Southern States Energy Board

The Southern Mutual Radiation Assistance Plan

December 2011

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Table of Contents

Preface iv
Introduction 1
The Southern Mutual Agreement for Mutual State Radiological Assistance 4
By-Laws of the Southern Emergency Response Council 10
SMRAP - A Summary Plan 13
SERC Officers 16
SMRAP Activation Procedure 20
Requesting State; Responding State; and Radiation Control Program
SMRAP Key Contacts 21
State Agencies 22
Alabama 23
Arkansas 26
Florida 29
Georgia 34
Kentucky 44
Louisiana 47
Mississippi 50
Missouri 53
North Carolina 55
Oklahoma 61
South Carolina 63
Tennessee 69
Texas 72
Virginia 76
Federal Agencies 78
Federal Emergency Management Agency 79
U.S. Department of Energy 83
U.S. Environmental Protection Agency 84
U.S. Nuclear Regulatory Commission 86
Tennessee Valley Authority 87

Preface

The Southern Mutual Radiation Assistance Plan (SMRAP) provides a mechanism for coordinating radiological emergency assistance capabilities among participating states. SMRAP is authorized under the provisions of the Southern Agreement for Mutual State Radiological Assistance, which was signed by the governors of Alabama, Florida, Georgia, Kentucky, Mississippi, North Carolina, South Carolina and Tennessee in 1973. The governors of Arkansas, Louisiana, Oklahoma and Texas signed in 1974, Missouri's governor signed in 1975, and Governor Wilder of Virginia signed the agreement in 1990. The authority for entering into supplemental agreements by any of the southern states is provided by Public Law 87-563, which grants U.S. Congressional approval of the Southern Interstate Nuclear Compact.

The Southern Mutual Radiation Assistance Plan is reviewed, revised and administered on a permanent basis by the Southern Emergency Response Council (SERC), which was established for that purpose under the terms of the agreement. The council consists of radiological health program directors from each signatory state and the executive director of the Southern States Energy Board (SSEB), formerly known as the Southern Interstate Nuclear Board (SINB). SSEB also serves as the SERC secretariat.

The plan contains general provisions and detailed resource information and is designed to serve the needs of state administrators as well as state radiological health personnel in their everyday activities. This document is updated regularly to ensure accuracy of federal and state agency information.

We hope that this approach to resolving radiation assistance problems in the southern states, as outlined in SMRAP, will provide useful direction and guidance to others with similar objectives.

Kenneth J. Nemeth
Executive Director
- The Southern States Energy Board -
December 2011

Introduction

With the discovery of radium and x-rays, and more recently the development and testing of nuclear weapons, it has become necessary to have plans to control potentially harmful radiation exposure to people should radiological mishaps occur. In 1961, the Interagency Radiological Assistance Plan (IRAP) was created. Thirteen federal agencies voluntarily entered into the plan. IRAP's primary purpose was to establish an organization and operating arrangements to be used in the event of a major accidental release or loss of control of radioactive material which could seriously endanger public health or safety. The Nuclear Regulatory Commission (NRC) is responsible for the administration of IRAP, with the Department of Energy (DOE) serving as the lead agency. Three of the signatory agencies -- NRC, DOE and the Environmental Protection Agency (EPA) -- maintain emergency teams on a continuing basis that are capable of responding to radiological emergencies.

In addition to the IRAP, the states began establishing radiological health programs. These programs were created during a period of intensive nuclear weapons testing by the United States and the former Soviet Union. Consequently, some states, such as North Carolina and Kentucky, prepared emergency plans to minimize population radiation exposures from excessively high fallout levels. However, the plans assumed less significance as levels of radiation began to decrease in the mid-1960s.

