC are responsible for the overall administration and execution of this exercise appendix. Each tasked department/agency is responsible for its internal administration and logistical operations to support the requirements of this appendix. Each tasked department/agency may prepare an after action report on exercises and drills. This report will contain a critique of the exercise /drill and will be kept on file at respective agencies.

Appendix 4
To
ALABAMA REP Annex

Hostile Action Based (HAB)

Hostile Action, as defined in Nuclear Regulatory Commission Bulletin 2005-02, *Emergency Preparedness and Response Actions for Security Based Events*, is an act toward a nuclear power plant or its personnel that includes the use of violent force to destroy equipment, take hostages, and/or intimidate the licensee to achieve an end. This includes attack by air, land, or water using guns, explosives, projectiles, vehicles, or other devices used to deliver destructive force.

The NRC determined that potential radiological exposure to the public during a hostile action based incident is no more severe than in other accident sequences considered in the radiological emergency preparedness basis. However, it is recognized that HAB events could present unique challenges to the response.

Planning needs to accommodate up to 3 major events happening simultaneously:

1. Hostile Action Based event at or towards a nuclear facility
2. Radiological Event
3. Increased state and national threat level and precautionary measures that may need to be implemented at other locations

As in any event, the county level will be the first to respond to a hostile action incident. The State is prepared and will provide any additional resources requested by the county. The ADPH/ORC has developed "Just in time training" for emergency workers responding to a nuclear event. Counties will be able to provide this training at the time of the incident to workers, if needed.

While it is recognized that normal notification procedures may not occur in a HAB, the SEOC will respond at the appropriate level once that notification has been received. Procedures for verification of notification, if not received directly from the plant to the state warning point, have been developed.

During a hostile action based event at a nuclear power plant, the SEOC will respond in accordance to the Alabama Emergency Operation Plan (EOP). The event will be treated as a non-release event until the Emergency Classification Level declared at the plant justifies a radiological response.

Some of the responsibilities to be carried out at the SEOC are as follows:

- Support request for response to on and/or off-site
- Coordinate state agency response assistance
- Coordinate federal agency response assistance

- Support security protocols for the non-affected nuclear power plant and other critical infrastructure in the state
- Establish a Joint Information System (JIS)
- Request a State of Emergency Declaration
- Coordinate with ADPH/ORC to establish Protective Actions Decisions (PADS)
- Coordinate information and resource request with the Command Post
- Request federal agency representatives in the SEOC
    - FBI Liaison
    - DHS Liaison
    - FEMA Liaison
- Coordinate with ADPH/ORC to coordinate the federal radiological support resources

During or after the hostile action activity has been terminated, coordination of PAD will remain consistent with the State of Alabama REP Annex.

Appendix 5
To
Alabama REP Annex

I. Introduction

A. Purpose

The purpose of this ESF is to coordinate Alabama health and medical resources to protect the public health and safety for excessive exposure to ionizing radiation resulting from an incident at a nuclear power plant (NPP) and to control all off-site sources of ionizing radiation.

B. Scope

This ESF is the decision making organization for protection of public health and safety during a radiological emergency in Alabama. The Alabama Department of Public Health will declare or implement the necessary protective actions to protect the public. This ESF includes, but not limited to, coordination and implementation of off-site radiological field monitoring assessment; evaluation and control of radioactive contaminated milk due to a radiological emergency; distribution of Potassium Iodide (KI), as ordered; and coordination of medical services, as needed, during a radiological emergency.

II. Policies

- Alabama law designates the Alabama Department of Public Health Office of Radiation Control (ADPH/ORC) as the Radiation Control Agency (RCA) of the State of Alabama and empowers the State Health Officer (SHO) as Director.

- During a radiation emergency, all divisions and organizational elements of the ADPH needed to accomplish the mission will function as part of the RCA acting at the direction of the State Health Officer. **(NUREG REF: A.1.d)**

- In the event of circumstances at a NPP requiring an immediate action to protect the public health and safety, delegation of authority during emergencies has been established and authorizes the designee(s) to order or implement the necessary protective actions involving ionizing radiation.

- The radiation emergency response actions of each organizational branch of the ADPH shall be coordinated by the RCA.

III. Situation (NUREG REF: A.1.b, A.1.d)

- An incident at a NPP may constitute a health hazard to the general public through the release of radioactive materials into the environment. Positive and prompt analysis coupled with effective decision making will be required to protect the public health and safety in case of such an incident.

- An incident could develop slowly, providing sufficient time to institute effective protective measures. The slight possibility also exists that an incident could develop in an extremely short time frame which would require instant communications and the decisions to implement pre-planned actions to protect the general public.

IV. Concepts of Operations

A. General

- The ESF #8 will be notified by the SEOC Communication Center and/or the utility of a nuclear power plant incident. Using this information, together with environmental monitoring and meteorological information, ESF #8 will determine the protective actions needed and issue any health orders necessary to meet the situation. Such health orders shall have the effect of law.

- The ESF #8 will immediately transmit information to the SEOC and the director or administrator of each organizational unit of the Department of Public Health needed to implement the protective actions ordered. ESF #5 will relay this information to the affected counties and other appropriate state agencies.

- ESF #8 will assess the need for radiological monitoring resources and, if necessary, will request radiological assistance from Federal agencies and other states.

- The SEOC Communication Center and/or the utility will continually advise ESF #8 of the plant status throughout the time frame of an incident. ESF #8 will analyze this information, coupled with radiological monitoring data and meteorological parameters, to revise and update the protective actions as necessary.

B. Response Actions

This section lists actions to be performed by ESF #8 for a radiological incident.

- For initial and follow-up notification, the SEOC Communication Center and/or the utility will notify designated personnel of ESF #8 in all cases except when the situation develops with such suddenness that the initial classification is a general emergency. In this case the initial notification goes first to the county 24-hour warning point in each county affected followed by notification of the designated ESF #8.

- Upon receiving the notification, ESF #8 determines the protective actions needed in accordance with the guidance.

- The SHO or designee will be notified to obtain authority for protective actions needed.

- ESF #8 will notify ESF #5 of the utility's classification of the incident, the plant status together with a brief description of the incident, the type of off-site action needed, and any public health order that has been issued.

- ESF #8 will then make notifications and take actions as specified in the current set of the Standard Operating Guides (SOGs). SOGs are on file at The RSA Tower, Suite 1250, 201 Monroe Street, Montgomery, AL 36104.

- ESF #8 will equip and direct the state and local off-site radiological field monitoring teams and provide guidance for control of radiation exposure to emergency workers. **(NUREG REF: H.7)**

- ESF #8 will determine appropriate actions to be taken after the maximum immediate danger to the public has passed in a nuclear power plant emergency.

