

**TEXAS  
EMERGENCY MANAGEMENT  
PLAN**

**Annex D: RADIOLOGICAL EMERGENCY MANAGEMENT**

**Tab 1: FIXED NUCLEAR FACILITY ACCIDENT RESPONSE**

**TAB 1 TO ANNEX D**  
**FIXED NUCLEAR FACILITY ACCIDENT RESPONSE**

**APPROVAL AND IMPLEMENTATION**

This tab is hereby approved for implementation and supersedes all previous editions.

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Date

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TAB 1 TO ANNEX D  
FIXED NUCLEAR FACILITY ACCIDENT RESPONSE

INTRODUCTION

I. PURPOSE:

Tab 1 amplifies the assignment of essential emergency functions identified in Annex D, focusing on their application to fixed nuclear facility accident response. Further, Tab 1 provides for the coordination of multi-jurisdictional incident response by identifying a framework of relationships among the State of Texas, the Local Governments within the Emergency Planning Zones (EPZ's), the Utilities (Operators of the nuclear power generating plants within the state), and agencies of the United States Government having response or regulatory assignments under Federal plans or regulations.

II. SCOPE:

Tab 1 establishes procedures for Bureau activities which are not a part of the day-to-day operations, or which would need to be conducted in a manner significantly different from routine practices of the Bureau. Those activities which are adequately addressed in the day-to-day operations of the Bureau, and for which no significant changes would be required during emergency operations, are included by reference, but procedures for such routine activities are not restated in this tab.

III. STRUCTURE:

Tab 1 consists of this introduction and two chapters. The Introduction summarizes the functions of other agencies that would be involved in response to fixed nuclear facility accidents. Chapters one and two respectively contain site-specific information and implementing procedures for Bureau response to accidents involving the EPZ's of the Comanche Peak Steam Electric Station (CPSES) in Somervell County, and the South Texas Project Nuclear Operating Company (STPNOC) in Matagorda County.

IV. CORRELATION WITH OTHER PLANS:

This tab is a part of the Texas Department of Health's Annex D to the Texas Emergency Management Plan. The State Plan and its annexes, the Federal Radiological Emergency Management Plan, and the Utility's emergency management plan are considered to be coequal to, and will be implemented in support of emergency management plans of local governments affected by actual or potential off-site effects of nuclear power plant accidents.

V. AUTHORITY AND REFERENCES:

Provisions of Tab 1 are to be carried out under the authorities cited in, and in accordance with the guidance incorporated in Annex D. Users of Tab 1 are directed to review Annex D for information concerning the organizational structure of the Bureau of Radiation Control, and its concept of operations for emergency response.

VI. SITUATIONS AND ASSUMPTIONS:

A. SITUATION

1. There are four nuclear power generating units at two sites within the state. Two units which are operated by TXU are located at the Comanche Peak Steam Electric Station (CPSES) site in Somervell County, about 40 miles southwest of Fort Worth. The other two units are at the South Texas Project Nuclear Operating Company (STPNOC) site in Matagorda County, about 90 miles southwest of Houston. All four units are pressurized water reactors.
2. Although these facilities are licensed by the Nuclear Regulatory commission, the Bureau of Radiation Control, along with other State and Local agencies, is responsible for protecting the public from the effects of accidental off-site releases of radioactivity.
3. Emergency planning for nuclear power plant accident response focuses on two Emergency Planning Zones (EPZ's)-the Plume Exposure Pathway EPZ, and the Ingestion Exposure Pathway EPZ.
4. The Plume Exposure Pathway EPZ extends outward approximately ten (10) miles in all directions from the plant site. The primary hazard in this EPZ is direct exposure of the public to radioactive gases and particulate matter spread by an airborne release. A secondary hazard, but one which still affects the public within the Plume Exposure Pathway EPZ, is the uptake of radioactive materials by plants or animals which constitute parts of the human food chain. Milk and other animal by-products and animals and plants which, themselves, are intended for human consumption must either be protected from radiation contamination or must be monitored to ensure that they do not contain radioactive materials in quantities which could pose a threat to the consumer.

B. ASSUMPTIONS

1. Activities of the Bureau of Radiation Control personnel will primarily be confined to the ten (10) mile radius inside the Plume Exposure Pathway EPZ around each site. Some supporting activities will be conducted in adjacent hosting communities if the response includes an evacuation of the public from part or all of the Plume Exposure Pathway EPZ.
2. Actions within the remainder of the concentric fifty (50) mile Ingestion Exposure Pathway EPZ, specifically those actions directed toward control of contaminated products in the food chain, will primarily be conducted by other bureaus of the Department of Health, and by the Texas Department of Agriculture. Bureau of Radiation Control activities in the 50-mile EPZ will include coordination of sample analysis, accident assessment, and recommendation of protective response.
3. Non-radiological aspects of emergency response are addressed elsewhere and will be conducted by state and local government agencies in accordance with their respective emergency management plans.
4. Short of a request for a Presidential Disaster Declaration to offset economic damages sustained, state and local resources should be adequate to meet the needs posed by any fixed nuclear facility accident. Requests for federal operational assistance are not anticipated. Any outside operational assistance required will first be sought through the Southern Mutual Radiation Assistance Plan, which encompasses the resources of sixteen signatory states.
5. In the event that the combined resources of Texas and the other members of the Southern Mutual Radiation Assistance Plan should prove inadequate to meet the needs posed by a fixed nuclear facility accident, Federal assistance would be requested in accordance with the provisions of the Federal Radiological Emergency Response Plan (FRERP).
6. Specific Federal resources expected would vary from one incident to the next, but would consist of those requested from among the resources of Federal agencies enumerated in the Southern Mutual Radiation Assistance Plan. Expected times of arrival for those resources, and the specific licensee, State and local resources available to support the Federal response are cited in the respective site-specific Federal plan for each fixed nuclear facility in the state.