Throughout this period, nuclear power plants, research reactors, nuclear fabrication plants and nuclear fuels reprocessing plants were constructed and began operation. Interest grew in establishing plans to control the effects of possible radiation accidents, involving both fixed nuclear facilities and radioactive materials shipments. Some states requested assistance with the writing of emergency procedures from appropriate federal agencies. In December 1979, President Carter created the Federal Emergency Management Agency (FEMA) and designated it as the lead agency in radiological emergency planning and response. Subsequently, FEMA and NRC prepared a document entitled ***Criteria for Preparation and Evaluation of Radiological Emergency Response Plans and Preparedness in Support of Nuclear Power Plants (NUREG-0654/FEMA-REP-1)***, which assisted the states in developing revised and detailed plans.

Need for Regional Assistance Planning

Radioactive materials are in significant use both in the United States and internationally. Though the probability of a radiation incident is low, the potential consequences of such an incident in the absence of a competent state and regional response capability are extreme. Producers and users of radioactive materials are scattered across the states, with each state having a different radiation protection program and different resource capabilities. Therefore, a radiation incident in one state may require resource capabilities that the affected state does not have.

For this reason, both state and regional needs must be examined when developing a fully coordinated emergency assistance program. This approach provides for the economical use of public funds, as well as the maintenance of adequate protection levels for the health and welfare of the region's citizens. Federal agencies, state agencies and private industry have developed independent radiation emergency response capabilities, and there have been efforts to coordinate existing capabilities and bridge the gaps among the various emergency response modules in the southern region. FEMA uses NUREG-0654 as a mechanism to merge these capabilities. The Southern Mutual Radiation Assistance Plan (SMRAP) factors ideally into the NUREG-0654 concept and also serves as a logical extension of IRAP.

Development of Regional Assistance Planning

In January 1972, as a first step in the development of radiological assistance planning on a regional basis, the Region IV office (Atlanta) of the EPA and the Southern States Energy Board (SSEB), formerly known as the Southern Interstate Nuclear Board (SINB), organized a conference on radiological emergency planning. This regional approach to mutual emergency response planning was unprecedented. Prior to this, there existed only the conviction that future nuclear and radiation activities required regional planning to meet possible radiological emergency situations.

The conference resulted in the formation of a Radiation Emergency Response Committee, consisting of radiological health representatives from SSEB member states, federal agencies and industries with radiological response capabilities. The committee's objective was to develop a regional radiological emergency assistance plan for the southern states. The committee met during 1972 and 1973 and concluded that:

1. The principle of mutual assistance is unusually applicable to radiation emergency planning;
2. Regional planning is required to protect the public welfare from emergencies with interstate implications;
3. The interstate compact is the only legal means for cooperation among the states in matters of this nature;
4. Interstate cooperation is enhanced by responsible recognition of similarities among states' problems and needs;
5. Problems arising from dissimilar state organization structure or laws can be overcome without damage to basic requirements of a common problem; and
6. Effective state cooperation will be applauded and recognized by federal agencies and result in a better partnership between the states and the federal government.

The committee drafted a Southeastern Mutual Radiation Assistance Plan (SMRAP), and the supplemental agreement, to be executed by the states under the provisions of the Southern Interstate Nuclear Compact legislation, Public Law 87-563. The organization and basic functions of the Southeastern Emergency Response Council (SERC), the council created to administer the SMRAP on a permanent basis, were determined, and the committee dissolved itself, having fulfilled its objective.

The governors of Alabama, Florida, Georgia, Kentucky, Mississippi, North Carolina, South Carolina and Tennessee signed "The Southeastern Agreement for Mutual Radiological Assistance" during the September 1973 Southern Governors' Conference. "Southeastern" was changed to "Southern" in the plan and agreement title, with the additional signatures of the governors of Arkansas, Louisiana, Missouri, Oklahoma and Texas in 1974 and 1975. Virginia joined the agreement in 1990.

The visibility of emergency assistance programs, through the dissemination of pertinent information on emergency requirements in every state, is necessary with regard to the allocation of funds for emergency assistance planning and implementation. It is important to make state government decision makers aware that emergency assistance capability is a necessary and proper item for public expenditures. These funds are necessary for the development of state emergency assistance capability, specifically the training and maintenance of state emergency assistance teams. The nature of emergency assistance capability requirements does not easily lend itself to a specific organization because it is not a constant need. Therefore, the most cost-efficient radiation control program is one in which the various assistance teams are performing other duties as well.