C. Responsibilities

ESF #8 has a broad scope of responsibilities as follows:

1. Office of Radiation Control

    - Evaluate a nuclear incident and determine the necessary protective actions for appropriate health orders.

- At the direction of the SHO, issue health orders when action is necessary to protect the public health and safety.

- Coordinate the collection and interpretation of environmental monitoring data, projected source term information and critical action level information.

- Provide a central reporting location for all organizations (local, state, and federal) collecting environmental data.

- Direct the state and county off-site radiological field monitoring teams.

- Request and coordinate the federal radiological assistance.

- Coordinate monitoring of personnel and equipment for radioactive contamination.

- Coordinate the environmental sampling of food crops with the Alabama Department of Agriculture and Industries (ESF #11) and order the condemnation of food if necessary.

- Coordinate the environmental sampling of raw milk with the Milk Branch of the Division of Food, Milk and Lodging (ESF #8) and determine the areas where radionuclide concentrations in raw milk are expected to exceed the protective action contamination levels.

- Coordinate with the Environmental Laboratories of the Alabama Department of Environmental Management (ADEM) (ESF #10) on the number of samples to be analyzed and the type of analysis performed.

- Coordinate with the ADPH State and/or District Nursing Director and the SHO (ESF #8) on the need and advisability of dispensing Potassium Iodide (KI) to individuals exposed to airborne radioiodine.

2. Milk Branch of the Division of Food, Milk, and Lodging

- Identify the dairies within the affected areas and stop distribution of raw milk. Hold such milk until tested.

- Notify the appropriate personnel about sample collection and delivery.

- Require all milk entering the State of Alabama from other states

within the 50-mile EPZ to be held until tested.

- Each day the personnel responsible for performing dairy inspections within a given area inside the 50-mile EPZ will collect raw milk samples from each dairy in his/her area of responsibility and transport it to the central analysis point.

3. County Health Departments

a. Environmental Health

- Trained environmentalists employed in counties within the 10-mile EPZ will perform off-site radiological monitoring during the emergency phase and environmental sampling during the ingestion phase under the direction of the ADPH/ORC.

- Environmentalists employed in counties affected by the 10-mile EPZ that are not part of the off-site radiological monitoring team may be trained as Personnel and Equipment Monitors (PEMs). PEMs will survey individuals and equipment for radioactive contamination at the reception centers.

b. Public Health Nurses

- Upon receiving notification from the ADPH/ORC of the potential need for potassium iodide, the Public Health Nursing Director shall notify sufficient staff to transport the supplies to the reception centers and to the emergency worker stations and dispense the authorized doses.

- Assist with medical problems which may arise at the reception centers.

- Notify the ADPH/ORC of the number of individuals exposed to airborne radioiodine who have taken KI and the need for additional KI.

4. Other Public Health Department Agency

- If needed, the SHO will activate ESF #8 for implementation of additional resources available within ADPH.

5. Environmental Laboratory **(NUREG REF: C.3)**

- Provide sufficient staff to perform sample analysis at the ADEM Lab in Montgomery.

- Establish a collection and screening point and distribute the samples collected and brought in for analysis to the various federal and state radiological laboratories providing assistance. **(NUREG REF: H.12)**

- Collect and record the results of such analysis.

V. Radiological Resources and Other Resources

A. Office of Radiation Control (NUREG REF: H.11; I.7; I.9; K.5.b)

- Micro R Meter, Ludlum Model 19(s)
- Scintillation Alpha Counter, Eberline Model ASP-1(s)
- Portable Neutron REM Meter, OCBM CDV-718, Model 6
- Ludlum 14C kits with pancake, gamma, and sodium iodide probes(s)
- Fluke 451P(s)
- Ludlum 9DP(s)
- Ludlum 193-6
- Thermo RadEye(s)
- Direct Reading Dosimeter(s)
- Direct Reading Dosimeter Charger(s)
- Thermoluminescent Dosimetry
- Portable High Volume Air Sampler(s)
- Stationary High Volume Air Sampler(s)
- GE RSS-131 Stationary Pressurized Ion Chamber(s)
- Thermo Identifinder(s)
- Ludlum Portal Monitor(s)
- Nitrile disposable gloves
- Orex disposable shoe covers & booties
- Safety glasses
- Orex safety coveralls
- Knee-high rubber boots
- Surgical caps
- Disposable face shields, masks, and hoods
- Rad rope, tape and signs
- Radio(s) with cell phone capabilities
- Cell phone(s)

- Portable lightening system(s)
- Emergency response trailer

B. Alabama Department of Environmental Management (ADEM) Radiological Lab, Montgomery, Alabama. (I.9)

- 28% HPGE detector(s) with shield(s)
- Tennelec LB 4110 Gas Flow Proportional Counter for alpha/beta counting
- Beckman LS 6500 liquid scintillation counter
- Direct Reading Dosimeter(s)
- Direct Reading Dosimeter Charger(s)
- Thermoluminescent Dosimetry

C. Federal Radiological Resources

ADPH/ORC shall evaluate the need for additional radiological resources and shall make a request for all federally supplied radiological resources.

ALABAMA DEPARTMENT OF
PUBLIC HEALTH

Scott Harris, M.D., M.P.H.
State Health Officer

DIRECTIVE

DATE: September 20, 2018

TO: David A. Turberville, Director
Office of Radiation Control

FROM: Scott Harris, M.D., M.P.H.
State Health Officer

SUBJECT: Delegation of Authority During Emergencies

In my absence, you are hereby authorized to declare, order, or otherwise implement the necessary protective actions to protect the public's health and safety during incidents involving sources of ionizing radiation. In the event of circumstances at a nuclear power generation plant that require an immediate action, including evacuation, to protect the public's health and safety, you are hereby authorized to declare, order, or otherwise implement the necessary protective actions.

Should you be absent, your designated alternates are authorized to take such actions.

To guide your actions, you are referred to Code of Alabama 1975, § 22-14-1, et seq., Radiation Emergency Plans and Chapter 420-3-26, Radiation Control, Alabama Administrative Code.

This supersedes and revokes the Directive of May 16, 2018.