VII. RESPONSIBILITIES OF OTHER AGENCIES:

In order to permit coordination of activities, it is necessary for Bureau of Radiation Control personnel to understand the functions of other agencies participating in the overall response to fixed nuclear facility accidents. The following listings are not intended to be all-inclusive, but should provide a ready reference of major areas of activity. Additional information, including functions of agencies not listed here, may be obtained by contacting the District disaster Committee chairman or the Division of Emergency Management.

A. UTILITY (FIXED NUCLEAR FACILITY OPERATOR)

1. Detect and perform preliminary assessment of significant events.
2. Classify events according to the mutually adopted accident classification system.
3. Disseminate warning/notification of significant events to local government and the Texas Department of Public Safety.
4. Provide follow-up information sufficient to permit Bureau of Radiation Control personnel to assess events during the initial response phase.
5. Provide workspace and liaison for Bureau personnel in the Utility's Emergency Operations Facility (EOF).
6. Provide space for a joint media center in the vicinity of the plant, and provide a Utility spokesperson to represent the utility in joint press briefings and to exchange information with Bureau and local government representatives as appropriate.
7. Provide telephone communications for exchange of information between Bureau personnel in the EOF, the joint media center, and the State Emergency Operating Center (EOC) in Austin.
8. Provide telephone lines for computer links between the mobile laboratory and the accident assessment team in the EOF.
9. Provide site meteorological data to the Bureau's accident assessment team.
10. Provide continuing update of plant conditions and projections as the incident progresses.

11. Provide liaison at Local Government and State Emergency Operating Centers upon request by those agencies.
12. Provide temporary storage for low-level wastes generated off site during accident response.
13. Maintain and provide to the Bureau of Radiation Control, upon request, a quantity of Potassium Iodide (KI) sufficient for state and local emergency workers, including any mobility-impaired or institutionalized members of the general public whose evacuation could not be readily effected.

B. TEXAS DEPARTMENT OF PUBLIC SAFETY

1. Confirm/verify warning or notifications received from the Utility, and disseminate to local government(s) and the Division of Emergency Management.
2. Notify members of the District Disaster Committee.
3. Activate and staff the Disaster District Emergency Operating Center.
4. Provide direction and control of State response efforts in the affected area, including public information coordination concerning activities of the District Disaster Committee.
5. Provide personnel, vehicles and radio communications capabilities for the field radiological monitoring teams.
6. Provide support to local government as detailed in the Texas Emergency Management Plan and the Department of Public Safety's annex to the State Plan.

C. TEXAS DEPARTMENT OF HEALTH (BUREAU OF FOOD & DRUG SAFETY)

1. Develop and maintain land-use maps of the 50-mile Ingestion Exposure Pathway EPZ showing locations of dairies and food processing plants; providing those maps to the Emergency management council as required.

2. The Milk & Dairy Products division will monitor and/or collect samples of dairy products, water for dairy animals and vegetation samples from pastures grazed by dairy animals if those samples are not collected by the Texas Department of Agriculture during its sampling program in the Ingestion Exposure Pathway EPZ.
3. The Seafood Safety Division will monitor and/or collect samples of affected surface water supplies associated with commercial fishing operations. For water bodies that contain shellfish in commercial quantities, this Division will also collect shellfish samples for analysis.
4. The Manufactured Foods Division will have the primary responsibility of monitoring and/or collecting samples of all other foodstuffs within the Ingestion Exposure Pathway EPZ. This effort may be complemented by coordinated sampling efforts of other Texas Department of Health Divisions or by the Texas Department of Agriculture and other cooperating state or federal agencies.
5. The Meat Safety Assurance Division will monitor and/or collect samples of unprocessed meat from animals that were inside the Ingestion Exposure Pathway EPZ when contamination was present. As time and personnel availability permit, this division will also assist the Manufactured Foods Division in sampling of processed meats.
6. The appropriate division will remove from commerce any contaminated products and will supervise their destruction, decontamination or diversion to usage outside the human food chain.

D. TEXAS DEPARTMENT OF HEALTH (BUREAU OF LABORATORIES)

1. Perform laboratory analyses on samples collected during fixed nuclear facility accident response operations.
2. Provide qualified staff to perform laboratory analyses in the mobile laboratory.