Providing emergency assistance for radiological incidents involves areas of responsibility within the scope of a number of state agencies. An incident involving radiation also involves state and local law enforcement agencies, as there may be problems of a non-radiological nature. A mechanism whereby various agencies of state and local government cooperate to solve the problem, regardless of its complexity, is necessary. To this end, a lead agency should be given authority by the state to coordinate all necessary interagency activities. The council recommends that, because the major threat may be radiation exposure or contamination, the state radiological health program director should lead that cooperative venture. It should be noted that SMRAP is only an assistance plan, with the actual emergency response executed entirely by the states, or jointly with federal teams at the state's request.

Legal Basis for Regional Action

The Southern Interstate Nuclear Compact was enacted by the legislatures of each member state and ratified by Congress on July 31, 1962. This legislation, P.L. 87-563, states that it is the national policy to encourage and to recognize the performance of functions by the states with respect to the peaceful use of nuclear energy in its several forms. The law further states that the federal government recognizes that many programs in nuclear fields can benefit from cooperation among the states, as well as between the federal government and the states.

The provisions of P.L. 87-563 which grant authority for SSEB member states to enter into the SMRAP supplementary agreement under the legislation are Article V(1) and Article VI(a). These sections are quoted below:

Article V(1)

Ascertain from time to time such methods, practices, circumstances, and conditions as may bring about the prevention and control of nuclear incidents in the area comprising the party states, to coordinate the nuclear incident prevention and control plans and work relating thereto of the appropriate agencies of the party states and to facilitate the rendering of aid by the party states to each other in coping with nuclear incidents. The Board may formulate and, in accordance with need from time to time, revise a regional plan or regional plans for coping with nuclear incidents within the territory of the party states as a whole or within any subregion or subregions of the geographic area covered by this compact.

Article VI(a)

To the extent that the Board has not undertaken an activity or project which would be within its power under the provisions of Article V of this compact, any two or more of the party states (acting by their duly constituted administrative officials) may enter into supplementary agreements for the undertaking and continuance of such an activity or project. Any such agreement shall specify its purpose or purposes; its duration and the procedure for termination thereof or withdrawal therefrom; the method of financing and allocating the costs of the activity or project; and such other matters as may be necessary or appropriate. No such supplementary agreement entered into pursuant to this article shall become effective prior to its submission to and approval by the Board. The Board shall give such approval unless it finds that the supplementary agreement or the activity or project contemplated thereby is inconsistent with the provisions of this compact or a program or activity conducted by or participated in by the Board.

The Southern Agreement for Mutual State Radiological Assistance

Supplemental Agreement Under the Southern Interstate Nuclear Compact

We, the undersigned states, recognize the benefits which have accrued to our jurisdictions from science and technology. Of equal importance are the costs we have borne while improving our lifestyle through innovations of both tangible and intangible means. When the costs of progress are such as to possibly affect the health and welfare of our states' citizens, the States must act to mitigate any potential losses and to minimize costs. Our concurrence in this agreement demonstrates the acceptance of a regional as well as a state responsibility for protecting the interests of our citizens in the event of a radiation incident or other emergency.

Our states are aware that thousands of shipments of radioactive materials cross our boundaries annually. Those shipments will grow in numbers, volume and type in future years. Nuclear power plants, fuel processing plants, fuel fabricating plants and other nuclear facilities are being constructed and operated in every one of our states. The growth of nuclear science in medicine, industry and agriculture will cause even greater numbers of shipments of radioisotopes to originate and terminate within our borders.

All of our states are proud that we have anticipated the problems of emergency response to radiation incidents by maintenance of adequate state response capability. During numerous emergencies involving actual or possible spills of radioactive materials, we have suffered no personal injuries or property damage. We are confident that such will continue to be the case only with continued vigilance.

The increased volume and numbers of radioactive materials shipments will place greater burdens on state response capability. While confident that our capabilities will be adequate to meet the need, we recognize the possibility of an accident occurring of either an interstate nature, possible interstate nature or of a magnitude greater than our individual capability to meet.