SH/daa

Physical Address:
The RSA Tower, 201 Monroe Street
Montgomery, AL 36104

alabamapublichealth.gov

Mailing Address:
P.O. Box 303017
Montgomery, AL 36130-3017

ALABAMA DEPARTMENT OF PUBLIC HEALTH

Scott Harris, M.D., M.P.H.
State Health Officer

MEMORANDUM

Date: May 30, 2019

To: Scott Harris, M.D., M.P.H.
State Health Officer

From: David A. Turberville, Director
Office of Radiation Control

Subject: Delegation of Authority During Emergencies

Effective immediately, the following personnel of the Office of Radiation Control are designated as my alternates when I am not immediately reachable by telephone or radio for the purposes given in Dr. Scott Harris' directive dated September 20, 2018. They are listed below in order of precedent:

1. Myron K. Riley
2. John "Nick" Swindall
3. Cornelius "Neil" Maryland
4. Kevin W. Hicks
5. Cason Coan

In the event one of the above is called outside of the office for emergency responses duties, that individual shall be empowered to act as my alternate until I can be contacted.

DT/daa

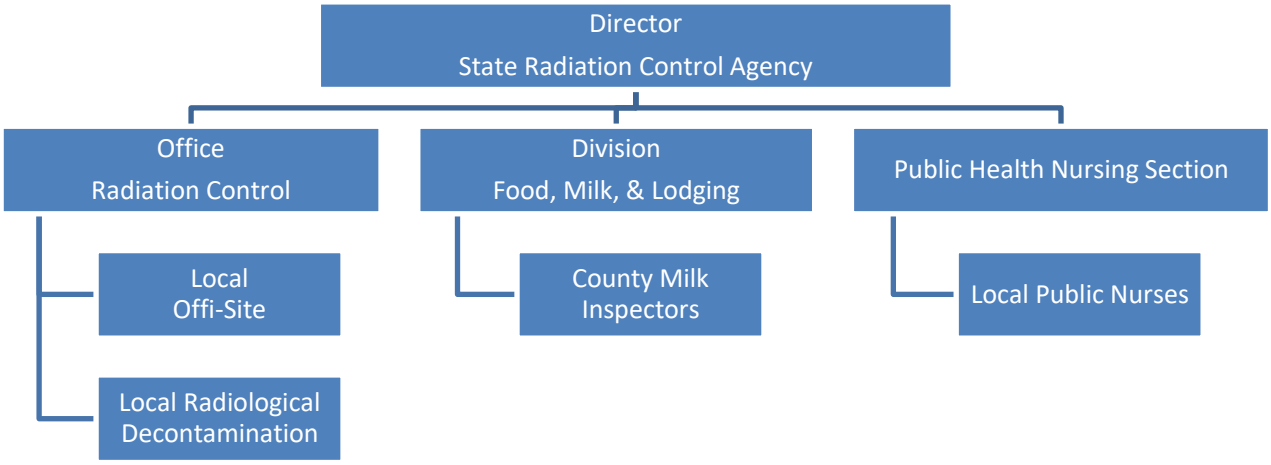
Physical Address:
The RSA Tower, 201 Monroe Street
Montgomery, AL 36104

alabamapublichealth.gov

Mailing Address:
P.O. Box 303017
Montgomery, AL 36130-3017

Organization of the State Radiation Control Agency During a Radiological Emergency

(NUREG REF: A.1.d)



PROTECTIVE ACTIONS GUIDES

This tab is to provide for the classification of on-site incidents and the off-site protective action guidance in the event of a radiological incident involving a nuclear facility. ***(*NUREG REF: J.9; J.11; M.1)**

I. Evaluation of Releases and Potentials for Release

ADPH/ORC will determine the type of protective actions required to protect the public health and safety and the areas in which such actions should be taken. Such protective actions will be based on the following criteria (listed in order of priority):

A. Plant conditions and potential for release of radioactive material.

B. Calculation of projected doses based on actual or predicted release rates.

C. Calculations based on data from radiological field monitoring teams.

All off-site dose projections arising from an accident at a nuclear power plant shall be calculated by one of the following three methods (listed in order of preference):

A. A computer system using appropriate software

B. The quick calculation number sheet

C. NRC's Response Technical Manual, RTM '96

The choice of method used will depend upon time, location, and availability of personnel, information, and equipment. In the absence of better information, the release rate provided by the power plant will be used and a release duration of four (4) hours will be used. If meteorological data is not available, the stability class "D" will be assumed.

From these data, an initial projected population dose may be calculated. This initial value will be used to determine protective actions until more accurate information is available. As more accurate information becomes available, the projected dose to the population will be adjusted to reflect the corrected release rates. It is recognized that the initial projected population dose may result in the initiation of protective actions in excess of those found to be necessary after population doses are measured. **(NUREG REF: M.1; M.4)**

II. Plume Exposure Pathway

The areas deemed to be affected by the radioactive plume will be outlined in terms of the sectors on the Evacuation Sector Map for the facility in question. A sector will be deemed totally affected if the projected exposure and associated protective

actions in any way affects any portion of the sector. In the absence of definitive information about the size and location of the area subjected to an actual or projected exposure, the area will be assumed to extend 45 degrees on either side of the line extending downwind to the point where the projected exposure equals the Protective Action Guide.

A. Protective Actions Guide (NUREG REF: J.10.m)

A Protective Action Guide is that projected dose savings which warrants consideration of taking a protective action. A Protective Action Guide under no circumstances implies an acceptance dose.

Protective Actions Considered	Projected Committed Dose Equivalent and Initiating Conditions
Evacuation and/or Shelter	1 rem whole body exposure including eyes, gonads, and blood forming organs; or
	5 rem – adult thyroid; or
	Plant conditions exist that make the above dosage probable or the protective actions appropriate; or
	Any General Emergency declared by the licensee.
Public Warning and/or Restrict Access	Any Site Area Emergency declared by the licensee.
Monitoring and Sampling as appropriate	1 millirem/hr whole body at the facility boundary; or
	Gaseous release in excess of 10 mCi of I-131 in one 24 hr period; or
	Any condition or situation where it may appear advisable that the State of Alabama assume a status of increased readiness; or
	Any alert declared by the licensee.
Sampling as appropriate	Any release or potential release in excess of the plant technical specification; or
	Any unusual event declared by the licensee.

B. Protective Actions

A protective action is an action taken to avoid or reduce the projected or potential committed dose equivalent of radiation to the populace.

Protective Action	Description
Evacuation	Evacuation of population from the area of exposure.
Shelter	Shelter of the population from the plume.
Public Warning	Alert of public of any potential danger of escalation of the release.
Monitoring	No protective action taken for plume exposure.

III. Ingestion Exposure Pathway

The areas deemed to be affected by the radioactive plume after the emergency phase will be outlined on the Ingestion Exposure Pathway 50-mile map for the facility in question. ADPH/ORC will determine the ingestion exposure pathway based on all data available including Aerial Radiological Monitoring (ARMs) aircraft survey data and Radiological Field Monitoring Team (RFMT) survey data.