E. TEXAS DEPARTMENT OF AGRICULTURE

1. Develop and maintain land-use maps of the Ingestion Exposure Pathway EPZ showing food production areas and types of crop or food production activity and provide those maps to the Emergency Management Council as required.
2. Develop and maintain listings of Texas A&M Agricultural Extension Service Agents by county and points of contact for County Emergency Boards within the 50-mile Ingestion Exposure Pathway EPZ.
3. Assist the Texas Department of Health in monitoring and/or collecting samples of foodstuffs and other agricultural products whose distribution to consumers must be regulated as a result of possible contamination following a fixed nuclear facility accident.
4. Assist the Texas Department of Health in identifying food processors who normally receive livestock or produce from the affected portion of the Ingestion Exposure Pathway EPZ, and in making efforts to curtail distribution of contaminated products.
5. Assist the Texas Department of Health in providing guidance to agricultural producers and processors concerning protective actions available. Typical actions could include sheltering and/or use of stored feed for livestock, delaying of marketing of live animals, diversion to non-human consumption or prolonged processing or storage of contaminated commodities, or destruction/disposal of foodstuffs which can not otherwise be rendered harmless.
6. Serve as Texas Emergency Management Council point of contact for the Texas A&M Agricultural Extension Service, the Texas A&M Feed and Fertilizer Control Service, the United States Department of Agriculture and other outside agencies or organizations providing assistance in monitoring or sampling agricultural products, or in disseminating information to agricultural producers and processors concerning protective actions available.

F. LOCAL GOVERNMENT

Under the State of Texas Emergency Management Plan, local government is responsible for emergency management within their local jurisdiction's. Specific to this plan local government will:

1. Disseminate warning/notification to the public.

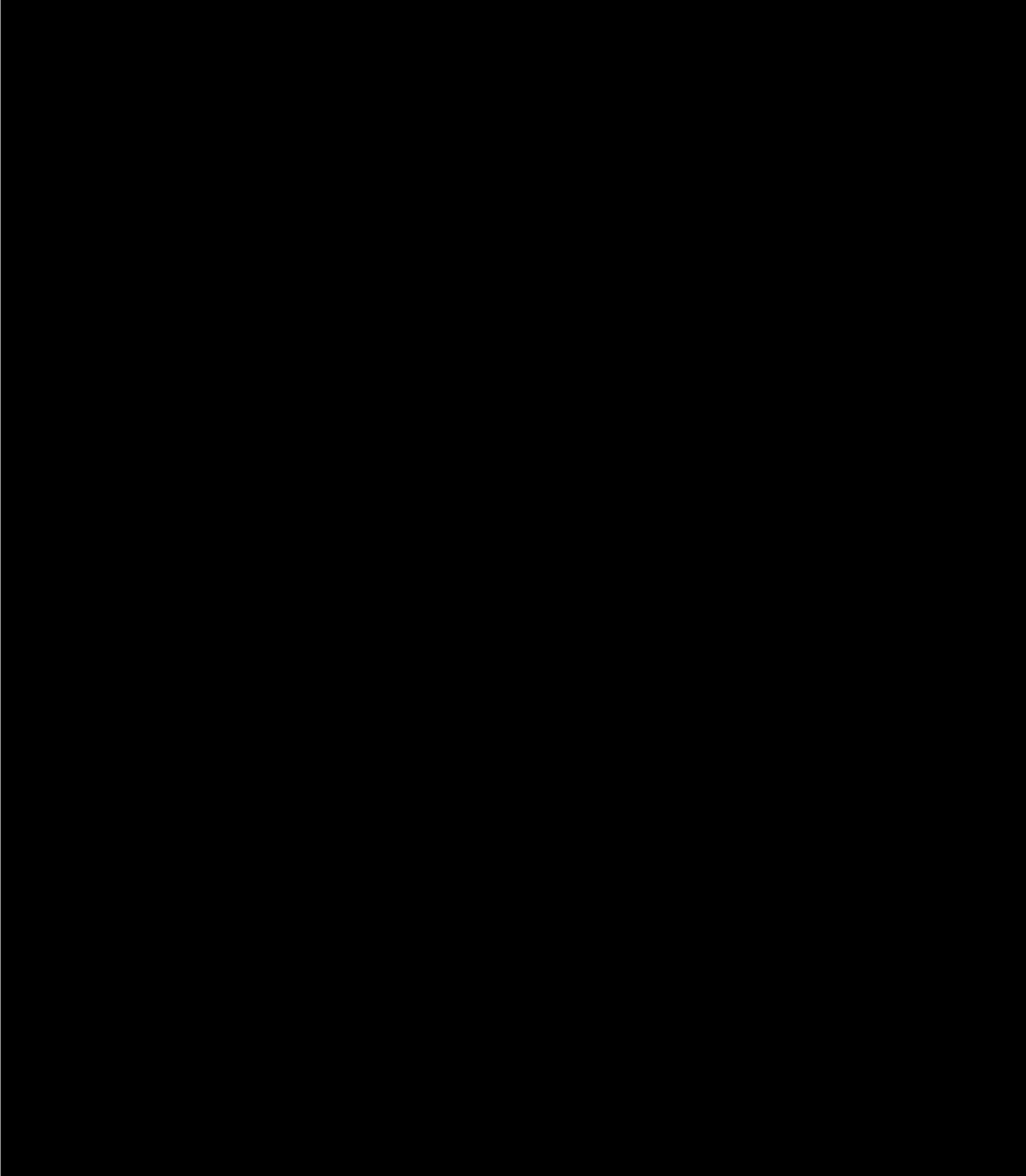
2. Implement protective response actions.
3. Assist persons whose mobility is impaired, or who otherwise require special consideration with respect to warning, notification or protective response.
4. Provide law enforcement and traffic control within the affected area.
5. Register and provide lodging for evacuees.
6. Monitor evacuees for possible radioactive contamination and provide decontamination assistance if required.
7. Provide food, clothing, emergency medical care, and other essential human services to evacuees.
8. Disseminate public information materials regarding local government activities in the response and recovery phases.
9. Perform additional functions as detailed in the local Emergency Management Plan.

