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Southern State Radiological Emergency Preparedness and Response Agencies

Southern States Energy Board
Norcross, Georgia

Prepared for U.S. Department of Energy under
Cooperative Agreement DE-FC02-87CH10324
01

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MASTER

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INTRODUCTION

The responsibility for initially responding to a transportation accident generally falls to the state, tribal and local governments. In addition, the local government must determine the action required to prevent further damage to life or property. The federal government provides support to these governments upon request through planning guidance, training and technical and financial assistance.

General federal agency responsibilities for radiological emergency assistance are set forth in Part 351, Title 44 of the Code of Federal Regulations, "Radiological Emergency Planning and Preparedness." The Federal Radiological Emergency Response Plan (Federal Register, Vol. 50, No. 217, pp. 46542-46570, November 8, 1985) further describes the authorities and responsibilities of the following 12 federal agencies:

- Department of Agriculture
- Department of Commerce
- Department of Defense
- Department of Energy
- Department of Health and Human Services
- Department of Housing and Urban Development
- Department of Interior
- Department of Transportation
- Environmental Protection Agency
- Federal Emergency Management Agency
- National Communications System
- Nuclear Regulatory Commission

The Federal Emergency Management Agency (FEMA) has the primary federal planning and guidance role in radiological emergency response. In August 1988 the agency issued for review a draft revision of FEMA-REP-5, Guidance for Developing State and Local Emergency Response Plans and Preparedness for Transportation Accidents. Since there are no federal laws or regulations requiring state, tribal and local governments to develop radioactive waste transportation emergency plans, use of the FEMA guidance is voluntary.

State, tribal and local requests for federal assistance may be received in a number of ways. The initial notification point depends on the organization making the request and the type of assistance requested. For example, state emergency management or radiological health organizations requesting radiological monitoring assistance are cognizant of the capabilities of the Department of Energy and would call the appropriate Regional Coordinating Office directly. The Department of Energy would be responsible for notifying other federal agencies that would participate in radiological monitoring efforts. Requests for other types of assistance, such as communications and logistics, would be coordinated by FEMA.

The Department of Energy provides emergency response advice and assistance upon request from licensees; federal, state, tribal and local agencies; private organizations; and individuals involved in or cognizant of an incident believed to involve source, byproduct, special nuclear material or other ionizing radiation sources. The initial response is coordinated by one of the eight Regional Coordinating Offices.

When requested, the Environmental Protection Agency (EPA) assists state and local governments with radiological emergency response by providing environmental monitoring, accident assessment and protective action guidance. In the event the federal government is requested to assist in offsite monitoring efforts, the EPA would assume responsibility (from the Department of Energy, who is responsible for initial offsite radiological monitoring efforts) for intermediate and long-term offsite monitoring activities.

The federal government is heavily involved in training all levels of emergency responders. Programs are conducted by DOE, FEMA, the Department of Transportation and their contractors. Target audiences include first responders, emergency planners, decision makers in emergency operations centers and technical personnel involved in accident assessment.

This State Radiological Emergency Preparedness and Emergency Response Agency Report provides information on the state agencies assigned to radioactive materials transportation incidents in 16 Southern States Energy Board member states. For each, the report lists the agencies with primary authority for preparedness and response, their responsibilities and personnel within the agencies who can offer additional information on their radioactive materials transportation programs.

The report also lists each state's emergency team members and its laboratory and analytical capabilities. Finally, the governor's designee for receiving advance notification of high-level radioactive materials and spent fuel shipments under 10 CFR Parts 71 and 73 of the U.S. Nuclear Regulatory Commission's regulations is listed for each state. Part 71 requires prenotification for large quantity radioactive waste shipments. Part 73 addresses prenotification for spent nuclear reactor fuel shipments.

This information was compiled under a cooperative agreement with the U.S. Department of Energy (DE-FC02-87CH10324) as part of the high-level radioactive waste transportation program. Since the personnel and equipment data are subject to change, the Southern States Energy Board plans to provide for annual updates in future work performed under this or subsequent agreements.

ALABAMA

GOVERNOR

The Hon. Guy Hunt (Term ends January 1991)
State Capitol
Montgomery, Alabama 36130
(205)261-7100

EMERGENCY SERVICES

The Alabama Emergency Management Agency (AEMA) is responsible for the preparation and implementation of a comprehensive emergency operations plan to cope with emergencies and disasters. Coordination of emergencies are conducted through the State Emergency Operations Center and/or a mobile command post. In the area of radiological emergency response, AEMA works jointly with the Department of Health (Bureau of Radiological Health) and other agencies to coordinate federal, state and local response activities and a public information program.

J. Danny Cooper, Director
Alabama Emergency Management Agency
520 South Court Street
Montgomery, Alabama 36130
(205)834-1375 (Duty hours)
(205)261-4378 (Non-duty hours)

HEALTH SERVICES

The Department of Public Health is the administrative agency for the State Board of Health, which manages the Agreement State Program and is the designated radiation control agency. The board is authorized to issue rules and regulations on radioactive material transportation and may inspect waste shipments. The State Health Officer is the director of the Department of Public Health and also serves as head of the State Board of Health. As head of the state radiation control agency, the State Health Officer is responsible for issuing orders, declaring emergencies and directing protective actions.

Operational responsibilities include determination of protective actions and performance of off-site radiation monitoring and control activities. The department will handle all technical aspects of radiation in an emergency and will provide medical support to local governments.

Claude Earl Fox, M.D., M.P.H.
State Health Officer
Department of Public Health
Montgomery, Alabama 36130
(205)261-5052

DESIGNEE FOR ADVANCE NOTIFICATION OF SHIPMENTS

Col. Thomas H. Wells
Director
Alabama Department of Public Safety
P.O. Box 1511
Montgomery, Alabama 36192
(205)261-4378

RADIOLOGICAL EMERGENCY ASSISTANCE CONTACTS

State Police	(205)261-4378
Alabama State Board of Health Radiological Health Branch State Office Building, Room 510 Montgomery, Alabama 36130-1701	(205)261-5315 (8AM - 5PM)

Emergency Team Members

<u>Name</u>	<u>Title</u>
Godwin, Aubrey V.	Director, Radiological Health Branch
Whatley, Kirksey E.	Section Chief, Radioactive Material Licensing
Hannah, B.O.	Section Chief, Environmental Monitoring & Emergency Plans

If above unavailable call (205)261-4378
and ask operator
to page No. 971

LABORATORY AND ANALYTICAL PROGRAMS

<u>Type of Sample</u>	<u>Type of Analysis</u>	<u>Major Equipment</u>
Air	Gross Beta	Canberra Alpha-Beta 2201
Fish	Gamma Analysis	Canberra Series 90 Int. Germanium
Low-Level Gamma		Canberra Series 90 Int. Germanium
Milk	Strontium - 89, 90 Gamma Analysis Iodine - 131 Barium - 140 Cesium - 137 Potassium - 40	Canberra Series 90 Int. Germanium Canberra Alpha-Beta

Soil	Gamma Analysis	Canberra Series 90 Int. Germanium
Vegetation	Gamma Analysis	Canberra Series 90 Int. Germanium
Water	Gamma Spectrum Gross Beta	Canberra Series 90 Int. Germanium Canberra Alpha-Beta

In addition, a portable Canberra Series 10 is available.

ARKANSAS

GOVERNOR

The Hon. Bill Clinton (Term ends January 1991)
State Capitol
Little Rock, Arkansas 72201
(501)371-2345

EMERGENCY SERVICES

The Office of Emergency Services is charged with coordinating emergency relief and the prevention of disasters. The director is appointed by the governor, and the office maintains a state disaster plan.

The State Emergency Operations Center, located south of Conway, Arkansas, is operated at all times. In the event of an emergency, the state is divided into four operational areas with an area coordinator for each. The area coordinators serve a liaison function among the office director, area planning councils and county and municipal governments.

Jack DuBose, Acting Director
Office of Emergency Services
P.O. Box 758
Conway, Arkansas 72032
(501)329-5601

HEALTH SERVICES

In an emergency the Department of Health has primary responsibility for health and medical assistance; water and sanitation inspection; chemical hazard response; recovery, identification and disposal of fatalities; vector control; radiological incident response; and maintenance of state-owned radiological equipment. In the specific area of radiological incident response, the Department of Health is in charge of technical evaluation and assessment and the issuance of guidelines and directives for protective actions.

M. Joycelyn Elders, M.D., Director
Department of Health
4815 West Markham Street
Little Rock, Arkansas 72201
(501)661-2111

DESIGNEE FOR ADVANCE NOTIFICATION OF SHIPMENTS

Greta J. Dicus
Director
Division of Radiation Control and Emergency Management Programs
Arkansas Department of Health
4815 West Markham Street
Little Rock, Arkansas 72201
(501)661-2136

RADIOLOGICAL EMERGENCY ASSISTANCE CONTACTS

Office of Emergency Services (501)374-1201 (24 hours)

Arkansas Department of Health (501)661-2136 (24 Hours)
Division of Radiation Control
& Emergency Management
4815 West Markham
Little Rock, Arkansas 72201

Emergency Team Members

<u>Name</u>	<u>Title</u>
Dicus, Greta J.	Director, Div. of Radiation Control & Emergency Management
Bevill, Bernard	Supervisor, Nuclear and Environmental Safety Section
Giel, James	Supervisor, Radioactive Materials Section
Sands, Jimmy L.	Supervisor, X-Ray Section
Elders, Joycelyn, M.D.	State Health Officer

In addition to the above individuals, the following positions make up the Emergency Response Team composition:

Health Physicists	9 individuals
State OES Liaison	1 individual
Administrative/Clerical Support	7 individuals
Radiological Defense Officer	1 individual
Laboratory Technicians	2 individuals
Logistical Support	2 individuals
Public Information	4 individuals
Radiochemistry	2 individuals
Communication Specialists	6 individuals

Additional logistical and radiation monitoring support is available from other Health Department divisions.