For these reasons, we agree to cooperate in providing assistance each to the others in coping with any radiation incident within our states, when such incident is deemed by the governor, or other duly authorized state administrator, to require such assistance.
To achieve this end, under the authority granted us by state and federal law, we hereby enter into the following supplemental agreement:

Article I. Purpose

The purpose of this supplemental agreement is to provide a cooperative mechanism within the southern region for mutual assistance in responding to radiation incidents upon request by any party to this agreement.

Article II. Responsibility

We, the undersigned, do hereby agree to provide any and all reasonable and available resources to any other party to this agreement for coping with any radiation emergency

deemed to be outside the capability of the initiating state, or if any actual or possible violation of mutual borders by such incident has occurred. An emergency shall be deemed outside the capability of the initiating state when so attested by the governor of that state in a communiqué to another party to this agreement. The governor of the responding state(s) shall determine the degree to which his state(s) may respond and promptly cause to be dispatched all available and necessary resources to assist with the emergency. The emergency shall be deemed to have passed whenever the lead agency of the initiating state informs other responding teams of its passage.

Article III. Reimbursement

Any state requesting assistance under the provisions of this agreement shall provide reimbursement for all reasonable costs incurred by any and all responding states, except that a responding state may waive such costs in favor of a credit for future reciprocal action under the terms of this agreement.

Article IV. The Plan

All action taken under this agreement will be in accord with the Southeastern Mutual Radiation Assistance Plan administered by the Southeastern Emergency Response Council (SERC).

Article V. Administration

As stated in Article IV, a Southeastern Emergency Response Council (SERC) will serve to review, revise and administer the Southeastern Mutual Radiation Assistance Plan. SERC will be composed of the Radiation Control officer from each party state and the Executive Director of the Southern Interstate Nuclear Board. Ex-officio members, as necessary, may be designated by SERC to assist in the performance of its duties. The council shall operate under a constitution and by-laws and shall conduct investigations and provide other necessary assistance to party states in furtherance of its purpose as stated in Article I.

Article VI. Duration, Amendment and Withdrawal

This agreement shall be in force until terminated by all signatory parties. Amendments to include additional states as participants will become effective upon signature of copy of this agreement by the governor of the joining state(s). Other amendments require approval by two-thirds of the signatory states. A party to this agreement may withdraw by notifying other parties in writing of such action, but such notification shall be signed by the governor of the withdrawing state.

Article VII. Eligibility

Parties to this agreement shall initially be the states of Alabama, Florida, Kentucky, Mississippi, North Carolina, South Carolina and Tennessee. However, the signatory states express their willingness and desire to extend this agreement to all members of the Southern Interstate Nuclear Compact. In such case, the signatory states hereby consent in advance to any eligible state(s) becoming a party hereto.

APPROVED OF AND AGREED TO THIS 25th DAY OF SEPTEMBER, A.D., 1973:

George C. Wallace
Governor
State of Alabama

Reubin O'D. Askew
Governor
State of Florida

Jimmy Carter
Governor
State of Georgia

Wendall H. Ford
Governor
Commonwealth of Kentucky

William L. Waller
Governor
State of Mississippi

James E. Holshouser, Jr.
Governor
State of North Carolina

John C. West
Governor
State of South Carolina

Winfield Dunn
Governor
State of Tennessee

ATTEST:

Chairman
Southern Interstate Nuclear Board

APPROVED OF AND AGREED TO THIS 25th DAY OF SEPTEMBER, A.D., 1973:

Dale Bumpers
Governor
State of Arkansas

Edwin W. Edwards
Governor
State of Louisiana

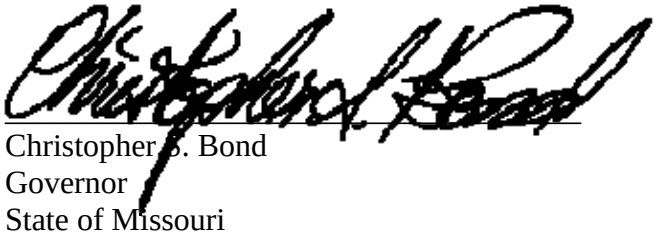
David Hall
Governor
State of Oklahoma

Dolph Briscoe
Governor
State of Texas

ATTEST:

Chairman
Southern Interstate Nuclear Board

APPROVED OF AND AGREED TO THIS 17th DAY OF SEPTEMBER, A.D., 1975:



Christopher S. Bond
Governor
State of Missouri

APPROVED OF AND AGREED TO THE 9th DAY OF August 1990.