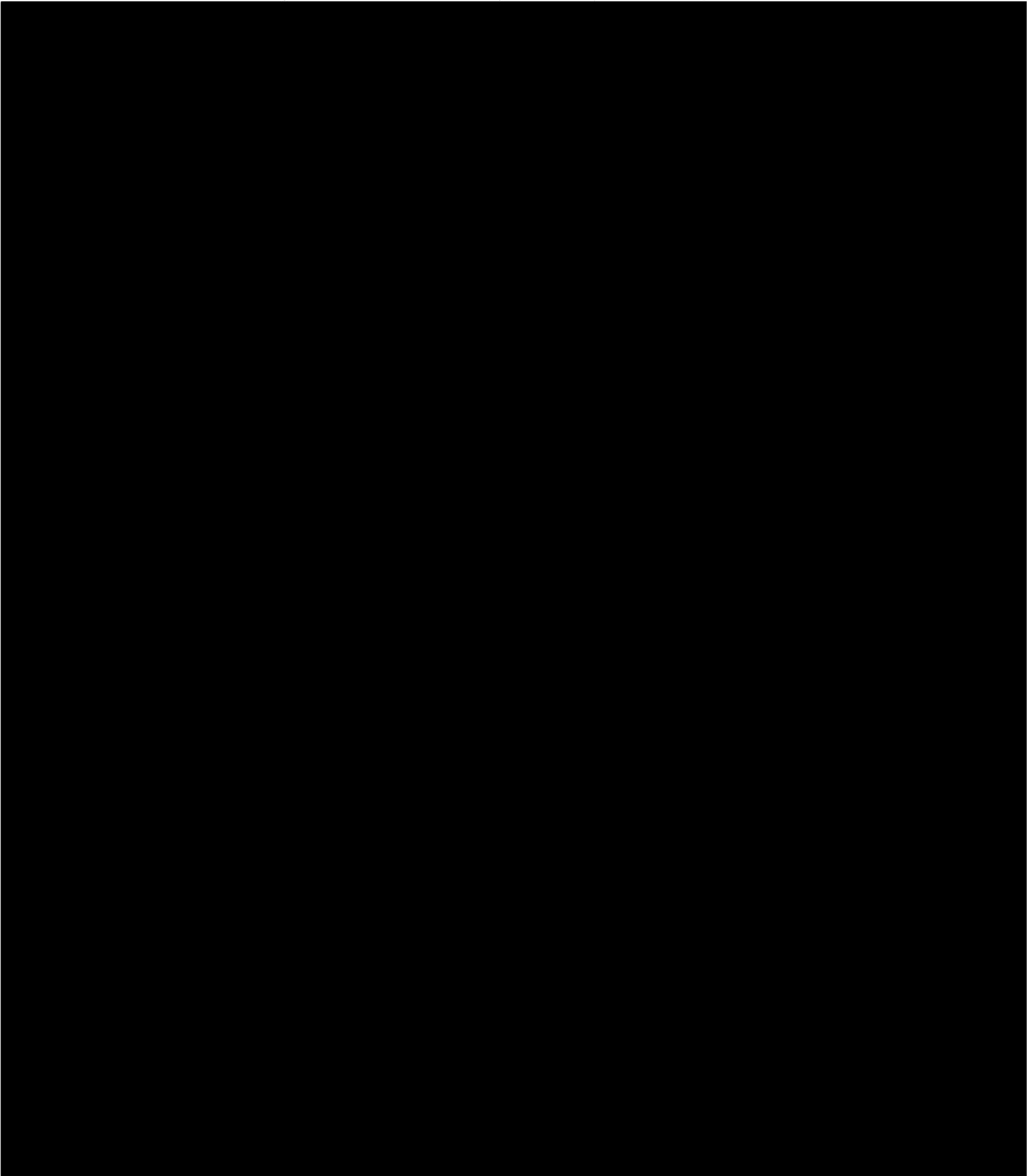
G. ADDITIONAL LABORATORY FACILITIES

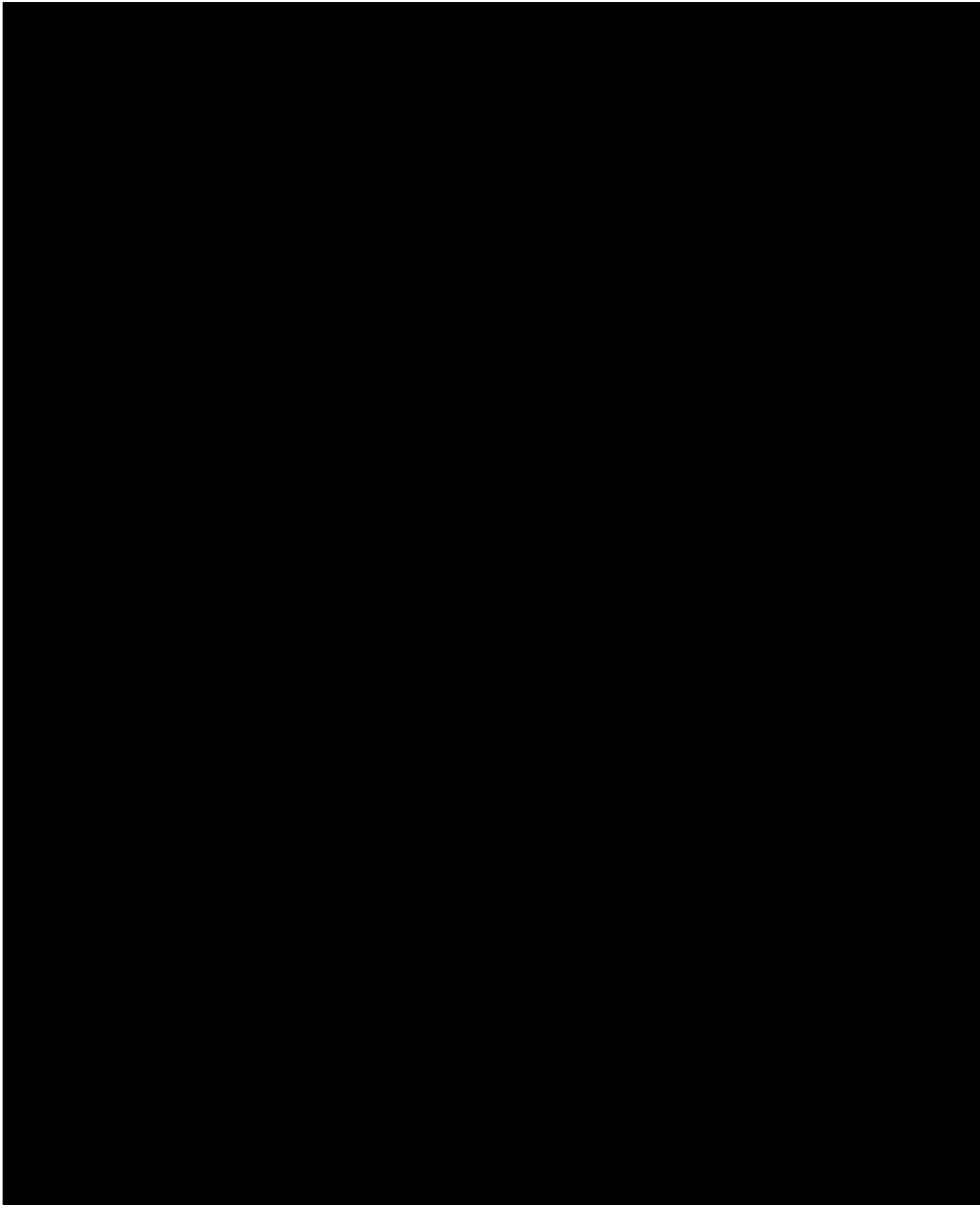
The University of Texas and Texas A&M University have agreed to provide backup facilities for sample analysis. Both universities have stated that, during an emergency, their laboratories would be available with full staff and services, 24-hours per day or as needed, for the duration of the emergency. Additionally, the University of Texas has offered to provide temporary storage of certain low-level wastes. (See attachments (2) and (3) for Letters of Agreement.)