LABORATORY AND ANALYTICAL PROGRAMS

<u>Type of Sample</u>	<u>Type of Analysis</u>	<u>Major Equipment</u>
Air	Gross Alpha Gross Beta Iodine - 131 and other gamma emitters	Packard Tri-Carb 2000CA liquid scintillation analyzer with printout.
Charcoal Filter	Gamma Analysis	Nuclear-Chicago Model 8700 Internal Proportional Counter with printout. Canberra Model 2201.
Fish	Gamma Analysis	
Milk	Strontium-89,90 Gamma Analysis Iodine-131 Barium-140 Cesium-137 Potassium-40	Transnuclear Low-Background Beta Counter Canberra Model 2200. 1 - Gamma Spectroscopy System Consisting of:
Soil and Silt	Gamma Analysis	1 - Multichannel Analyzer (Nuclear Data 990).
Vegetation	Gamma Analysis	
Water	Gross Alpha Gross Beta Tritium Gamma Analysis Radium-226,228 Strontium-89,90 Uranium	1 - 4 x 4 inch sodium iodide (Tl) detector (Harshaw) with shielding. 1 - Canberra GeLi detector and associated software with shielding.
Wipe Test	Gross Alpha Gross Beta Technitium-99 Nickel Tritium	

Field Equipment (Average Inventory)

- 14 Ludlum Model 3 Survey Meters with:
 - 10 Ludlum Model 44-2 Gamma Scintillators
 - 12 Ludlum Model 44-9 Pancake Probes
 - 9 Ludlum Model 43-5 Alpha Scintillators
 - 14 Ludlum Model 44-6 Thin Wall Gamma Probes
 - 1 Ludlum Model 42-4 Thermal Neutron Probe
- 6 Ludlum Model 17 Ion Chambers
- 1 Ludlum Model 18 Analyzer with:
 - a. Neutron Ball
 - b. Ca7 Alpha Probe
- 2 Ludlum Model 12S Micro R Meters
- 1 Eberline PRM-6 Survey Meter
- 3 Eberline ESP-1 Survey Meters
- 2 Keithley Instruments Model 36150 Ion Chambers

- 7 Texas Nuclear Corp./Warning to Labs Model 2592 Ion Chambers
- 12 Victoreen Model 06-502 "Chirpers"
- 11 Extex Model 415A "Chirpers"
- 9 MRH Ion Chambers
- 3 Reuter-Stokes Model RS-111 Pressurized Ion Chambers
- 1 Canberra Series 10 Portable MCA with 2" x 2" NaI (TZ) probe
- 1 Eberline MS-3 Scaler with GM Pancake Probe
- 1 Harsha Nuclear Systems 2000P TLD System with Calcium Fluoride Dysprosium TLD bulbs
- 1 Ludlum Model 2218 Dual Channel Analyzer with 2" x 2" NaI (TL) Gamma Scintillator
- 1 Everline Model PNC-1 Neutron Detector
- 1 Narda Microwave detector
- 2 RadeCo Model HD-288 Air Samplers
- 6 RadeCo Model H-809C Air Samplers
- 6 Staplex Model T71A Air Samplers
- 5 vehicles equipped with other miscellaneous emergency response equipment and 2 communication systems - Arkansas Department of Health radios
- Arkansas Department of Emergency Services radios
- 1 Mobile Emergency Operations Center (semi-trailer)
- 12 Handheld Portable radios (miscellaneous manufacturers)
- 1 Victoreen Model 2810-1 TLD Reader with TLD bulbs

Radiological Defense Equipment

The following radiological defense equipment is managed by the Radiological Defense Program within the Arkansas Department of Health. The equipment is in stock storage at the department or is in place in most counties under the jurisdiction of the County Emergency Services Coordinator.

Survey Meters: Victoreen Model CDV-700
Victoreen Model CDV-715
Victoreen Model CDV-720

Dosimeters: Victoreen Model CDV 138
Victoreen Model CDV 730
Victoreen Model CDV 740
Victoreen Model CDV 742
Victoreen Model CDV 750 (Chargers)

FLORIDA

GOVERNOR

The Hon. Bob Martinez (Term ends January 1991)
State Capitol
Tallahassee, Florida 32301
(904)488-4441

EMERGENCY SERVICES

The Division of Emergency Management in the Department of Community Affairs is responsible for preparing and implementing a comprehensive program to meet disasters and emergencies. In the area of radiological emergency response, the division maintains a plan for nuclear power plant emergencies; provides assistance in the preparation of local plans; coordinates federal, state and local response activities; activates a state emergency operations center; and manages a public information program.

Gordon Guthrie, Director
Division of Emergency Management
Department of Community Affairs
2740 Centerview Drive
Tallahassee, Florida 32399
(904)488-1900

HEALTH SERVICES

The Florida Radiation Protection Act designates the Department of Health and Rehabilitative Services as the lead agency for radiation safety. The department also administers the Agreement State Program. The act was amended in 1984 to require the department to protect the environment, in addition to the public, from harmful radiation effects. Hence, the department also undertakes environmental surveillance activities.

Charles S. Mahan, M.D.
Deputy Assistant Secretary for Health
Department of Health and Rehabilitative Services
1317 Winewood Blvd.
Tallahassee, Florida 32301
(904)487-2705

DESIGNEE FOR ADVANCE NOTIFICATION OF SHIPMENTS

Harlan Keaton
Office of Radiation Control
Florida Department of Health and Rehabilitative Services
P.O. Box 15490
Orlando, Florida 32858
(407)297-2095

RADIOLOGICAL EMERGENCY ASSISTANCE CONTACTS

Office of Radiation Control
Department of Health and
Rehabilitative Services
1317 Winewood Boulevard
Tallahassee, Florida 32301

(904)487-1004

Orlando Office

(407)297-2095

Emergency Team Members

<u>Name</u>	<u>Title</u>
Jerrett, Lyle E.	Director, Office of Radiation Control
Clark, Mary	Public Health Physicist, Consultant Office of Radiation Control
Keaton, Harlan	Manager of Environmental Radiation Control Program
Lanham, John P.	Manager of X-Ray Machine Inspection Program
Nash, J. Daniel	Manager of Radioactive Materials Program
Eakins, Jearold C.	Coordinator of Emergency Response Program

LABORATORY AND ANALYTICAL PROGRAMS

<u>Type of Sample</u>	<u>Type of Analysis</u>	<u>Major Equipment</u>
Air	Gross Beta* Gamma Analysis	4 - Low Background, gas flow, proportional counter with automatic sample changer (Nuclear-Chicago, Searle, Gamma Products, Tennelec)
Biota	Gamma Analysis	
Milk	Strontium - 89, 90 Gamma Analysis	1 - Gamma spectroscopy system consisting of:
Soil	Gamma Analysis	1 - multichannel analyzer (Nuclear Data 6620)
Vegetation	Gamma Analysis	1 - 4 x 4 inch sodium iodide detector (Harshaw)
Water	Tritium Gamma Analysis	1 - 54 x 49 mm intrinsic germanium detector (Princeton Gamma-Tech) 2 - 4-inch steel shield (Gamma Products)

- 1 - Liquid scintillation spectrometer (Packard Tri-Carb 3255)
- 1 - Automatically controlled electric furnace (Lucifer)
- 1 - TLD reader system (Harshaw 2000)

* Gamma analysis when gross is greater than $1\mu\text{Ci}/\text{m}^3$

Mobile Laboratory

"Winnebago" 27' complete with:

- a. A.C. Generator (6.5kw)
- b. Wind speed and direction indicator system
- c. Gamma spectroscopy system consisting of:
 - 1. Hewlett-Packard Model 9825S desktop computer
 - 2. Hewlett-Packard printer and plotter
 - 3. Intrinsic Germanium Detector 24%
 - 4. Tracor Northern 4000 channel analyzer
- d. Nuclear Measurements Corp. gas flow proportional counter
- e. Victoreen model 2800 TLD reader
- f. Hi-Vol air samplers 110VAC, (8)
- g. Low-Vol air samplers 12VDC, (4)
- h. Ludlum 12-S Micro-R meters, 0-3,000 $\mu\text{R}/\text{hr}$ (8)
- i. Eberline E-140 Ratemeters with G-M probes, 0-70,000 cpm (2)
- j. Eberline PRM-5-3 Ratemeters with alpha scintillation probes and G-M probes, 0-500,000 cpm (2)
- k. Pressurized ion chamber, 0-500 $\mu\text{R}/\text{hr}$ (2)
- l. CDV-700 G.M. instruments with thin end window and side window probes, 0-30,000 cpm (4)
- m. CDV-715 ion chambers, 0-500 R/hr (10)
- n. Victoreen Panoramic ion chambers, 0-1000 R/hr (2)
- o. Ludlum 2200, portable single channel analyzer, 0-500,000 cpm, with sodium iodide detectors (4)
- p. Aerial gamma survey system with 7" plastic scintillator, 0-500,000 cpm

- q. Self-reading pocket dosimeters with chargers:
 - 0-200 mr (30)
 - 0-20 R (22)
 - 0-200 R (20)
 - 0-5R (15)
- r. Ludlum Model 2 Ratemeters with pancake probes, 0-50,000 cpm (2)
- s. Ludlum Model 2220 Ratemeter/Scaler with 2" NaI detector, 0-500,000 cpm (1)

GEORGIA

GOVERNOR

The Hon. Joe Frank Harris (Term ends January 1991)
State Capitol
Atlanta, Georgia 30334
(404)656-1776

EMERGENCY SERVICES

The Emergency Management Agency of the Department of Defense prepares and implements the state's emergency management program. The executive director is authorized to make rules or regulations subject to the governor's approval.