Lawrence Douglas Wilder
Governor
State of Virginia

By-Laws of the Southern Emergency Response Council

Article I. Name

The name of this organization shall be the Southern Emergency Response Council.

Article II. Authority

The council is formed by authority of the Southern Agreement for Mutual State Radiological Assistance, a supplemental agreement under P.L. 87-563, the Southern Interstate Nuclear Compact.

Article III. Object

The object of this organization shall be to review, revise and provide for expeditious implementation of the Southern Mutual Radiological Assistance Plan; to assist individual members and their states in developing and maintaining an adequate capability for responding to a radiation incident; and to perform such other related duties as will further radiation protection for the public through prevention of and/or response to a radiation incident, including but not limited to public information activities, training and seminars, professional information dissemination, evaluation or standardization of equipment and its calibration, and liaison with other organizations conducting activities of interest to the Council.

Article IV. Membership

Section 1. Membership in this council shall consist of the executive director of the Southern States Energy Board and one representative from each signatory state to the Southern Agreement for Mutual State Radiological Assistance who shall be the radiological health program director for that state, or such person as designated by the governor.
Section 2. Each member may designate an alternate who shall have full power to act on any matter before this Council in assembly when the member is absent.

Article V. Officers

Section 1. The elected officers of this council shall be the chairman and vice chairman. The secretary shall be the executive director of the Southern States Energy Board. These officers shall perform the duties prescribed by the by-laws and by the parliamentary authority adopted by the council. Since this council does not have a president, the chairman shall perform those duties when such is required and which may differ from those normally assigned to a chairman.
Section 2. At least 60 days prior to the annual meeting, a nominating committee of three members shall be appointed by the chairman. It shall be the duty of this committee to nominate candidates for the offices to be filled at the annual meeting; nominations from the floor shall be permitted in addition.
Section 3. The officers shall be elected by secret ballot except where such election is made moot by unanimous consent to a motion by the nominating committee for election of its proposed slate of officers. Their term of office shall begin at the close of the annual meeting at which they are elected. The nominal term of office of the officers shall be for one year.

Article VI. Meetings

Section 1. An annual meeting of the council shall be held once a year at a time and place designated by the executive board, and shall be for the purpose of electing officers, receiving reports of officers and committees, and for any other business that may arise.
Section 2. Special meetings can be called by the chairman with concurrence of the executive board, and shall be called upon the written request of a majority of members. The purpose of the meeting shall be stated in the call. Except in cases of emergency, at least two (2) weeks notice shall be given by telephone or wire and four (4) weeks notice if by mail.
Section 3. A majority of the members shall constitute a quorum of the council.
Section 4. Minutes shall be taken at all meetings of the council and distributed to the members within four (4) weeks following the meeting.

Article VII. The Executive Board

Section 1. The officers of the council shall constitute the executive board.
Section 2. The executive board shall have general supervision of the affairs of the council between meetings.
Section 3. Meetings of the executive board shall be held upon call of the chairman and shall be open to all members. The board, in conducting such meetings, shall be subject to the orders of the council and none of its acts shall conflict with action taken by the council. A conference telephone call shall be considered a bona fide meeting of the executive board.
Section 4. Minutes are to be taken at all executive board meetings and shall be disseminated to all council members within two (2) weeks after each such meeting.
Section 5. Three members shall constitute a quorum of the executive board.