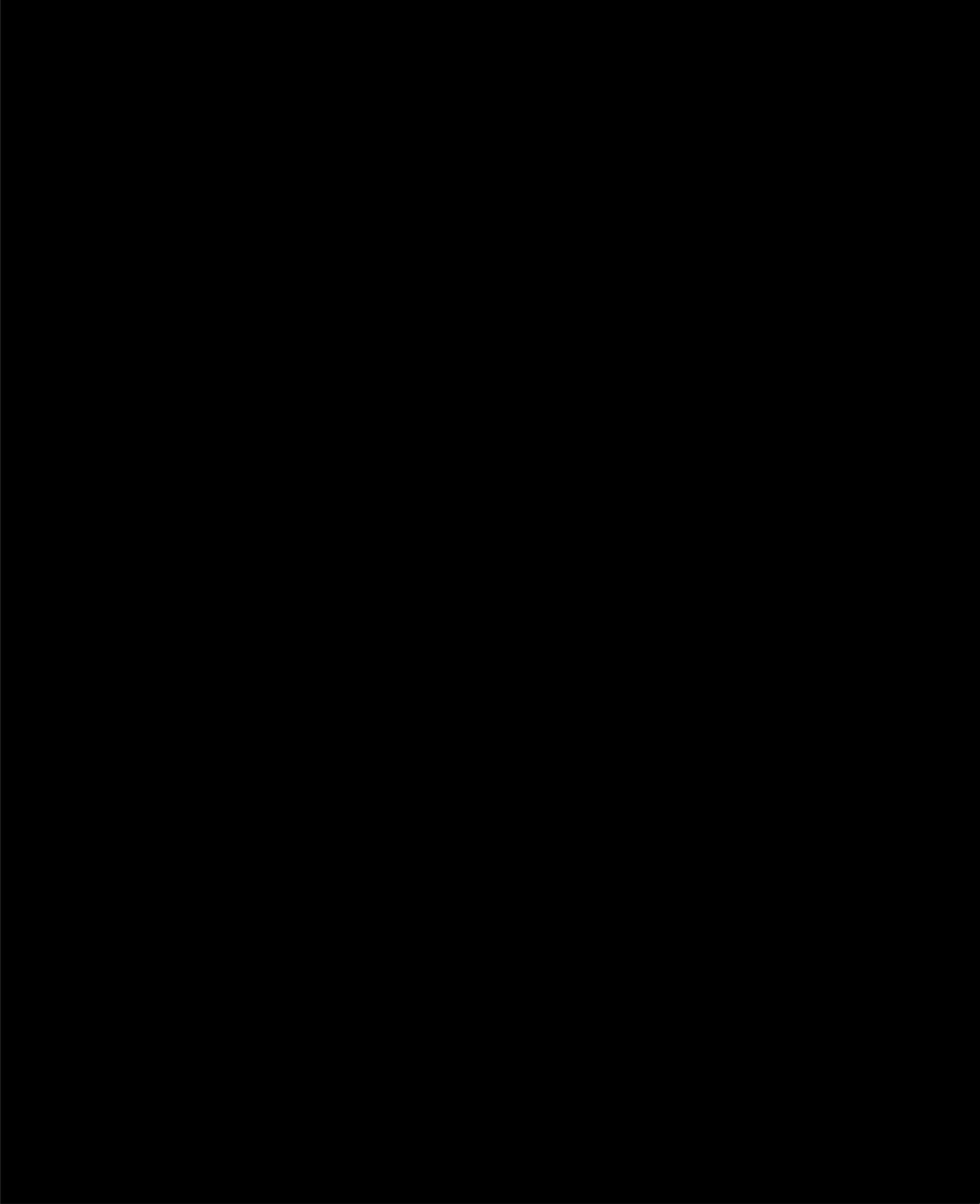
VIII. TRAINING, DRILLS AND EXERCISES:

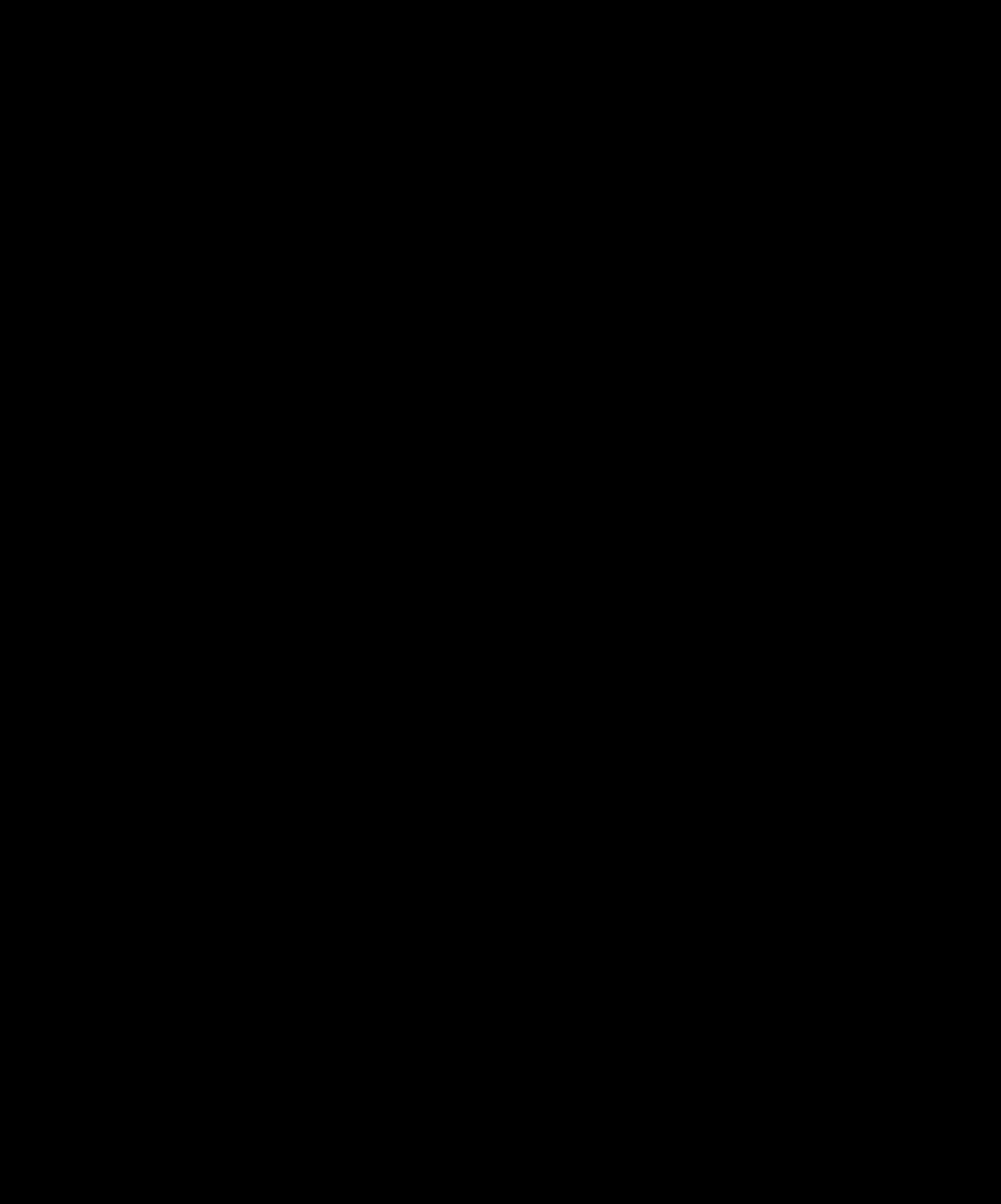
All Bureau of Radiation Control Personnel with emergency response assignments under this plan will receive training applicable to their duties. See attachment (4) for a discussion of the training, drills and exercises to be conducted in preparation for response to fixed nuclear facility accidents.











## TRAINING, DRILLS AND EXERCISES

### I. TRAINING:

#### A. GENERAL

All Bureau of Radiation Control personnel with assigned responsibilities under Annex D will receive an orientation that will be conducted by the Emergency Planning Coordinator. This orientation will include sections addressing:

1. State Emergency Management Council Organization and Operations.
2. District Disaster Committee Organization and Operations.
3. Local Government Organization and Operations.
4. Annex D Format and Contents.
5. Bureau of Radiation Control Concept of Operations.
6. Emergency Team Functions.

Additionally, for fixed nuclear facilities, all assigned personnel will receive orientation, which includes:

1. Facility Location and Type.
2. Demography of the 10-mile and 50-mile EPZ's.
3. Host Area Reception/Relocation Centers and Medical Facilities.
4. Response Team Duty Stations.

Refresher training will be accomplished by means of the required annual review of Annex D, participation in required full-scale exercise, and participation in other drills and exercises that are conducted at more frequent intervals.

Included in the specific training described below for various response teams, the Bureau (through the utilities) will offer a 40-classroom-hour course on reactor plant systems. Personnel assigned as Chief of Field Operations, Licensee Liaison, Accident Assessment and Field Team Leader will be required to complete this course (if not previously qualified by other means, i.e. previous equivalent education/training).

B. Specific

1. Chief of Field Operations – Bureau Chief and Division Directors are qualified by virtue of education and experience. Deputy Directors may qualify through a combination of education and experience at a variety of positions (i.e., Field Team Leader, Accident Assessment, Public Information and Licensee Liaison). Qualification of Deputy Directors will be contingent upon Division Director concurrence.
2. Emergency Planners – All persons assigned duties in emergency plan development and maintenance will attend the Federal Emergency Management Agency course entitled “Radiological Emergency Planning.” Retraining will be subject to the availability of FEMA instruction, except for the training derived from plan review and updating.
3. Licensee Liaison – All persons assigned duties as Licensee Liaison will be required to complete the course on reactor plant systems. Additionally, they will receive a more intensive orientation in specific plant operations, including safety-related systems and operating and emergency response personnel. Personnel may otherwise be qualified to perform this function on the basis of previous training or experience. Retraining will occur during drills and exercises conducted with each plant.
4. Accident Assessment Team – In addition to the reactor plant systems course (or equivalent), personnel will receive specific training on the computerized dose assessment models in use within the Bureau for accident assessment. Retraining is accomplished during participation in semi-annual drills and exercises.
5. Field Monitoring Teams – Bureau personnel and their Department of Public Safety counterparts will receive initial instruction via a radiological monitoring course conducted by the Incident Response Staff. Retraining will be accomplished during exercises, with additional classroom instruction to be presented as needs are identified.
6. Field Sample Analysis – Field Sample Analysis personnel from the Bureau of Laboratories will receive an initial

orientation on mobile laboratory systems. This orientation will be provided by the laboratory supervisor or by the vendor in accordance with bid specifications. Additional training will be provided during routine operations in which the mobile laboratory is taken to the field and actual sample analyses are performed.