A. Protective Action Guides (NUREG REF: J.11)

Evaluation of radiation exposure from ingestion of contaminated food products will be performed in accordance with criteria and procedures established in EPA-400-92. Human food including milk as well as animal feed will be considered and recommendations included in EPA-400-92 will be used to determine if levels of radiation encountered in food after a radiological incident warrant protective actions.

B. Protective Actions

1. Milk

Milk from dairies located in the ingestion exposure pathway area will be considered to contain I-131 in excess of allowable limits and will be held at the dairy until a raw milk sample is tested. Analysis will be made daily and the decision to release or condemn milk will be made after daily sample results are reviewed. Raw milk containing I-131 in excess of .015 uCi/L will be condemned in accordance with EPA-400-92. All dairies within these areas will be advised to place lactating animals on stored feed. Isotopes other than I-131 will be monitored as appropriate.

2. Foodstuffs

Foodstuffs will be sampled at the farm prior to harvesting when possible, as described in ESF #11. Food crops will be condemned if sample results indicate contamination levels are above the applicable preventive Protection Action Guides established in EPA-400-92 and/or FDA PAGs.

IV. Radio-Protective Drugs (NUREG REG: II. I.10; J. 10.)

Potassium Iodide (KI) will be made available on a voluntary basis to all emergency workers who may enter or work traffic control points at the boundary of the plume exposure EPZ.

The SHO shall consider ordering that KI be made available to all evacuees who are believed to have been exposed to a time averaged concentration of radioiodine that would result in a projected thyroid dose commitment in excess of 5 rem.

Initial supplies of KI will be stored in the county health departments in the 10-mile EPZ around the nuclear power plants in Alabama.

V. Sheltering in Place

Sheltering in place shall be considered when the projected time exposure in the area is less than 3 hours, when evacuation time and meteorological conditions would cause expected cumulative exposure time to exceed 50% of the total projected exposure time. An order to go inside, stay inside and monitor the situation may be issued for safety reasons during a hostile action emergency.

VI. Immobile or Confined Individuals (NUREG REF: J.10.d)

In the event protective actions are ordered for areas containing persons institutionally confined, these persons and those individuals required for their supervision and care will initially be given radio-protective drugs and be instructed to remain in the institution under shelter conditions with building air intakes closed.

PERSONAL PROTECTIVE GUIDELINES

This tab is to delineate the monitoring and control of external gamma exposure and internal or external radioactivity on evacuees or State and county radiation emergency workers. **(NUREG REF: K.3.a; J.10.e; J.10.f; J.12)**

I. Emergency Worker Exposure

Emergency workers may be exposed to the airborne release while carrying out their missions. Means for measuring the radiation exposure of these personnel will be available from the beginning of the nuclear incident. The objective is to minimize the exposure of radiation to emergency workers and to measure their accrued dose.

The radiation exposures of primary concern are whole-body external exposure to gamma radiation from airborne materials and materials deposited on the ground, and the internal thyroid dose from inhalation of radioiodine. Whenever emergency personnel are planning to undertake operations inside of the evacuation area, it is

essential that the best estimate of the situation be known by the personnel directly involved. All sources of information including projected exposure rate patterns will be considered, and a best estimate made of the dose likely to be received during a specific mission. The mission will be planned by taking into consideration the most likely situation as well as the most potentially hazardous situation. Items to be considered include entry and exit routes, changes in meteorological conditions, areas or roads to be avoided, equipment and vehicle failure, etc. Only missions approved in lifesaving missions or in emergency operations during early post-accident periods may receive a significant gamma radiation dose to the whole body. Therefore, personal dosimetry will be provided to all state and local personnel involved in operations in and around the evacuation area. Such dosimetry should provide data that can be used to control an individual's exposure to gamma radiation and data for the ADPH/ORC's administrative records to document the total effective dose equivalent. Two types of dosimetry will be used.

A. Direct Reading Dosimetry (NUREG REF: K.3.b)

Emergency personnel who will be serving in or around the evacuation area will receive two or more charged (zeroed) direct reading dosimeters (DRD); one of which will be a 200 mR, and the other will be 5 R or greater. These dosimeters will be available at each command post. The dosimeters should be read in 30 minutes intervals. The primary function of DRDs is to allow an individual to know this exposure and hence act in such a way as to control it and prevent the accumulation of excessive exposure. Unless otherwise directed by the ADPH/ORC, each emergency worker should be relieved when his/her dosimeter indicates that he/she has received an exposure equal to the appropriate value on the **Radiation Dosage Limits for Emergency Workers***. These limits are subject to revision by the ADPH/ORC once the exact concentrations of the release are known.

At the completion of each shift of emergency duty, each radiation emergency worker will report back to the appropriate command post and record his/her dosimeter reading and time(s) and location(s) of duty.

RADIATION DOSAGE LIMITS FOR EMERGENCY WORKERS*
TEDE (Total Effective Dose Equivalent)

Total Dose TEDE	Dosimeter Reading	
1 rem	500 mR/day	Protecting Property, Patrolling Evacuated Areas, & Manning Check Points
5 rem max	2.5 R max	
1 rem	500 mR/day	Environmental Monitoring and Locating Airborne Releases
5 rem max	2.5 R max	
10 rem	5 R max	Evacuating Known Residents
10 rem	5 R max	Fighting Residence Fires
25 rem	12.5 R max	Life Saving

In addition to the above individual's dose limits, all emergency workers are advised to make a reasonable effort to limit their dose while at the same time accomplishing their emergency responsibilities.
*Non-pregnant adult

B. Permanent Record Dosimetry

At the command post, radiation emergency field workers will also be provided with a thermoluminescent dosimeter (TLD) which they will carry at all times during the emergency in addition to the two or more direct reading dosimeters (DRDs). This dosimeter will also measure whole body gamma radiation dose for the dual purpose of (1) providing an accurate measurement of the accrued dose, and (2) providing a measurement of the accrued dose in excess of the range of the DRD. The TLD will be returned at the completion of the emergency or as directed by the ADPH/ORC.

C. Thyroid Blockage

Thyroid dose is likely to be the controlling exposure in reactor incidents. The radioiodine dosage received by emergency personnel may be minimized by having them take stable iodine (in the form of Potassium Iodide (KI)) orally in order to block the uptake of any significant amount of radioiodine by the thyroid. If ordered by the SHO, each state and local emergency worker who will be serving in or around the evacuation area may be given two (2) 65 mg tablets or one (1) 130 mg tablet per day as directed. At the conclusion of the emergency phase, if there was a sufficient I-131 release, a daily dosage will be given as directed by SHO to maintain blockage of thyroid radioiodine uptake.