Article VIII. Committees and Advisors

Section 1. Such committees as are considered by the chairman or the council to carry on the work of council shall, from time to time, be appointed by the chairman. The chairman shall be an ex-officio member of all committees except the nominating committee.
Section 2. A standing advisory committee shall assist the council in all its deliberations. Committee members are authorized to cooperate with the council under a committee charter adopted by the council. Federal members of the standing advisory committee have an additional authority under P.L. 87-563, the Southern Interstate Nuclear Compact.
Section 3. Membership of the standing advisory committee shall consist of federal agency and industrial representatives as designated by the executive board.
Section 4. Advisors can be named by the chairman, the committees and by the membership of the council to serve at their pleasure for special purposes.

Article IX. Parliamentary Authority

The rules contained in the current edition of Robert's Rules of Order - Newly Revised shall govern the council in all cases to which they are applicable and in which they are not inconsistent with these by-laws and any special rules of order the council may adopt.

Article X. Amendment of By-Laws

These by-laws can be amended at any meeting of the council by a two-thirds vote of the membership of the council, provided that the amendment has been submitted in writing to the chairman 30 days prior to the call of the meeting and is included in such call as special item for consideration.

Article XI. Secretariat

The Southern States Energy Board (SSEB) shall function as secretariat for the Southern Emergency Response Council.

SMRAP - A Summary Plan

Section A: Purpose

The purpose of this plan is to protect the health and safety of the public in the event of accidents, if the magnitude or type of accident is outside the response resources available to any single signatory of the plan. These accidents include those occurring at nuclear facilities; during the transportation of radioisotopes, nuclear fuel or radioactive waste; and during the use of radioactive sources.

The mechanism for cooperation of radiological emergency assistance capabilities developed herein will serve also to improve the efficiency of providing assistance during an accident that involves a boundary watercourse of two or more signatory states.
Additionally, coordination among signatory states will meet the purpose of providing assistance to individual signatory states in the development of their radiation emergency response capabilities and plans.

Section B: Objectives

The objectives of this Plan are as follows:

1. To identify authority and assignment of responsibility under federal and state statutes which provide a basis for developing and implementing this plan;
2. To promulgate a mechanism for administering this plan;
3. To identify the scope of the radiological emergency assistance developed under this plan, both geographically and functionally;
4. To identify each agency and available resources located within signatory states available for implementing action under this plan, including the role to be played by each resource;
5. To develop standardized Protective Action Guides for use in the region;
6. To provide a mechanism limiting state employee (including university or college) personal liability for his or her actions when called upon to provide assistance during any emergency within the scope of this plan; and
7. To provide for federal and regional assistance to the states in maintaining and revising state capabilities for providing assistance under this plan, including:
   a. providing a mechanism for obtaining expert consultants or specialists upon request;
   b. holding seminars on special courses; and
   c. disseminating information to public sources designed to educate them concerning the capabilities of this plan.

Section C: Authority

The authority for entering into this plan exists within the scope of the Southern Interstate Nuclear Compact, Public Law 87-563, and its provisions for supplemental agreements by any of the southern states.

Section D: Administration

Emergency response plans will periodically be reviewed so they can respond to changes in their underlying conditions. Periodic, regional meetings will be held for coordination of activities that impact plan capabilities. This phase of administration will be directed by the Southern Emergency Response Council (SERC), comprised of one representative from each

signatory state and from SSEB, and such ex officio representatives from federal agencies and other organizations as the council deems necessary.

The SERC will adopt by-laws for its operation and will meet as required to fulfill its objectives.

Administration, for the purpose of responding to an accident, will be fulfilled under the emergency response framework for plan implementation as outlined in Section F, "Resources." Any accident occurring within a signatory state is under the jurisdiction of that state. Parties to this agreement concur that if it is necessary for resources to move from one state to another, the receiving state's administrative authority will prevail. Decisions for responding to a request for assistance with the provisions of resources will fall to the assisting state. Outside assistance is supplemental to state resources. Response to an accident would be coordinated through the alert communications network as specified in Section F(2), "Communications."