In a radiological emergency, the Department of Defense provides for communication through the state emergency operations center and/or the mobile operations center. It will also perform radiological monitoring, activate evacuation procedures, assist in response personnel and equipment transportation and coordinate a public information effort.

Mr. Billy J. Clack, Executive Director
Georgia Emergency Management Agency
Department of Defense
P.O. Box 18055
Atlanta, Georgia 30316
(404)624-7000

In a radiological transportation emergency the Georgia Department of Natural Resources (DNR) Environmental Protection Division (EPD) is notified through the Emergency Operations Center (EOC) operated by DNR Law Enforcement. This center is manned twenty-four hours a day. On receipt of an emergency call reporting a radiological transportation emergency, the EOC radio operator contacts the Emergency Response Team Duty Officer and the state's Radiological Emergency Coordinator (REC). The REC evaluates the situation and makes decisions on the level and extent of emergency response. The REC may call on the Georgia Emergency Management Agency of the Department of Defense for additional resources beyond those of the Emergency Response Team. The Emergency Response Team would be activated at the request of the REC. The team would perform radiological monitoring and situation evaluation as well as technical assistance to local emergency authorities.

J. Leonard Ledbetter
Commissioner
Department of Natural Resources
Floyd Towers East
205 Butler Street, SE
Atlanta, Georgia 30334
(404)656-3500

James C. Hardeman, Jr., Radiological Emergency Coordinator
Georgia Department of Natural Resources
Environmental Protection Division
Floyd Tower East 1166
205 Butler Street, SE
Atlanta, Georgia 30334
(404)656-6905

HEALTH SERVICES

Georgia's radiation control legislation gives administrative authority to the Department of Human Resources for the Agreement State Program. The department has exclusive authority to license medical uses of radioactive material and is authorized to license all other uses of radioactive materials. Prior to issuing a new or renewal license the department must obtain the concurrence of the Environmental Protection Division of the Department of Natural Resources for those license applicants who have a potential for release of radioactive material to the environment. The lead responsibility for radiological emergency response belongs to the Department of Natural Resources. The Department of Human Resources provides technical assistance upon the request of the Department of Natural Resources.

James G. Ledbetter
Commissioner
Department of Human Resources
47 Trinity Ave., SW
Atlanta, Georgia 30334
(404)656-5680

DESIGNEE FOR ADVANCE NOTIFICATION OF SHIPMENTS

Tom Doyal
Director
Transportation Division
Georgia Public Service Commission
1007 Virginia Avenue
Hapeville, Georgia 30354
(404)761-2229

RADIOLOGICAL EMERGENCY ASSISTANCE CONTACTS

Emergency Operations Center	1-800-241-4113 (24 Hours)
Georgia Emergency Management Agency	(404)624-7000 (24 Hours)
Department of Natural Resources Environmental Protection Division Floyd Tower East 205 Butler Street, SE Atlanta, Georgia 30334	(404)656-4300 (24 Hours) (404)656-6905 (8AM - 4:30PM)

Department of Human Resources
878 Peachtree Street, NE
Room 600
Atlanta, Georgia 30309

(404)894-5795 (7AM - 5:30PM)

Emergency Team Members

<u>Name</u>	<u>Title</u>
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Department of Natural Resources:

Hardeman, James C.	Radiological Emergency Coordinator
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Schreiber, Richard A.

Blackmon, Clifford P.

Department of Human Resources:

Hill, Thomas	Acting Director, Radiological Health Section
--------------	--

DeRose, Lewis B.	Chief, X-Ray Unit
------------------	-------------------

Slocumb, Bill

Cochran, Pat

Drinnon, Elizabeth

Fiquett, Terry

Fowler, Gary

Mott, Sharon

Simonton, Barry

LABORATORY AND ANALYTICAL PROGRAMS (DNR)

<u>Type of Sample</u>	<u>Type of Analysis</u>	<u>Major Equipment</u>
Air (filters)	Gamma Spectrum Iodine - 131 (Cs-137) Gross Beta Cesium - 137	MCA-Ge(Li) with DEC-Micro-11 Computer In-situ Ge(Li)
Fish/Aquatic Life	Gamma Spectrum RadioStrontium Tritium	4" x 4" NaI - MCA Beckman Ls-250 Liquid Scin- tillation

Milk	Gamma Spectrum Tritium Strontium Radioiodine (I-131)	Alpha Scintillation Harshaw TLD-2000 Reader (LiF and CaF)
Soil	Gamma Spectrum RadioStrontium	
Stream/Harbor Sediment	Gamma Spectrum	
Vegetation	Gamma Spectrum RadioStrontium Tritium	
Water	Gross Beta, Gross Gamma, Tritium, Strontium, Radioiodine (I-131)	

Routine laboratory analysis of environmental samples are conducted in a low-level fixed environmental radiation laboratory. A summary of the instrumentation resources available is as follows:

- Three - Ge(Li) Type Detectors
- One - NaI Type Detector
- One - 64000 Channel Multi-Channel Analyzer w/DEC-Micro-11-Computer
- One - Spectrofluorometer
- Two - Automatic Gas Proportional Alpha/Beta Analyzers
- One - Liquid Scintillation Analyzer
- Six - Radon Scintillation Counters
- One - TLD Annealer and Reader
- One - Networked Computer System
- Two - Pressurized Ionization Chambers
- One - Beta/Gamma Anticoincidence System
- One - Alpha Spectrometer

DNR Emergency Vehicles

** 1) GMC Suburban with 4-wheel drive

** 2) Mobile Laboratory equipped with the following:

- a) MCA - HpGe(Li) with IBM XT computer for dose projection and gamma spectrum analysis
- b) Liquid Scintillation System
- c) Alpha/Beta Counting System (Gamma Products)
- d) TLD Reader
- e) Air Samplers (battery, gasoline, and electrical operated)
- f) Survey meters (ion, Alpha, Beta, Micro-R, Geiger and Neutron detectors)
- g) Dosimetry systems (digital, pocket, etc.)
- h) Protective equipment
- i) Portable generator
- j) Tritium Sniffer

3) GMC 20 foot van equipped with radio communication capability to Civil Defense, DNR/EPD and other state agencies

4) Boating capability for surveying and water sampling as a backup for emergency response

** Indicates extensive radio communication capability (i.e. Civil Defense, Public Safety, local sheriffs, DNR, etc.)

KENTUCKY

GOVERNOR

The Hon. Wallace G. Wilkinson (Term ends December 1991)
State Capitol
Frankfort, Kentucky 40601
(502)564-2611

EMERGENCY SERVICES

The Division of Disaster and Emergency Services in the Department of Military Affairs is headed by the Adjutant General of the Commonwealth of Kentucky. The division is the lead state agency for response planning and coordination. The division's responsibilities include activation of the Emergency Operations Center and Emergency Communications Center, coordination of planning and response with adjacent states, public information dissemination and radiological protection coordination.

Col. James H. (Mike) Molloy, Executive Director
Division of Disaster and Emergency Services
Boone National Guard Center
Frankfort, Kentucky 40601
(502)564-8680

HEALTH SERVICES

The Cabinet for Human Resources administers the Agreement State Program and monitors sites where radioactive materials exist. Within the cabinet, the Radiation Control Branch has primary responsibility for response to peacetime radiological incidents.

Harry J. Cowherd, M.D., Secretary
Cabinet for Human Resources
275 East Main Street
Frankfort, Kentucky 40621
(502)564-7130

DESIGNEE FOR ADVANCE NOTIFICATION OF SHIPMENTS

Donald R. Hughes
Manager
Radiation Control
Department for Health Services
Cabinet for Human Resources
275 East Main Street
Frankfort, Kentucky 40621
(502)564-3700

RADIOLOGICAL EMERGENCY ASSISTANCE CONTACTS

State Police (502)564-3579

Division of Disaster and Emergency Services (502)564-7815 (Pager Service)

Radiation Control Branch (502)564-3700 (8AM - 4:30PM)
Department for Health Services
Cabinet for Human Resources
275 East Main Street
Frankfort, Kentucky 40621

Emergency Team Members

<u>Name</u>	<u>Title</u>
Hughes, Donald R.	Manager, Radiation Control
Mays, Mark L.	Supervisor, Radioactive Materials and Environmental Monitoring Section
Jeffs, Vicki	Senior Radiation Physicist
Imes, Kevin M.	Radiation Physicist
Volpe, John, Ph.D.	Chief Chemist

LABORATORY AND ANALYTICAL PROGRAMS

<u>Type of Sample</u>	<u>Type of Analysis</u>	<u>Major Equipment</u>
Air	Gross Alpha, beta or Gamma analysis/	100, Sample capacity, automated low background alpha and beta counting instrument.
Biota	soil, water, air, biota, milk, etc.,	
Milk or Water	and specific analysis for strontium, radium, tritium and gamma emitters	Chemistry laboratory (wet chemistry ion exchange system, muffle furnace drying ovens, radiochemistry hood, etc.)
Soil		
Water		200, Sample capacity, automated 3 channel liquid scintillation counting system.
		Computer based 6600 Nuclear Data System with portable Nuclear Data 66 multichannel analyzer and portable Germanium detector for field analysis of gamma emitters.