II. Contamination Control (NUREG REF: K.5.a)

The monitoring of all evacuees from the Plume Exposure Pathway Emergency Planning Zone (EPZ) is neither anticipated nor deemed practical since most of these individuals would have already departed by the time monitoring teams are available to perform this function. Contamination monitoring will be limited to emergency personnel and evacuees who are believed to have been exposed to radiation. This monitoring problem will be particularly prevalent where airborne radioactivity is detected beyond the facility boundary or when it is necessary to send emergency rescue parties into these high level radiation areas close to the facility. Screening for the presence of beta and gamma contamination on emergency personnel and equipment leaving evacuated areas will be performed at each county reception center(s) and/or command post(s) or at stations along exit routes from the evacuated area, outside the plume, to monitor personnel; and will be instituted as soon as possible. Equipment which cannot be readily decontaminated will be placed in segregated storage until sufficient time, material, and manpower can be made available to complete the procedure.

Screening of evacuees for contamination will be done at the reception center(s) and/or command post(s). Emergency radiation workers and evacuees who are known to have been exposed to the plume for a significant period of time prior to evacuation will be surveyed using an appropriate survey instrument which may be a portable portal monitor and/or a hand-held survey meter. The survey using hand-held meters should be made holding the probe approximately 1 inch from the surface and moving the probe at the speed of no more than 1-2 inches per second. Unless otherwise directed by the ADPH/ORC, contamination is considered to be an open window reading of twice pre-accident background radiation (2 x background).

Initial decontamination will consist of first removing contaminated clothing and shoes, then washing with soap and water. Careful attention should be paid to the hair and feet.

III. Medical Services

The mission of the medical services is to provide medical care on an uninterrupted basis during a radiological incident at a fixed nuclear power plant (NPP) in Alabama. In the event that individuals who may have been exposed to the plume for the significant periods of time prior to being evacuated need medical care, special handling procedures must be utilized. In no case should the contamination take precedent of medical injuries or care. Additional guidance on medical treatment can be obtained in NCRP Handbook No. 65, entitled “Management of Persons Accidentally Contaminated with Radionuclides”, (1980).
(NUREG REF: K.5.b)

Plans and drills will be conducted by the designated care facility and ambulance services/rescue squads to ensure that personnel are trained and that equipment is available in an emergency.

A. Responsibilities

Radiation Control Agency

- Assist and advise medical care facilities on radiological hygiene.
- Provide training support to care facility and staffs in radiological matters. **(NUREG REF: O.4.h)**
- Coordinate requirements for additional medical care and radiological hygiene assistance.
- Provide communication and information between the Radiation Control Agency, ambulance companies, rescue squads, and medical facilities. **(NUREG REF: F.2)**

Ambulance Companies and Rescue Squad
(NUREG REF: L.4)

- Provide transportation of patients from within the evacuation zone, evacuation routes and from mass care facilities to designated medical care facilities.
- Assure crew members are trained on radiological self-protection and on procedures to handle contaminated casualties or equipment. Maintain radiological protection and communication equipment in a continuous state of readiness.

Designated Medical Care Facilities
(NUREG REF.L.1)

- Provide medical care for patients from within the evacuation zone from evacuation routes and from mass care facilities.
- Prepare plans and conduct training on methods to care for contaminated patients. Provide and maintain special radiological equipment needed to monitor patients and dispose of contaminated material.

- Participate in exercises and drills to enhance training and improve procedures. Incorporate lessons learned in revisions to this plan and in-house plans.

B. Administration

Each agency, company, or medical care facility is responsible for its internal administration, training, and logistical operations to support this plan.

C. Medical and Health Resources (NUREG REF: C.4; L.1)

The hospital agreements and ambulance agreements are maintained by the County EMAs.

Farley Nuclear Plant

a. Medical Care Facilities

- Southeast Health
  1108 Ross Clark Circle, Dothan, AL
- Flowers Hospital
  4370 West main St. Dothan, AL

b. Ambulance Companies and Rescue Squads

- Pilcher's Ambulance Service
  923 South Foster Street, Dothan, AL

Browns Ferry Nuclear Plant

a. Medical Care Facilities

- Decatur Morgan Hospital (Decatur General Campus)
  1201 7th St. Southeast, Decatur, AL
- Decatur Morgan Hospital (Parkway Medical Campus)
  1874 Beltline Road Southwest, Decatur, AL
- Huntsville Hospital
  101 Sivley Road SW, Huntsville, AL

b. Ambulance Companies and Rescue Squads

- Lifeguard Ambulance Services
  5371 Highway 67 S, Somerville, AL
- Lawrence County EMS
  11227 Alabama 157, Moulton, AL
- First Response EMS
  1502 Central Parkway SW, Decatur, AL