Section E: Scope

The area scope of this mutual assistance plan includes the territories of fourteen southern states (Alabama, Arkansas, Florida, Georgia, Kentucky, Louisiana, Mississippi, Missouri, North Carolina, Oklahoma, South Carolina, Tennessee, Texas and Virginia) with provisions for including additional SSEB states. The organizations cooperating under this plan may include federal agencies, state agencies, industrial groups, private action agencies and individuals of special expertise.

Industry will be included as a valuable resource for regional consideration and use. Since the plan is being implemented by public organizations, industrial participation has been limited to an advisory role in the developmental aspects of planning. While industry can provide expertise and services for planning or implementation, no industry funds will be solicited for mutual assistance. For the most effective and efficient leadership in mutual assistance planning, the industry's resources will be coordinated through its state radiological emergency plan. These provisions for delineating the role of industry are also applicable in the case of private educational institutions.

The role of federal agencies will be limited to one of advice and coordination, unless otherwise requested by the states.

Section F: Resources

1.<u>Emergency Teams</u> - Each signatory state maintains an emergency team ready to respond to a radiation accident at any time. The teams consist of qualified and experienced health physics personnel with appropriate radiation detection instrumentation and equipment that would be required to handle anticipated emergency situations. If assistance is required, the Southern Mutual Radiation Assistance Plan (SMRAP) provides communications with the U.S. Department of Energy teams at either Savannah River Plant, Aiken, South Carolina, or Oak Ridge Operations, Oak Ridge, Tennessee; the Environmental Radiation Facility, Montgomery, Alabama; a Tennessee Valley Authority team at Muscle Shoals, Alabama and Chattanooga, Tennessee; and the Federal Emergency Management Agency, Thomasville. These facilities maintain an emergency response capability that is available round-the-clock and will assist a state upon request.
2.<u>Communications</u> - A communication system among the signatory states and between the states and federal agencies having emergency response capability in the form of an round-the-clock telephone system has been prepared. Arrangement for intrastate radio communications networks is considered a necessary complement to the telephone system and should become a part of each state plan (e.g., the DOD National Warning System - NAWAS).

3.Equipment - Each signatory state maintains radiation detection instrumentation, decontamination material and other equipment required to handle radiation accidents. However, the SMRAP provides the states access to unusual survey and monitoring instruments and/or very complex laboratory radiation measurement and analytical equipment that they would not normally possess.
4.Medical Facilities - Radiation accident casualties demand specialized care and treatment, thus requiring hospitals or clinics having the necessary facilities, equipment and trained personnel. At least one facility in each signatory state is identified, and state plans will provide for joint cooperative agreements among the state radiation protection agency and the facilities.
5.Transportation - Statistical analyses indicate a probability that a certain number of radiation accidents per number of radioactive material shipments will occur. The SMRAP, therefore, delineates factors that a state should consider in establishing measures to control the effects of this type of accident. If the accident involves more than one state, then appropriate federal agencies must be involved.
6.Public Relations - The sensitive area of public relations and press coverage in the wake of a radioactive accident must be handled in a calculated and pragmatic manner. If the accident involves more than one state, the SMRAP will provide for the appropriate federal agency, in conjunction with the states, to issue press releases and to interface with the public. If the accident is intrastate only, the state plan will provide for authority.
7.Laboratories - Each signatory state has a radiological laboratory capable of analyzing various media for radioactivity. If a radiation accident is of such scope or character that quantitative and/or qualitative assistance is required, the laboratories of the U.S. Department of Energy at Savannah River Plant, Aiken, South Carolina; Oak Ridge Operations, Oak Ridge, Tennessee; and the Environmental Protection Agency, Montgomery, Alabama may be utilized.
8.Civil Defense - State and federal civil defense organizations have expertise in handling of radiation accidents, particularly in the areas of communication and evacuation. This capability may be factored into state emergency plans as applicable.
9.Protective Action Guides - Protective Action Guides are developed by the EPA and are available for use by individual states. They are unofficial but should be useful in establishing standardization.