One Germanium and one GeLi detector available with calibration for the following geometrics:

- 200 gram dry soil/silt sample (200 mesh)
- 3.0 liter water sample
- 3.0 liter milk sample
- 20 milliliter glass liquid scintillation vial
- 140 millimeter charcoal filter
- 500 milliliter water sample

LOUISIANA

GOVERNOR

The Hon. Buddy Roemer (Term ends March 1992)
State Capitol
Baton Rouge, Louisiana 70804
(504)342-7015

EMERGENCY SERVICES

The Office of Emergency Services coordinates and controls emergency operations as directed by the governor. If warranted by the emergency, the office activates the state's emergency operations and communications centers. It coordinates the nontechnical response to a radiological incident and assists parish governments with their protective response planning.

Tom Creaghan, Assistant Secretary
Office of Emergency Preparedness
Department of Public Safety and Corrections
P.O. Box 66536
Baton Rouge, Louisiana 70896
(504)342-5470

HEALTH SERVICES

The Office of Air Quality and Nuclear Energy administers the state's radiation control law and the Agreement State Program. The office is headed by an assistant secretary, who is appointed by the governor with the consent of the Senate.

The Nuclear Energy Division, Office of Air Quality and Nuclear Energy, provides technical guidance and assistance to state and parish governments in the areas of accident assessment, monitoring, sampling and decontamination. The division also conducts education programs to inform the media and public of radiation, its hazards and appropriate protective measures and provides training to emergency response personnel, both state and local.

Mike D. McDaniel, Ph.D., Assistant Secretary
Office of Air Quality and Nuclear Energy
Department of Environmental Quality
P.O. Box 44096
Baton Rouge, Louisiana 70804

DESIGNEE FOR ADVANCE NOTIFICATION OF SHIPMENTS

Col. Wiley D. McCormick
Head
Louisiana State Police
P.O. Box 66614
Baton Rouge, Louisiana 70896
(504)925-6117

RADIOLOGICAL EMERGENCY ASSISTANCE CONTACTS

State Police

(504)925-6325

Nuclear Energy Division
Office of Air Quality and Nuclear Energy
Department of Environmental Quality
P.O. Box 14690
Baton Rouge, Louisiana 70898-4690

(504)925-4518 (24 Hours)

Emergency Team Members

<u>Name</u>	<u>Title</u>
Spell, William H.	Administrator, Nuclear Energy Division
Wascom, Ronald L.	Inspection and Enforcement Program Manager
Bohlinger, L. Hall	Licensing and Registration Program Manager
Zaloudek, David A.	Emergency Planning and Response Program Manager
Funderburg, Robert D.	
Stuckey, Savery G.	

Other section personnel are utilized as required.

LABORATORY AND ANALYTICAL PROGRAMS

<u>Type of Sample</u>	<u>Type of Analysis</u>	<u>Major Equipment</u>
Ambient Gamma	Environmental Gamma Levels (Pressurized Ion Chamber) Short Term Measurements	(3) Reuter-Stokes RSS-111 PIC's
Ambient Gamma	Environmental TLD (Glass enclosed TLDs) Long Term Measurements	Victoreen 2810 TLD reader using CaF (Mn) bulb dosi- meters
Water, Milk, Sedi- ment, Vegetation, Air Filters, Fish, Swipes	Gamma Spectroscopy	Canberra Series 90 Gemini System with four (4) solid state detectors
Water, Air Filters, Swipes	Gross Alpha/Gross Beta & Gross Gamma	Canberra 2400 Alpha, Beta, Gamma Sealed Detector Sys- tem
Water	Liquid Scintillation	Beckman LS-3801 Liquid Scin- tillation System

MARYLAND

GOVERNOR

The Hon. Donald Schaefer (Term ends January 1991)
State Capitol
Annapolis, Maryland 21404
(301)269-3591

EMERGENCY SERVICES

The Emergency Management and Civil Defense Agency, a division of the Department of Public Safety and Corrections, is responsible for preparing and implementing the state emergency management program. In response to a radiological incident, the agency will notify the appropriate federal, state and/or local technical responders. If necessary, the agency will activate the state emergency operations center to coordinate assistance to local jurisdictions.

Edward Murray, Director
Emergency Management and Civil Defense Agency
Sudbrook and Reisterstown Road
Pikesville, Maryland 21208
(601)352-9100

HEALTH SERVICES

Maryland's general radiation safety law designates the Department of the Environment as the radiation control agency. It also administers the Agreement State Program. In the event of a radiological incident, the department will provide assistance to local responders and can activate the Accident Assessment Center and the Ingestion Pathway Center. If the situation warrants, the department will provide the state public information officer with information on the emergency.

Martin W. Walsh, Jr.
Secretary
Department of the Environment
201 West Preston Street
Baltimore, Maryland 21201
(301)333-3130

DESIGNEE FOR ADVANCE NOTIFICATION OF SHIPMENTS

Col. James A. Jones
Chief, Services Bureau
Maryland State Police
1201 Reisterstown Road
Pikesville, Maryland 21208
(301)486-3101

RADIOLOGICAL EMERGENCY ASSISTANCE CONTACTS

State Police	(301)486-3101 (24 Hour)
Emergency Management and Civil Defense	(301)486-4422 (24 Hour)
Assistant Secretary for Operations Maryland Department of the Environment	(301)225-6523
Center for Radiological Health Maryland Department of the Environment 201 West Preston Street, 7th Floor Mailroom Baltimore, Maryland 21201	(301) 333-3130

Emergency Team Members

<u>Name</u>	<u>Title</u>
Fletcher, Roland G.	Administrator, Center for Radiological Health
Brisson, Richard J.	Assistant Administrator, Center for Radiological Health
Perzynski, Paul R.	Emergency Response Coordinator/ Public Health Radiation Specialist
Bonta, William K.	Public Health Engineer VI
Trump, Carl E.	Public Health Radiation Specialist
Flynn, Charles R.	Public Health Radiation Specialist
Ferguson, Thomas D.	Public Health Radiation Specialist
Chong, Yun K.	Health Physicist III
Owrutsky, Nathaniel A.	Health Physicist III
Scheltema, Johannes L.	Health Physicist III
Manley, Raymond E.	Health Physicist III
Chaparala, Phani N.	Health Physicist III
Jacobson, Alan D.	Health Physicist III
Van Antwerp, Walter R.	Health Physicist III
Rachuba, Leon J.	Health Physicist II
Ball, Anne	Health Physicist II
Abell, Francis E.	Health Aide IV

LABORATORY AND ANALYTICAL PROGRAMS

<u>Type of Sample</u>	<u>Type of Analysis</u>	<u>Major Equipment</u>
Air	Beta, gamma emitters in air particulates	1 Nuclear Data Pulse Height Analyzer (ND 9900) Genie Computer based P.H.A. System capable of operating 8 detectors simultaneously in either clock or live time.
Air	Iodine - 131 in filtered air	
Bay water	Hydrogen - 8: gamma	3 Ortec HPGe Detectors (Co-axial) Approx. 2" x 2" crystals EFF: 13.7%, 16% and 25%. RES: 1.8 KeV 3 LN-2 Monitors on cryostats.
Bay sediments	Gamma emitters	
Milk	Gamma emitters: Strontium - 89,90	2 Harshaw NaI (TL) Detector (Integral). 3" crystals with requisite electronics.
Oyster flesh	Gamma emitters	Tennelec automatic alpha-beta 1 proportional planckett counting system. Auto sample change (100 samples) 5 x 10 ⁻⁴ g/cm ² window. Printer output.
Vegetation	Gamma emitters	1 Beckman Liquid Scintillation (LS-133). Auto sample changer (100 samples). Printer output and page formator.

MISSISSIPPI

GOVERNOR

The Hon. Ray Mabus (Term ends January 1992)
State Capitol
Jackson, Mississippi 39205
(601)359-3150

EMERGENCY SERVICES

The Emergency Management Agency prepares and implements a state program for emergency management. The agency also issues permits for radioactive waste transportation. The state's "Guidance for Radiological Transportation Emergencies" gives the agency a support role unless the emergency warrants the use of additional personnel, evacuations or activation of the Mississippi Natural Disaster Plan.

James E. Maher, Director
Mississippi Emergency Management Agency
P.O. Box 4501, Fondren Station
Jackson, Mississippi 39216
(601)352-9100

HEALTH SERVICES

The State Department of Health is the administrative agency for the Board of Health, which implements the state's Agreement State Program. According to the Mississippi Radioactive Waste Transportation Act of 1982, the Board of Health must develop regulations for transportation permits, fees, notice and emergency response. Emergency response involves technical supervision, site isolation, monitoring and records management.