Other Hospitals (**NUREG REF: L.3)**

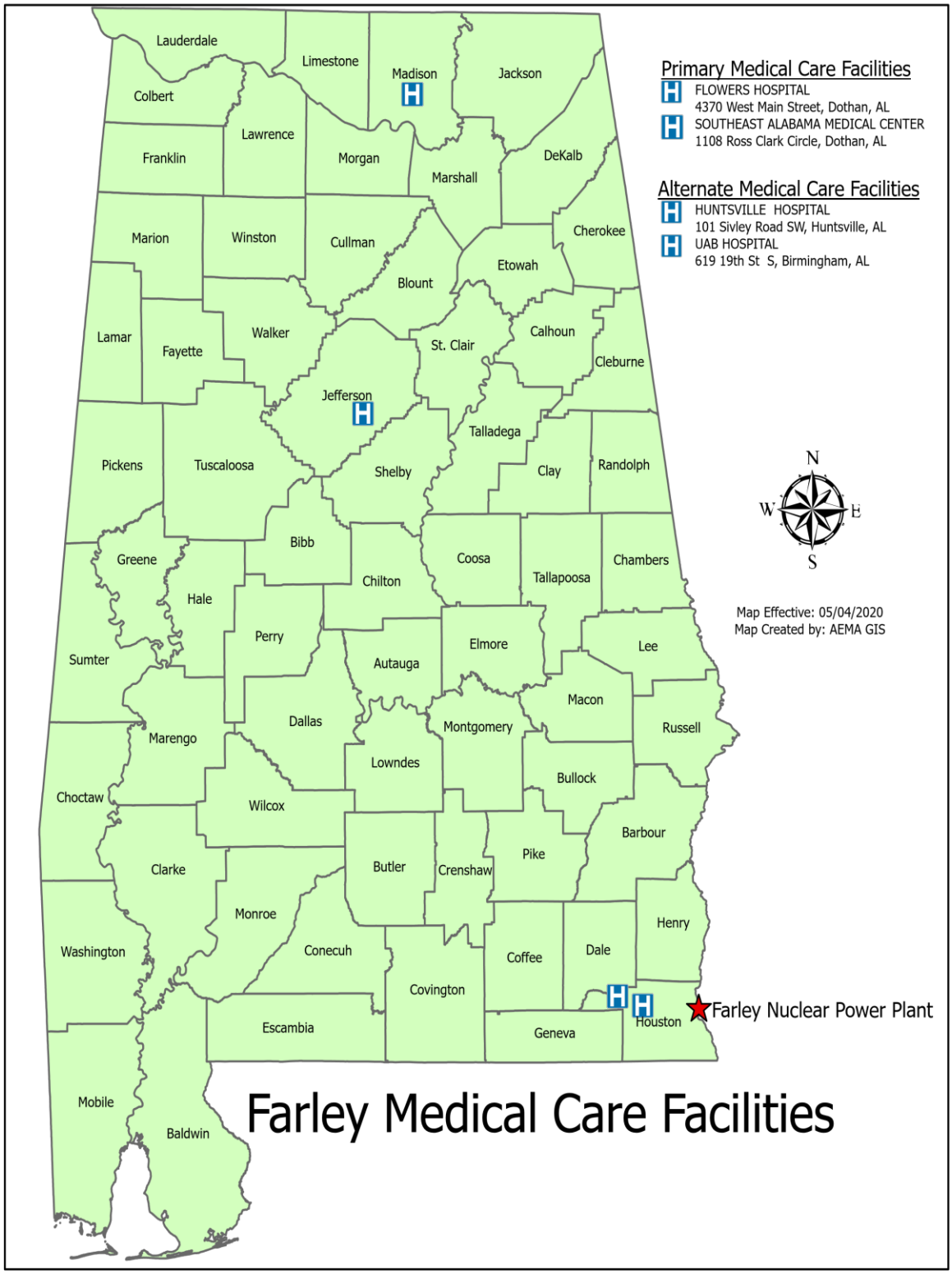
Additional hospitals capable of handling contaminated patients.

a. University of Alabama in Birmingham (UAB)
619 19th St. South, Birmingham, AL

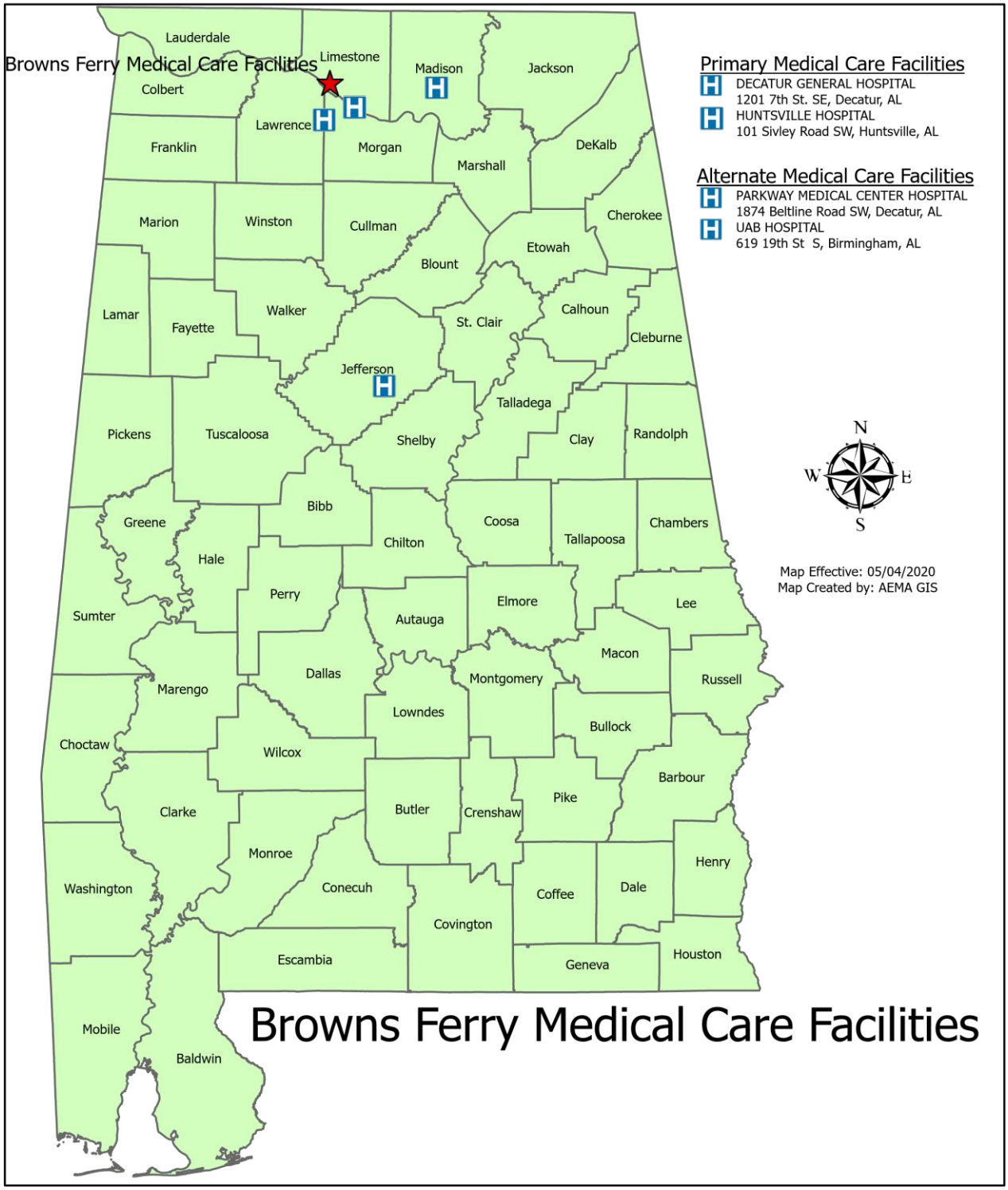
IV. Permissible Exposure

It is the expressed policy of the State of Alabama that no emergency worker should exceed the occupational exposure limits in 10CFR20 or Rules of the State Board of Health, chapter 420-3-26, Radiation Control except in extreme situations (lifesaving, evacuation residents, and fighting fires, etc.). The Alabama Radiation Control Agency (Public Health) may grant exemptions to these exposure limits. **(NUREG REF: K.4)**

Medical Care Facilities



Medical Care Facilities



RELOCATION

This tab is to provide the criteria to be used in determining the appropriate actions to be taken after the maximum immediate danger to the public has passed in a nuclear power plant emergency. (**NUREG REF. J.10.g; J.10.h; J.11)**

I. Situation and Assumptions

Actions necessary to protect the public health and safety in the worst case situation are expected to begin with warning of the public of the potential danger, followed by or accompanied by shelter of the public in their places of employment or residences, with a possible evacuation of individuals from selected evacuation zones, "evacuation" here meaning the immediate fleeing from an area for a brief period of time. Following any significant release of airborne radioactivity from the nuclear power plant, a determination of the ground deposition of radioactive material will be made and the associated relative hazard used to classify the affected areas into action zones. The general public will then be relocated from zones where the ground deposition of radioactive materials causes excessive risk to their health. Here "relocation" means the removal of individuals and their household possessions from an area of high risk to an area of lesser risk for an extended period of time.