7. Contamination Control – Team members will receive in-house classroom instruction and hands-on training in personnel and equipment monitoring, anti-contamination protection, decontamination procedures, and temporary storage of low-level wastes. Retraining will occur during the response to actual incidents involving other types of radioactive materials usage and during participation in exercises of this plan.
8. Decontamination Assistance Teams – Personnel will receive in-house classroom instruction and hands-on training in personnel monitoring and decontamination. Retraining will be provided in response to actual incidents or during participation in exercises of this plan.
9. Public Information Coordination – Persons assigned this task are initially selected because of academic training and/or professional experience. Additional training will be provided through courses conducted by the Emergency Planning staff and through work sessions with Utility Public Information Coordinators and participation in exercises of this plan.
10. Instrument Maintenance and Calibration – Team members are qualified by virtue of their professional duties, which consist of maintenance and calibration. Additional training is not anticipated for these individuals, except as instrumentation changes and new service procedures are required. Other Bureau personnel have been trained in instrument testing and calibration and continue to receive such training as part of their day-to-day duties.
11. Logistics Support – Initial training has been provided during the general orientation described in Section I-A. Retraining is derived from participation in plan exercises.
12. State Emergency Management Council Liaison – All personnel assigned are familiar with the operation of the Emergency Management Council. Familiarity will be

maintained through participation in plan exercises. Specialized training will be provided by the Department of Public Safety, Division of Emergency Management concerning use of any specialized equipment available to these persons in the State Emergency Operations Center.

13. District Disaster Committee Liaison – Assigned individuals will attend a Disaster Committee workshop and will receive an in-house briefing concerning district operations. Additional training will be provided during participation in exercises with appropriate disaster districts.
14. Local Government Liaison – Initial training will be provided during the orientation described in Section I-A. Retraining will be provided through participation in exercises.

## II. DRILLS AND EXERCISES

### A. GENERAL

The Bureau of Radiation control will participate, along with appropriate Utility, Local, State and Federal agencies, in required exercises of Fixed Nuclear Facility Response plans. The scope of these exercises will be in accordance with requirements identified by the Federal Emergency Management Agency. Scenarios for exercises will be developed by the Bureau of Radiation Control in cooperation with the Utility and the Texas Department of Public Safety's Division of Emergency Management. Other participants will be included in scenario development covering the involvement of their agencies. Exercise scenarios will be designed to test major components of relevant plans, and will be scheduled to demonstrate 24-hour operating capabilities starting at any time of day or night in any type of weather.

In addition to any official observers who may be provided by Federal agencies, the exercises will be observed by a team of knowledgeable individuals comprised in part of representatives from participating state agencies. Personnel from similar programs in other states will augment this team as necessary under a cooperative agreement between the states of Texas, Arkansas, Louisiana and Mississippi. Following each exercise, a critique will be conducted, observer comments will be evaluated, necessary changes to appropriate plan elements will be incorporated and plan updates will be issued.

B. SPECIFIC

Either in conjunction with the major exercise, or as separate limited exercises and drills, the following will be conducted at the stated frequencies:

1. Monthly communications drills designed to test the ability of the state system to receive a simulated message from each utility; relay that message from the Department of Public Safety (DPS) District Office through DPS Headquarters Communications, the DPS Division of Emergency Management and to the Bureau of Radiation Control; and have that message arrive at the Bureau in an understandable form. Similar drills may be conducted wherein messages are sent from each utility to appropriate local governments, either direct or via relay through the DPS District Office(s).

Message verification during Local Government drills will be in accordance with local procedures. Verification will not be a factor in state drills since initial notification will be via dedicated telephone line from the Utility to the Department of Public Safety District Office and will be verified by the Department of Public Safety in accordance with Standing Operating Procedures of the Department. Once a message enters the official state communications channel, it may be considered to be authentic by all parties.

C. EXCEPTIONS

Although suggested by federal guidance, the following drills will not be conducted as discrete activities. They are adequately included in other activities.

1. Monthly communications drills involving Radiological Monitoring teams – The communications equipment involved is in daily use by the Department of Public Safety members of those teams. Message contents will be familiar to Bureau of Radiation Control team members and Department of Public Safety team members will be present at all times during actual response to give technical assistance in equipment use.

2. Communications drills with other states in the Ingestion Exposure Pathway EPZ – there are no other states in the Ingestion Exposure Pathway for any actual or proposed fixed nuclear facility in the state.
3. Communications with federal emergency response organizations – proper channels for this type of communication are between the Division of Emergency Management and the Federal Emergency Management Agency’s Region VI offices in Denton, Texas. Primary communications mode between those agencies is telephone, which is in daily use by both parties. NAWAS, the secondary communications system, is tested every day
4. Radiological monitoring drills – teams will participate in full scale exercise, but additional drills are not necessary because the skills and procedures involved are identical to those used in routine sampling at other locations, and because the communications and record keeping systems are in daily use.