Alton B. Cobb, M.D.
State Health Officer
State Department of Health
P.O. Box 1700
Jackson, Mississippi 39215-1700
(601)960-7634

DESIGNEE FOR ADVANCE NOTIFICATION OF SHIPMENTS

James E. Maher, Director
Mississippi Emergency Management Agency
P.O. Box 4501, Fondren Station
Jackson, Mississippi 39216
(601)352-9100

RADIOLOGICAL EMERGENCY ASSISTANCE CONTACTS

Highway Patrol	(601)987-1530 (24 Hours)
Emergency Management Agency	(601)352-9100 (24 Hours) 1-800-222-6362 (in Mississippi)
Division of Radiological Health State Department of Health 3150 Lawson Street P.O. Box 1700 Jackson, Mississippi 39215-1700	(601)354-6657/6670 (8AM - 5PM)

Emergency Team Members

<u>Name</u>	<u>Title</u>
Fuente, Eddie S.	Director, Division of Radiological Health
Hilton, Charles E.	Branch Director I
Smith, Michael J.	Branch Director I
Smith, Scott A.	Acting Branch Director

LABORATORY AND ANALYTICAL PROGRAMS

<u>Type of Sample</u>	<u>Type of Analysis</u>	<u>Major Equipment</u>
Air	Gross Beta Specific Gamma	Nuclear Data 6700 PHA Computer, PGT GeLi System, Ortec Intrinsic Ge Detector
Direct Radiation	Gross Gamma	
Meat/Fish	Specific Gamma	Gamma Products G4000 Automatic Alpha/Beta Gas Flow Proportional Counter
Milk	Strontium - 89, 90 Specific Gamma	Tennelec LB-1000 Alpha/Beta Gas Flow Proportional Ctr.
Soil	Tritium Specific Gamma	Random Model 918 Lucas Cell Counter
Vegetation	Specific Gamma	
Water	Gross Alpha Gross Beta Radium - 226, 228 Strontium - 89, 90 Tritium Uranium Specific Gamma	Beckman LS1800 - Liquid Scintillation Counter Harshaw Model 3000 TLD Analyzer Assorted portable detectors (Alpha, Beta, Gamma)

Emergency Vehicles

- 1) Chevrolet Suburban 4-wheel drive with radio and trailering capability.
- 2) Dodge Ram van with radio.
- 3) Mobile Laboratory (trailer) equipped with the following:
 - a) Intrinsic Germanium detector with Nuclear Data ND66 and modem to main computer in Jackson (ND6700) and floppy disc backup
 - b) Liquid Scintillation System (Nuclear Enterprises)
 - c) Alpha/Beta Counting System (Canberra)
 - d) TLD Reader System (Harshaw 2000 Series)
 - e) Air Samplers (external battery)
 - f) Survey meters (ion, alpha, beta, gamma & scintillometer)
 - g) Dosimetry equipment (pocket with readers)
 - h) Protective equipment (Anti-C's, air packs, etc.)
 - i) Field chemistry supplies
 - j) Reuter-Stokes RSS-111 PIC
- 4) Various state-owned vehicles that can be equipped with plug-in radios.

MISSOURI

GOVERNOR

The Hon. John D. Ashcroft (Term ends January 1989)
State Capitol
Jefferson City, Missouri 65101
(314)751-3222

EMERGENCY SERVICES

The State Emergency Management Agency in the Office of the Adjutant General is the initial contact point for emergency organizations throughout the state. The agency coordinates both the Missouri Nuclear Emergency Assistance Plan and the Missouri Nuclear Emergency Team. The team comprises members from the agency; the Bureau of Radiological Health; the University of Missouri; and local organizations, academic institutions and private industry.

Richard D. Ross, Director
State Emergency Management Agency
1717 Industrial Drive
P.O. Box 116
Jefferson City, Missouri 65102
(314)751-9500
(314)751-2748 (24 hour)

HEALTH SERVICES

The Department of Health is the lead agency for radiation control. A 1985 law directed the department to develop a radiation data management program and radiological laboratory capabilities. In addition, the law directed it, in coordination with other agencies, to respond to radiological emergencies.

Robert G. Harmon, M.D., M.P.H.
Director, Department of Health
1738 East Elm
P.O. Box 570
Jefferson City, Missouri 65102
(314)751-6001

DESIGNEE FOR ADVANCE NOTIFICATION OF SHIPMENTS

Richard D. Ross, Director
State Emergency Management Agency
1717 Industrial Drive
P.O. Box 116
Jefferson City, Missouri 65102
(314)751-9500

RADIOLOGICAL EMERGENCY ASSISTANCE CONTACTS

Missouri Department of Health
Division of Environmental Health and
Epidemiology
1730 East Elm, P.O. Box 570
Jefferson City, Missouri 65102

(314)751-6083

Emergency Team Members

<u>Name</u>	<u>Title</u>
Miller, Kenneth V.	Chief
McNutt, Gary W.	Radiological Health Analyst
Cope, Reggie D.	Radiological Health Analyst
Tschetter, Michael J.	Radiological Health Analyst
Diaz, Leticia R.	Radiological Health Analyst
Dyer, Margie L.	Radiological Health Analyst

LABORATORY AND ANALYTICAL PROGRAMS

<u>Type of Sample</u>	<u>Type of Analysis</u>	<u>Major Equipment</u>
Environmental Media (air, water, soil, etc.)	Gamma (MCA)	Canberra Series 90
	Alpha, Beta	Tennelec Model 5100
	Beta liquid scintillation	Packard Model 2250 CA
	Alpha spectrometer	Canberra Model 7404

NORTH CAROLINA

GOVERNOR

The Hon. James G. Martin (Term ends January 1989)
State Capitol
Raleigh, North Carolina 27611
(919)733-5811

EMERGENCY SERVICES

The Department of Crime Control and Public Safety has primary responsibility for emergency operations preparation and conduct. When an event involves the participation of more than one state agency, the secretary of the department can designate a lead agency and allocate the necessary state resources.

The Division of Emergency Management activates the Emergency Operations Center and the State Emergency Response Team as directed by the department. Its Area Emergency Management Coordinators provide liaison with federal, state and local officials regarding communication, damage assessment and response coordination.

Joseph Myers, Director
Division of Emergency Management
Department of Crime Control and Public Safety
116 West Jones Street
Raleigh, North Carolina 27611
(919)733-3867

HEALTH SERVICES

The Department of Human Resources administers the Agreement State Program under the rules and regulations of a governor-appointed Radiation Protection Commission. It is designated as the lead agency for radiological materials emergency response and radiation protection. Technical response is provided through its Division of Facility Services.

I.O. Wilkerson, Jr., Director
Division of Facility Services
Department of Human Resources
701 Barbour Drive
Raleigh, North Carolina 27603-2008
(919)733-4283

DESIGNEE FOR ADVANCE NOTIFICATION OF SHIPMENTS

Cap. Walter K. Chapman
Director, Administrative Services
North Carolina Highway Patrol Headquarters
P.O. Box 27687
Raleigh, North Carolina 26711
(919)733-7952

RADIOLOGICAL EMERGENCY ASSISTANCE CONTACTS

Highway Patrol	(800)662-7956
Emergency Medical Services	(919)737-9886
Radiation Protection Section	(919)733-4283
Division of Facility Services	
Department of Human Resources	
701 Barbour Drive	
Raleigh, North Carolina 27603-2008	

Emergency Team Members

<u>Name</u>	<u>Title</u>
Brown, Dayne H.	Chief, Radiation Protection Section
Fry, Richard M.	Deputy Chief
Brown, Cecil B.	
Fong, S.W.(Felix)	
Watkins, Lanny L.	
James, Johnny	Radiation Emergency Coordinator
Buschow, Richie D.	
Newman, Harry J.	
Johnson, William D., Jr.	
Jackson, Larry W.	
Mann, Daniel F.	
Hall, Beverly O.	
Adams, David Paul	
Smith, Thomas M.	

Crocker, William F., Jr.

Hance, David A.

Dusenbury, Bernard Daly, Jr.

Mabry, Allen M.

Howell, David C.

Haden, J. Robin

Lee, Willie J.

LABORATORY AND ANALYTICAL PROGRAMS

MCA

1. One (1) computer based MCA system (ND-9900) for data analysis, data management and file storage (including MicroVAX II CPU with 5MB memory; 71MB hard disk; dual floppy drive; TK50 streaming tape; 8 user capability; Fortran; Basic and DECgraph).
2. One (1) computer based MCA (ND-6620) for data analysis, data management and results storage (224 K bytes memory, 2 dual hard disks, Fortran & Basic interpreters, 4 serial ports for terminal communication and data transfer).
3. One (1) Nuclear Data ND-66 multi-channel Analyzer/Terminal system for data acquisition and as a remote video terminal for data analysis when connected to the ND-6620 or the ND-9900 system through telephone communication.
4. One (1) Quantum Technology MCA software card and nuclear identification software used in an IBM PC XT for gamma spectroscopy.