II. Protective Action Zones

Protective Action Guides (PAGs) are established in EPA-400-92 and are to be applied during a nuclear power plant accident. EPA-400-92 guidance limits the amount of radiation exposure to an individual after the initial emergency phase to: two rem the first year; 500 millirem the second year; and a cumulative exposure total of five rem for the next 50 years. ADPH/ORC will coordinate the collection of soil samples and the measurement of actual radiation exposure levels in the affected areas. Procedures and calculation methods which include the use of weathering and decay factors established in EPA-400-92 will be used to determine the projected radiation exposure to individuals in the affected areas. From this information, the area determined to exceed any of the protective action guidelines established in EPA-400-92 will be restricted and individuals will be relocated as described above. Entry into zones established as restricted that exceed the established protective action limits in EPA-400-92 will be controlled to limit exposure to personnel to less than the occupational dose limits described in Rule 420-3-26-.03, Radiation Control of the Rules of the State Board of Health.

III. Concept of Operations

The ADPH/ORC, in coordination with the nuclear power plant operator and the U. S. Nuclear Regulatory Commission, will decide when the severity of the accident and associated potential for radiological hazard has declined to the point that

immediate protective action appears not to be necessary or that it is appropriate to take action based upon suspected long-term exposures from ground deposition of radionuclides. Using the best available knowledge of ground deposition, the ADPH/ORC will classify all areas in the vicinity of the nuclear power plant, including both evacuated and non-evacuated areas, as restricted or unrestricted zones in accordance with the guidance established in EPA-400-92.

Members of the general public will be authorized to enter any unrestricted zone that is not subject to an evacuation order. Individuals whose residences are within a restricted zone will relocate to temporary residences outside of a restricted zone.

Individuals will be authorized to enter and remain inside of a restricted zone only to perform essential services and only with appropriate personnel monitoring equipment consisting of one thermoluminescent dosimeter and one low range (0-200 mR) pocket dosimeter. Individuals authorized to enter a restricted zone will do so under procedures and controls established for occupationally exposed radiation workers described in Chapter 420-3-26, Radiation Control, of the Rules of the State Board of Health.

IV. Administration

ADPH/ORC will coordinate the internal administration of the ADPH/ORC, with each individual bureau, division, or department being responsible for their own internal administration and logistical support.

EMERGENCY AND RE-ENTRY ENVIRONMENTAL MONITORING

This tab is to delineate the monitoring of the environment for the presence of radioactive materials released by the nuclear plant. The results of this monitoring, together with information supplied by the utility, will be used by ADPH/ORC in determining the adequacy of any protective actions ordered and, when conditions warrant, the rescission of protective actions. This monitoring information serves to verify that the dispersion of radioactive materials is at least as conservative as predicted by meteorology and will not be substituted for dose calculations based upon release rates and meteorological data as supplied by the utility. It is an expressed purpose of this annex that no environmental sampling personnel be exposed to a dose commitment in excess of that listed in the "Personal Protection Guidelines". To this end, except with the expressed consent of the ADPH/ORC, all state, local, and federal environmental monitoring shall be done outside of any evacuation zone. **(NUREG REF: (M.1; I.7; I.8)**

I. Organization Structure (NUREG REF: I.7)

RFMTs will consist of state merit system employees employed by ADPH. For the duration of the emergency, these RFMTs will function at the general direction of

the ADPH/ORC subject to the approval of the SHO and/or the local county Health Officer.

II. Mission

To obtain accurate information on the radiological quality of the environment near the NPP.

III. Plume Exposure Pathway

During the plume phase, the RFMTs will consist of a two person team as described above. For additional details, refer to the "Alabama Department of Public Health, Office of Radiation Control, Radiological Field Monitoring Team Manual."

A. Direct Radiation

In order to obtain gamma radiation measurements, RFMTs will be deployed in the downwind direction, or if no wind, they will be deployed at various locations surrounding the plant site. The RFMTs should drive in an arc around the plant outside the plant boundary. At 30-minute intervals, they will report gamma radiation intensity (15-minute intervals if in an area where radiation dose rate exceeds 1 mrem/hour). A change in radiation levels is always reported immediately. Four measurements should be made: one with the detector at 1 meter above ground (open & closed readings) and the other with the detector 6 inches above the surface of the ground (open & closed readings).

Should an evacuation be ordered by ADPH/ORC, the RFMTs should move to an area downwind of the plant just outside the evacuation area and continue to drive back and forth across the projected plume pathway taking readings every 15 minutes or as directed.

B. Air Sampling

Upon instruction from ADPH/ORC, air samples will be collected at downwind locations near the point of maximum concentration or at the boundary of the evacuation zone. RFMTs have the capability to detect and measure radioiodine concentrations in air in the plume exposure EPZ as low as 10^{-7} uCi/cc under field conditions. **(NUREG REF: I.9; M.4)**

IV. Ingestion Exposure Pathway

During the ingestion phase, the RFMTs will consist of a four person team: two as described in the plume phase, one personnel from the Department of Agriculture & Industries, and another from the ADPH Milk Branch. Ingestion sampling media (i.e., milk, water and food crops) may be required. Refer to the "Alabama

Department of Public Health, Office of Radiation Control, Radiological Field Monitoring Team Manual" for additional details.

V. Re-Entry Monitoring

A. Surface Deposition

After the potential for release has been controlled, and prior to the removal of protective actions, an ARMs aircraft survey of the radiation levels in all areas subject to the plume will be requested from U.S.D.O.E. Subsequently, RFMTs will survey the area under the plume's footprint for deposited radioactive materials using appropriate radiation detection equipment and procedures. When the isotopic composition of materials deposited upon the ground is not known, it will be assumed that an exposure rate of 5.5 R/hr at one meter above the ground is caused by 1 Ci of deposited material per square meter. Once the isotopic composition is known, methodology contained in EPA-400-92 will be used and/or the following table will be used: (**NUREG REF: I.10)**

Table 7-1 of EPA-400-92

Gamma-emitting nuclide	Dose-rate for 1 Ci/m^2 (Rem/hr)
$^{95}Zr + {}^{95m}Nb$	12.0
^{95}Nb	13.0
^{103}Ru	8.2
$^{106}Ru + {}^{106}Rh$	3.4
^{131}I	6.6
^{137}Cs	10.0
^{141}Ce	1.4
^{144}Ce	0.35

For re-entry dose projections purposes, each deposition will cause 10^{-6} Curie per cubic meter or re-suspended concentration.

B. Soil Sampling

Soil samples will be collected in areas subject to protective actions and such sampling will be continued into areas where there are no plume exposure pathway protective actions in effect. The most useful measures of concentration of deposited material in soil relates to the amount of deposition per unit area. Sampling is carried out in such a way as to assure

that the weight of the material collected can be directly related to the area sampled and that the depth or the sampling is known. Later measurements made on a weighted aliquot of the soil sample can then be readily related to the concentration per unit area. A typical sample should consist of the top inch of soil from a square 4 inches by 4 inches.

It may be desirable to re-sample the site at a later time. Global Positioning System (GPS) coordinates and/or distance and direction to fixed landmarks should be recorded to identify the relative position of the transect.

VI. Communication (NUREG REF: F.1.d)

Primary communications between the SRMAC and the RFMTs will be CL PPT radios. Backup communications will be commercial cellular phones.

VII. Transportation

RFMTs will use the vehicles they normally utilize in performing official government business supplemented by State Motor Pool vehicles or by car rental service.

VIII. Anticipated Deployment Times

Under ideal circumstances one or more county RFMT teams should be activated and fully operational at the plant boundary within one hour of deployment. Additional RFMT teams will arrive and become operational within 8 hours of deployment.

STANDING RADIOLOGICAL ASSISTANCE REQUESTS (NUREG REF: C.1.b)

Upon direction from the SHO and/or his designee, state and federal radiological resources will be requested dependent on the emergency.

I. State Resources

If other state radiological resources are needed, the Southern Mutual Radiation Assistance Plan (SMRAP) will be activated. SMRAP will be activated through the Southern States Energy Board (SSEB).

II. Federal Resources

Depending on the level of federal radiological resources requested, all activations will go through the Department of Energy (DOE) Radiological Assistance Program (RAP). In this case, DOE RAP Region 2, Savannah River, SC will be the initial contact.

III. Time of Arrival of Federal Resources

The time of arrival of federal radiological assistance will depend upon the location from which the resources are brought.

A. Savannah River Operations to:

Browns Ferry Nuclear Plant is 10 hours
Joseph M. Farley Nuclear Plant is 11 hours

B. EPA Eastern Radiological Laboratory to:

Browns Ferry Nuclear Plant is 5 hours
Joseph M. Farley Nuclear Plant is 3 hours

FOOD CROP INGESTION PATHWAY

I. Mission

To prevent crops containing excessive amounts of radioactivity from being used for human or animal consumption.

II. Situation and Assumptions

A. An incident at a nuclear power plant could result in a release of radioactive materials into the environment that could render certain food crops in the area hazardous to consume.

B. ADPH/ORC is the decision-making authority for ordering the protective actions in the event of a radiological emergency.

C. The Department of Agriculture and Industries (AGI) (ESF #11) is primarily a regulatory agency whose major responsibility is the enforcement of State laws that protect the consumer and producer against inferior products. The Department of Agriculture and Industries possesses the capability to support the ADPH/ORC in the area of food crop ingestion.

D. The food crop ingestion (or agriculture security) issues will be of much longer duration than the plume exposure pathway exposure issues.

III. Concept of Operations

A. AGI will be initially notified by the Alabama Emergency Management Agency (ESF #5). Once activation is achieved, direct contact between the ADPH/ORC and AGI (ESF #11) will be established.

B. The ADPH/ORC will evaluate the scope of the hazard, identify the areas and isotopes involved, and inform AGI (ESF#11).

C. AGI (ESF#11) will then identify affected crops in the area and assist the RFMTs in collecting samples of these crops for analysis. For additional details, refer the "Alabama Department of Public Health, Office of Radiation Control, Radiological Field Monitoring Team Manual."

D. ADPH/ORC will arrange for analysis of the crop samples, interpret the results and make decisions based on the results.

E. AGI (ESF#11) will enforce any condemnation or summary destruction of food crops ordered.

IV. Responsibilities

The responsibilities of ADPH/ORC and AGI are contained in ESF #8 and ESF #11, respectively.

V. Administration

Each department is responsible for its internal administration and logistical operations to support the requirements of this tab.

MILK CONTROL

Authority for this Appendix is contained in Title 2, Chapter 13, Code of Alabama, 1975, as amended.

I. Mission

To prevent milk and milk products containing excessive amounts of radioactivity from being used for human consumption.

II. Situation

A. Iodine will be the limiting radioactivity in milk in the immediate aftermath of a release at a nuclear power plant.

B. All milk, including milk which was in the bulk tanks at the time of the accident, must be tested prior to pick-up from the dairies.

III. Concept of Operations

A. The Milk Branch of the Division of Food, Milk and Lodging will notify the milk processors who serve the area, advise them of the incident, and instruct them that no milk shall be picked up until cleared by the Milk Branch.

B. The Milk Branch will notify the Area Milk Representative and instruct him or her to contact the dairies in the affected area. The Area Representative is to instruct the owner or manager of the dairy to:

1. Not place any milk in the bulk tank until the tank has been emptied of all milk which was milked before the time of the accident.

2. Remove the milking herd from pasture, and feed the herd only stored feed.

3. Not allow cows to drink from ponds or streams. Use only water from wells or public supplies for watering the milking herd.

4. Not allow any milk to be picked up until cleared by the Milk Branch.

C. The Area Representative with the assistance of the RFMTs will collect samples of milk from the dairies specified by the Milk Branch. For additional details, refer the "Alabama Department of Public Health, Office of Radiation Control, Radiological Field Monitoring Team Manual."

D. ADPH/ORC will arrange for analysis of the milk samples and make decisions based on the results.

E. The Milk Branch will notify the area milk representative and the producers when the milk from each dairy has been cleared for human consumption. The area milk representative will notify the individual dairy.

IV. Administration

ADPH/ORC will coordinate the internal administration of the ADPH/ORC with each individual bureau, division, or department being responsible for their own internal administration and logistical support.