Detectors

1. Two (2) PGT lithium drifted germanium Ge(Li) detectors for gamma spectroscopy [Efficiency: 18.2% (#1) and 15% (#2); FWHM: 1.95 KeV (#1) and 1.8 KeV (#2)].
2. One (1) PGT portable intrinsic germanium detector with a liquid nitrogen autofill system (13% efficiency, 1.85 KeV resolution at 1.33 MeV).
3. One (1) intrinsic germanium detector (N-type; 35% efficiency, 2.0 KeV resolution and 1.33 MeV).
4. One (1) Harshaw 4x4 inch NaI (Tl) scintillation crystal coupled to a PM tube for gamma spectroscopy data acquisition.
5. One (1) EG&G Ortec (BR-025-450-100) silicon surface barrier detector with electronics and vacuum chamber and vacuum pump for alpha spectroscopy.

6. One (1) Quantum Technology 3x3 inch NaI (Tl) scintillation crystal for gamma spectroscopy.
7. One (1) Harshaw low background alpha/beta/gamma manual Phoswich Counting System utilizing CaF_2 and NaI detectors.

Computers and Accessories

1. One (1) MicroVAX II CPU with 5MB memory and 71MB hard disk (this is the same MCA system as described above).
2. One (1) Toshiba T3100 portable computer with 640KB RAM and 10MB fixed disk.
3. Two (2) IBM PC XTs with 640 KB RAM and 20 MB fixed disks.
4. Two (2) TRS-80 portable computers.
5. One (1) programmable calculator (TI-59) with printer (PC-100A).
6. Two (2) Digital DECwriters and a Datalink 212 modem for data reception through telephone communication from a remote microcomputer.
7. One (1) Digital LA210 letter printer.

TLD Readers

1. One (1) Panasonic UD-702E manual TLD reader with 400 environmental dosimeters and 75 personnel dosimeters.
2. One (1) manual TLD reader (Teledyne Isotope Model 8310) with 150 CaSO_4 (Dy) dosimeters.
3. One (1) Eberline TLD Reader (Model TLR-5).

Radon Measurement Capability

1. One (1) Pylon AB-5 Portable Radiation Monitor with PPT-1 printer and one (1) Lucas Cell Adapter LCA-2; four (4) Model 300 cells; one (1) Model 3150 calibration standard; one (1) RN-190-47 Radon Daughter Standard; one (1) AEP-47 Alpha Detector Assay; one (1) RFA-47 reverse flow adapter.
2. One (1) Pylon WG-1001 vacuum water degassing system for radon in water measurement.
3. One (1) charcoal canister measurement system using the 3x3 inch NaI crystal system as described in "Detectors" above.
4. Charcoal canisters (capability to fabricate charcoal canisters for radon measurement).

Communication Equipment

1. One (1) SSB Transceiver, Scientific Radio System (Model SR-206-MS-1).
2. Four (4) Motorola 32 Channel Radios (Syntor X-9000).

3. Five (5) Hand-held Portable Transceivers (Radios) (Revco Model RPNSL44HC).
4. One (1) Bearcat Scanner (Model BC-250).
5. One (1) Portable Cellular Telephone.

Air Samplers and Accessories

1. Five (5) battery powered portable air samplers.
2. Five (5) high-volume portable air samplers.
3. Three (3) portable electric generators.
4. One (1) Sierra-Misco Weather Station (Model 1045).
5. One (1) Sierra-Misco Wind Direction Control System.

In-House Counting Systems

1. Three (3) Tennelec LB-5100 series automatic low background Alpha/Beta counting systems. Each has an automatic sample changer for 50 samples.
2. One (1) Searle Analytic Isocap 300, Liquid Scintillation System of Model 6868 with automatic sample changer for 300 samples.
3. Two (2) in-house constructed Radon Flask counting assembly and radon gas emanation systems for determining radon and Ra-226 concentrations in water. Systems utilize 150 ml bubblers of 2-inch diameter Lucas cells.

Field Counting Instruments

1. One (1) Reuter-Stokes RSS-111 high pressure ionization chamber for gross gamma measurement.
2. Two (2) Ludlum Model 2218 Dual Stabilized Analyzers with 1/2" by 2" (dia) NaI crystals for field radioiodine measurement with silver zeolite radioiodine cartridge.
3. Two (2) Eberline Portable Rate Meters (Model PRS-1 [Rascal]) with hand-held probes; sample holders; crystals; and special carrying case.
4. Five (5) Ludlum Model 19 Micro R Meters for gross gamma radiation measurement.

Survey Instruments

1. Five (5) Eberline Survey Meters (Model PAC-4G-3).
2. Two (2) Eberline Survey Meters (Model E-520).
3. Two (2) NARDA Electromagnetic Radiation Monitors (Model 8110).
4. Two (2) Eberline Survey Meters (Model E-130-G).

5. Four (4) Victoreen Portable Survey Meters (Model 470A).
6. Six (6) X-ray survey Meters MFG. by MDH (Model 1015C with ion chambers).
7. Three (3) Eberline Monitors; thin end window GM up to 50 mR/hr (Model 1A).
8. Five (5) Ludlum Survey Meters (Model 14C).
9. Two (2) Ludlum Survey Meters (Model 2).
10. One (1) Ludlum Survey Meter (Model 6).
11. One (1) Dosimeter Mini; thin end window GM up to 500 mR/hr (Model Conrad II).
12. Two (2) NERO, Non-Evasive Radiation Output monitors.

OKLAHOMA

GOVERNOR

The Hon. Henry Bellmon (Term ends January 1991)
State Capitol
Oklahoma City, Oklahoma 73105
(405)521-2342

EMERGENCY SERVICES

The director of Oklahoma Civil Defense, acting on behalf of the governor, directs and coordinates the interagency and volunteer emergency services during a disaster. The state is divided into four civil defense districts, with headquarters in each.

Woodrow Goins, Acting Director
Oklahoma Civil Defense
P.O. Box 53365
Oklahoma City, Oklahoma 73152
(405)521-2481

HEALTH SERVICES

The Department of Health implements policies developed by the State Board of Health. The Board receives guidance from a Board-appointed Radiation Advisory Committee in matters concerning radiation protection. Radiological emergency response is under the control of the Chief, Radiation and Special Hazards Service, Department of Health.

Joan K. Leavitt, M.D.
Commissioner
State Department of Health
P.O. Box 53551
Oklahoma City, Oklahoma 73152
(405)271-4200

DESIGNEE FOR ADVANCE NOTIFICATION OF SHIPMENTS

Clent Dedek
Commissioner of Public Safety
Oklahoma Department of Public Safety
3600 N. King Avenue
P.O. Box 11415
Oklahoma City, Oklahoma 73136-0415
(405)424-4011

RADIOLOGICAL EMERGENCY ASSISTANCE TEAM CONTACTS

Radiation & Special Hazards Service
State Department of Health
P.O. Box 53551
Oklahoma City, Oklahoma 73152

(405)271-5221 (24 Hours)

Emergency Team Members

<u>Name</u>	<u>Title</u>
McHard, Dale	Chief, Radiation & Special Hazards Service
Brown, Paul H.	Director, Radiation Protection Division
Smith, Coleman H.	Environmental Engineer

LABORATORY AND ANALYTICAL PROGRAMS

<u>Type of Sample</u>	<u>Type of Analysis</u>	<u>Major Equipment</u>
Air	Gross Beta	One 3x3 NAI crystal with 8196 channel analyzer and low background steel shield.
Ambient Gamma	TLD	
Water	Gamma Spectrum	One GM counter for Hi-Vol filters
	Gross Beta	One GeLi detector with 8196 channel analyzer with low background steel shield and computerized analysis capability.
	Gross Alpha	
	Uranium	
	Radium	
		Two thin window proportional counters with 100 sample capacity sample changer.
		One Victoreen 2800 TLD reader using LiF chips.

Four (4) Vehicle-mounted gamma surveillance systems (WAGS)

Six (6) Hi-Vol air samplers

SOUTH CAROLINA

GOVERNOR

The Hon. Carroll Campbell (Term ends January 1991)
State House
P.O. Box 11369
Columbia, South Carolina 29211
(803)734-9818

EMERGENCY SERVICES

The Emergency Preparedness Division, Office of the Adjutant General, coordinates the disaster training and response activities of the state and local governments. In the event of an emergency, the division may establish a state emergency operations center and/or a forward emergency operations center in the threatened area.

Raymond L. Brown, Director
Emergency Preparedness Division
Office of the Adjutant General
1429 Senate Street
Columbia, South Carolina 29201
(803)734-8020

HEALTH SERVICES

The Department of Health and Environmental Control administers the Agreement State Program. The department is advised on radiation control issues by a governor-appointed Technical Advisory Radiation Control Council.

For response to radiological incidents, the department trains and maintains an Emergency Radiological Assistance Team. Its Bureau of Radiological Health is prepared to provide monitoring, protective action guidance, exposure control and advice on decontamination and disposal.

Michael D. Jarrett
Commissioner, Department of Health and Environmental Control
2600 Bull Street
Columbia, South Carolina 29201
(803)734-4880

DESIGNEE FOR ADVANCE NOTIFICATION OF SHIPMENTS

Heyward Shealy
Chief, Bureau of Radiological Health
South Carolina Department of Health and Environmental Control
2600 Bull Street
Columbia, South Carolina 29201
(803)734-4700

RADIOLOGICAL EMERGENCY ASSISTANCE CONTACTS

State Patrol	(803)737-1030
Bureau of Radiological Health South Carolina Department of Health and Environmental Control 2600 Bull Street Columbia, South Carolina 29201	(803)734-4700/4780 (8:30 AM - 5PM) (803)253-6488 (Nights, weekends and holidays)

Emergency Team Members

<u>Name</u>	<u>Title</u>
Shealy, Heyward G.	Chief, Bureau of Radiological Health
Dobbs, Lynn B.	Program Management Specialist
McGlohorn, Danny	Director, Division of Electronic Products
Autry, Virgil	Director, Division of Radioactive Materials Licensing
Bivens, C. Nolan	Director, Division of Radiological Environmental Surveillance
Craft, Bert	Chemist
Patterson, Beverly	Health Physicist
Threatt, Sandra	Health Physicist
O'Kelley, Pearce	Health Physicist

LABORATORY AND ANALYTICAL PROGRAMS

<u>Type of Sample</u>	<u>Type of Analysis</u>	<u>Major Equipment</u>
Air	Gross Alpha and Beta-particulate Strontium - 90 Iodine - 131 Krypton - 85 Xenon - 133 other gamma emitters	Nuclear Data 66 System, multi-channel analyzer-computer with 3 GeLi detectors, printout and live display. Eberline TLR-5 Thermoluminescent Dosimeter Reader (LiF TLDs used).
Direct Exposure	Gamma (TLD) Gamma (RSS-111)	Canberra 8110 Multichannel Analyzer System with NaI (3x3).
Milk	Strontium - 89,90 gamma emitters Tritium	Tennelec LB-5100 Beta Analyzer, Automatic System.

Silt, Soil
and Vegetation

Gross Alpha
Gross Beta
gamma emitters

Packard 1550 LL Liquid Scintillation System with printout.

Harshaw 2000B Thermoluminescent Reader (LiF TLDs used).

Water

Gross Alpha
Gross Beta
Tritium
Strontium - 89,90
Cobalt - 58, 60
Cesium - 137
Iodine - 129,131
Other gamma emitters
Plutonium - 238,239

Nuclear Data Model 66 Analyzer with 8192 Channels. Compaq Computer interface. Downlooker GeLi Detector.

Portable Micro R Meters, Pic 6A, E520 with pancake and HP270s.

Emergency Vehicles

- o Mobile Radiological Laboratory (Superior 25' Motor Home), mobile radio, decontamination capability, air samplers, radiation monitoring, dress out packs and field analysis instrumentation.
- o Boat equipped with electro-fish shocking equipment.
- o Eight vehicles equipped with VHF transceivers; six hand-held or portable transceivers; portable base station.

TENNESSEE

GOVERNOR

The Hon. Ned Ray McWherter (Term ends January 1991)
State Capitol
Nashville, Tennessee 37219
(615)741-2001

EMERGENCY SERVICES

The Tennessee Emergency Management Agency (TEMA), within the Department of Military, is the responsible agency for the development of state emergency plans and procedures. By Executive Order, TEMA is the responsible agency for coordinating state response to all emergencies, including peacetime radiological accidents. TEMA also provides an Emergency Operation Center that is operational twenty-four hours a day. TEMA provides radiological instrumentation to state and local government agencies for use in the detection of radiation. TEMA coordinates and conducts radiological training for state and local radiological emergency responders.

Lacy E. Suiter, Director
Tennessee Emergency Management Agency
State Emergency Operation Center
3041 Sidco Drive
Nashville, Tennessee 37204-1502
(615)252-3300

HEALTH SERVICES

The Department of Health and Environment administers the state's Agreement State Program. In support of the Tennessee Emergency Management Agency, the department provides radiological monitoring, training guidance, protective action advice and decontamination assistance. The department's Division of Radiological Health is responsible for training and equipping Radiological Monitoring Teams, which are part of the State Radiological Response Team. It also provides radiological accident assessments.

James E. Word, Commissioner
Department of Health and Environment
344 Cordell Hull Building
Nashville, Tennessee 37217-5402

DESIGNEE FOR ADVANCE NOTIFICATION OF SHIPMENTS

John White
Assistant Deputy Director
Tennessee Emergency Management Agency
State Emergency Operations Center
3041 Sidco Drive
Nashville, Tennessee 37204
(615)252-3300

RADIOLOGICAL EMERGENCY ASSISTANCE CONTACTS

Emergency Management Agency (615)252-3300 (24 Hour)

Division of Radiological Health (615)741-7812
Department of Health and Environment
T.E.R.R.A. Building
150 9th Avenue No.
Nashville, Tennessee 37219-5404

Emergency Team Members

<u>Name</u>	<u>Title</u>
Mobley, Michael H.	Director
West, Charles P.	Assistant Director
Nanney, Lawrence E.	Supervisor, Inspection & Enforcement
Graves, Johnny C.	Supervisor, Licensing & Registration
Halsey, Roger L.	Supervisor, Training and Technical Services
Allen, Barbara B.	Supervisor, Environmental Specialist 4
Anderson, Steve M.	Environmental Specialist 2
Arnott, Charles W.	Supervisor, Environmental Specialist 4
Gilley, Libby	Environmental Specialist 4
Graham, Bill	Environmental Specialist 5
Greene, Darice A.	Environmental Specialist 2
Grewe, Allen E.	Environmental Specialist 2
Shultz, Debra	Environmental Specialist 3
Stetar, Elizabeth	Environmental Specialist 2
Lisle, John	Environmental Specialist 2

LABORATORY AND ANALYTICAL PROGRAMS

<u>Type of Sample</u>	<u>Type of Analysis</u>	<u>Major Equipment</u>
Air	Gross Alpha-Beta Strontium - 89, 90 Gamma Spectroscopy	TLD (Harshaw TLD Reader)
Fish	Strontium - 89, 90 Gamma Spectroscopy	
I-131 Cartridges	Gamma Spectroscopy	
Milk	Iodine - 131 Chemical Strontium - 89, 90 Gamma Spectroscopy	
Silt, Soil, Vegetation	Gross Alpha-Beta Gamma Spectroscopy	
Water	Gamma Spectroscopy Gross Alpha-Beta Strontium - 89, 90 Tritium	

TEXAS

GOVERNOR

The Hon. Bill Clements (Term ends January 1991)
State Capitol
Austin, Texas 78711
(512)475-4101

EMERGENCY SERVICES

The Division of Emergency Management prepares, maintains and coordinates the state's comprehensive emergency plan. A Disaster Emergency Funding Board maintains a disaster contingency fund. The governor, lieutenant governor and the directors of the State Board of Insurance, the Department of Human Resources and the Division of Emergency Management are members.

The division provides the emergency response functions that are not available through other state agencies. These include shelter planning and promotion, crisis relocation planning, continuity of government programs, resources management, economic stabilization plans, emergency public information activities, emergency management training, hazard mitigation and recovery and rehabilitation activities.

Robert A. Lansford, Coordinator
Division of Emergency Management
Department of Public Safety
P.O. Box 4087
Austin, Texas 78733
(512)465-2000

HEALTH SERVICES

Texas' radiation safety statute designates the Department of Health as the radiation control agency. The Bureau of Radiation Control within the agency administers the Agreement State Program. In the event of a radiological incident, the bureau is responsible for detection, measurement and clean-up of materials that are released to the environment. It also provides an assessment of the incident as the basis for the assignment of protective responses.

Robert Bernstein, M.D.
Commissioner
Department of Health
1100 West 49th Street
Austin, Texas 78756
(512)458-7375

DESIGNEE FOR ADVANCE NOTIFICATION OF SHIPMENTS*

Robert Bernstein, M.D. (10 CFR Part 71)
Commissioner
Department of Health
1100 West 49th Street
Austin, Texas 78756
(512)458-7375

Col. Leo Gossett (10 CFR Part 73)
Director
Texas Department of Public Safety
5805 North Lamar Blvd.
Austin, Texas 78752
(512)465-2000

* Texas is the only SSEB member state in which two separate agencies are designated to receive prenotification for the two types of shipments.

RADIOLOGICAL EMERGENCY ASSISTANCE CONTACTS

(Street Address)
Bureau of Radiation Control (512)835-7000 (8AM - 5PM)
1212 East Anderson Lane (512)458-7460 (24 Hour)
(US-183, East)
Austin, Texas 78752

(Mailing Address)
Bureau of Radiation Control
Texas Department of Health
1100 W. 49th Street
Austin, Texas 78756-3189

Division of Emergency Management (512)465-2000
Ext.2138 (8AM - 5PM)
Ext.2277 (24 Hour)

Emergency Team Members

<u>Name</u>	<u>Title</u>
Lacker, David K.	Chief, Bureau of Radiation Control
Bailey, Edgar D.	Director, Division of Licensing, Registration and Standards
Ratliff, Richard A.	Director, Division of Compliance & Inspection
Free, Robert E.	Administrator, Emergency Response & Investigation Branch, Division of Compliance & Inspection

Born, Clarence L. Manager, Emergency Response Planning Program

Thiel, Joseph F. Emergency Planner

Emergency Team Composition

The Bureau of Radiation Control's Radiological Emergency Response Team includes, but is not limited to, the following manpower and skills. These are normally divided into two 12-hour shifts, but can be activated in other combinations if required.

Chief of Field Operations	2 individuals
Accident Assessment	8 individuals (2 four-man teams)
Licensee Technical Liaison	2 individuals
Field Monitoring Team Leader	2 individuals
Field Monitoring Team Members	24 individuals (12 two-man teams) ¹
Sample Preparation & Coordination	4 individuals (2 two-man teams)
Field Sample Analysis (Mobile Lab)	2 individuals ²
Contamination Control (Roadblocks)	12 individuals
Decontamination Assistance	10 individuals
Medical Facility Liaison	6 individuals
Staging Area Coordination	2 individuals
Logistics Support	4 individuals ³
Instrument Maintenance & Calibration	2 individuals ⁴
Courier Service	2 individuals
State EOC Liaison	6 individuals
Disaster District EOC Liaison	2 individuals
Local Government EOC Liaison	4 individuals
Public Information Coordination	8 individuals ⁵
Administrative/Clerical Support	8 individuals ⁶

¹Includes 12 individuals from the Texas Department of Public Safety.

²These individuals are from the Department of Health's Bureau of Laboratories.

³Includes two individuals assigned to 12-hour shifts in the Austin office.

⁴These individuals are from the Department of Health's Bureau of Emergency Management.

⁵Includes two individuals from the Texas Low-Level Radioactive Waste Disposal Authority.

⁶Includes two individuals assigned to 12-hour shifts as switchboard operators in the Bureau's Austin office.

Detection, Measurement and Evaluation Systems

Fixed Laboratory Facility

The Bureau of Laboratories, Texas Department of Health, has in its headquarters laboratory the following equipment:

- 1 Canberra Jupiter Series 85 Multichannel Analyzer
- 1 Canberra Series 8180 Multichannel Analyzer
- 1 Canberra Series 8100 Multichannel Analyzer
- 2 Automatic Sample Changers
- 3 High Purity (>30%) Germanium Detectors (2 p-type, 1 n-type)

- 7 Proportional Systems
- 5 Ludlum Model 2000 Scalers with scintillation detectors
- 1 Liquid Scintillation System

Mobile Laboratory

The Bureau's mobile analysis laboratory is contained within a 45' electronics van-type semi-trailor. Using power supplied by the truck-mounted 15 kw generator, or commercial 220v/150-200 amp single-phase power, samples can rapidly be processed in one of three onboard systems. The configuration includes a Harshaw TASC-12 proportional counter capable of simultaneous and separate detection of alpha, beta and gamma; a p-type high purity (>30%) germanium spectroscopy system; a 4" x 4" Sodium Iodide unit; and a DEC II/24 computer system with dose projection software, computer graphics terminals, printers and modems.

Emergency Response Vehicle

The Bureau's emergency response vehicle consists of a large modular ambulance-type vehicle equipped for incident response. Power can be supplied by a truck-mounted 6.5 kw generator or obtained from commercial distribution lines. Identification is performed using a Harshaw TASC-12 proportional counter capable of simultaneous and separate detection of alpha, beta and gamma, and an Ortec Model 7150 multichannel analyzer with a 2" x 2" Sodium Iodide detector.

Miscellaneous Equipment

In addition to the equipment listed for the laboratory and the mobile units, the Bureau of Radiation Control has the following miscellaneous equipment available for incident response:

- 15 power inverters (12vdc to 115vac, 60Hz)
- 15 high volume air samplers with silver zeolite cartridges and particulate filters
- 12 Portable Multichannel Analyzers
- 98 Ludlum 14-C survey meters with:
 - 69 Ludlum model 44-6 Thin Wall Gamma Probes
 - 69 Ludlum model 44-2 High Energy Gamma Scintillators
 - 30 Ludlum model 44-3 Low Energy Gamma Scintillators
 - 55 Ludlum model 43-2 Alpha Scintillators
 - 6 Ludlum model 44-40 Shielded Pancake Probes
 - 24 Ludlum model 44-9 Pancake Probes
 - 6 Ludlum model 44-7 End Window Geiger-Muller Probes
- @ 200 0-200mR Self-Reading Pocket Dosimeters
- @ 200 0-20R Self-Reading Pocket Dosimeters
- 250 Emergency Response Team identification badges with (2 each) TLD permanent dosimetry chips incorporated
- 30 Scott model 652 full facepiece respirators with (2 each) combination HEPA filters & charcoal cartridges (Scott model 642TEDAR)
- 12 hand-held 2-watt radios
 - 2 (25-watt) base radios (portable)
 - 1 (40-watt) repeater (installed in mobile laboratory)

VIRGINIA

GOVERNOR

The Hon. Gerald L. Baliles (Term ends January 1990)
State Capitol
Richmond, Virginia 23219
(804)786-2211

EMERGENCY SERVICES

The Department of Emergency Services administers the emergency operations plan. The office is also charged with monitoring the transportation of radioactive materials. During an emergency, the governor is the director of emergency services and has full control over the office.

A.E. Slayton, Jr., Coordinator
Department of Emergency Services
310 Turner Road
Richmond, Virginia 23225
(804)674-2497

HEALTH SERVICES

The Department of Health implements programs for the State Board of Health, which is the lead agency for radiation safety. The department maintains a Radiological Emergency Response Team for assessment and response. It also provides guidance on protective actions, requests specific assistance from other agencies, establishes exposure control, coordinates the use of medical facilities and identifies controlled areas around the accident site.

C.M.G. Buttery, M.D., Commissioner
Department of Health
109 Governor Street
Richmond, Virginia 23219
(804)786-3561

DESIGNEE FOR ADVANCE NOTIFICATION OF SHIPMENTS

Michael M. Cline
Director of Operations
Virginia Department of Emergency Services
310 Turner Road
Richmond, Virginia 23225
(804)674-2400

RADIOLOGICAL EMERGENCY ASSISTANCE CONTACTS

Department of Health
Bureau of Radiological Health
109 Governor Street
Richmond, Virginia 23219

(804)786-5932

Emergency Team Members

<u>Name</u>	<u>Title</u>
Vacant	Supervisor, Bureau of Radiological Health
Schrider, Carolyn	Radiation Safety Specialist
Stone, Thomas W.	Radiation Safety Specialist
Conway, Richard F.	Radiation Safety Specialist
Gonsoulin, Robert	Radiation Safety Specialist
Gorisch, Manfred L.	Radiation Safety Specialist
deKraft, James A.	Radiation Safety Specialist
Foldesi, Leslie P.	Radiation Safety Specialist
Fuller, Michael L.	Radiation Safety Specialist

LABORATORY AND ANALYTICAL PROGRAMS

<u>Type of Sample</u>	<u>Type of Analysis</u>	<u>Major Equipment</u>
Air Particulate	Gross Beta Gamma Spectrum	Tracon Northern TN-1700 with 4"x4" no. 1 (T2) detector.
Charcoal Filter	Gamma Spectrum	Tennelec LB5100-Serie 1 pro- portional counter.
Milk	Gamma Spectrum Strontium - 89 & 90	Tennelec LB5100-Series 2 pro- portional counter.
Vegetation, soil, dirt, fish	Gross Beta Gamma Spectrum	Randam SC-5 Scintillation counter.
Water	Gross Alpha Gross Beta Radium - 226 & 228 Strontium - 89 & 90 Gamma Spectrum Uranium	Tracon Northern TN-1700 with GeLi detector Canberra Series 90 with GeLi detector MCA.

WEST VIRGINIA

GOVERNOR

The Hon. Arch A. Moore, Jr. (Term ends January 1989)
State Capitol
Charleston, West Virginia 25305
(304)348-2000

EMERGENCY SERVICES

The Office of Emergency Services carries out the emergency services program by coordinating the response activities of all other state organizations. The office supports the radiological protection program by providing communications and office facilities, training and exercises and drills for state agency responders. The office includes the State Radiological Officer, the Radiological Maintenance Officer and radiological maintenance technicians and support staff for the radiological protection program.

Bill R. Jopling, Deputy Director
Office of Emergency Services
State Capitol, Room EB-80
Charleston, West Virginia 25305
(304)348-5380

HEALTH SERVICES

The Department of Health is responsible for enforcing a 1980 state law that permits the storage and disposal of radioactive waste generated in West Virginia by medical, institutional and industrial activities. The department's Industrial Hygiene Division responds to all peacetime radiological incidents, providing personnel and equipment for the state Radiological Response Team.

David K. Heydinger, M.D., Director
Department of Health
1800 East Washington Street
Charleston, West Virginia 25305
(304)348-2971

DESIGNEE FOR ADVANCE NOTIFICATION OF SHIPMENTS

Col. W.F. Donohoe
Superintendent
Department of Public Safety
725 Jefferson Road
South Charleston, West Virginia 25309
(304)746-2111

RADIOLOGICAL EMERGENCY ASSISTANCE CONTACTS

Industrial Hygiene Division
Department of Health
151 11th Avenue
South Charleston, WV 25305

(304)348-3526, 3427 (Business
hours)
(304)348-0691 (Emergency contact
only and during
business hours)

Emergency Team Members

<u>Name</u>	<u>Title</u>
Aaroe, William H.	Director, Industrial Hygiene Division
De Bord, B. L.	Radiological Health Specialist, Radiological Health Section

LABORATORY AND ANALYTICAL PROGRAMS

<u>Type of Sample</u>	<u>Type of Analysis</u>	<u>Major Equipment</u>
Any applicable	Gross Alpha	Harshaw LBS
	Gross Beta	
	Gamma Spectroscopy (call to check if operational)	ND 66
	Victoreen (Bulb) Dosimetry	TLD

**DATE
FILMED**

8 / 5 / 93

END