Assistance to Signatory States

Assistance to signatory states may include the following:

1. provision of training-development of emergency response capability;
2. consultation and advice on emergency response planning and plans; and
3. stimulation of interstate coordination and cooperation.

Assistance will be delivered through the following methods:

1. seminars on subjects requested by the state;
2. designations of specific radiation experts to provide states with information required to solve environmental programs; and
3. provision of the latest information on all phases of the environmental radiation field on a continuing basis.

SERC Officers

2011-2012	Chair:	Leslie Foldesi – VA
	Vice-Chair:	Ann Troxler – LA
	Members-at-Large:	Michael Broderick – OK; B.J. Smith – MS
	Secretary:	Christopher Wells – SSEB
2010-2011	Chair:	Mike Stephens – FL
	Vice-Chair:	Leslie Foldesi – VA
	Members-at-Large:	Ann Troxler – LA; Michael Broderick – OK
	Secretary:	Christopher Wells – SSEB
2009-2010	Chair:	Cindy Cardwell – TX
	Vice-Chair:	Mike Stephens – FL
	Members-at-Large:	Leslie Foldesi – VA; Ann Troxler – LA
	Secretary:	Christopher Wells – SSEB
2008-2009	Chair:	Cynthia Sanders – GA
	Vice-Chair:	Cindy Cardwell – TX
	Members-at-Large:	Mike Stephens – FL; Leslie Foldesi – VA
	Secretary:	Christopher Wells – SSEB
2007-2008	Chair:	Ann Troxler – LA
	Vice-Chair:	Mike Stephens – FL
	Members-at-Large:	Beverly Hall – NC; Cindy Cardwell – TX
	Secretary:	Christopher Wells – SSEB
2006-2007	Chair:	Kim Wiebeck – AR
	Vice-Chair:	Mike Stephens – FL
	Members-at-Large:	Ann Troxler – LA; Henry Porter – SC
	Secretary:	Christopher Wells – SSEB
2005-2006	Chair:	Alice Rogers – TX
	Vice-Chair:	Edward Nanney – TN
	Members-at-Large:	Mike Stephens – FL; Kim Wiebeck – AR
	Secretary:	Christopher Wells – SSEB
2004-2005	Chair:	Michael Henry – LA
	Vice-Chair:	Bob Goff – MS
	Members-at-Large:	Cynthia Sanders – GA; Alice Rogers – TX
	Secretary:	Christopher Wells – SSEB
2003-2004	Chair:	Beverly Hall – NC
	Vice-Chair:	Ruth McBurney – TX
	Members-at-Large:	Mike Henry – LA; Mike Stephens – FL
	Secretary:	Christopher Wells – SSEB
2002-2003	Chair:	Pamela Bishop – OK
	Vice-Chair:	Bill Passetti – FL
	Members-at-Large:	Henry Porter – SC; David Walter – AL
	Secretary:	Christopher Wells – SSEB

2001-2002	Chair:	Jared Thompson - AR
	Vice-Chair:	Pamela Bishop – OK
	Members-at-Large:	Arthur Tate – TX; Bill Passetti – FL
	Secretary:	Christopher Wells – SSEB
2000-2001	Chair:	Tom Hill - GA
	Vice-Chair:	Alice Rogers - TX
	Members-at-Large:	Kirksey Whatley – AL; Edward Lohr - KY
	Secretary:	Christopher Wells – SSEB
1999-2000	Chair:	Michael Broderick – OK
	Vice-Chair:	Jared Thompson - AR
	Members-at-Large:	Vicki Jeffs – KY, Debra Shults, TN
	Secretary:	Christopher Wells - SSEB
1998-99	Chair:	Richard Ratliff - TX
	Vice-Chair:	Tom Hill - GA
	Members-at-Large:	Michael Broderick - OK; Pearce O'Kelly - SC
	Secretary:	Christopher Wells - SSEB
1997-98	Chair:	Bob Goff - MS
	Vice-Chair:	Ruth McBurney - TX
	Members-at-Large:	Tom Hill - GA, Kirksey Whatley - AL
	Secretary:	Beth Fulmer - SSEB
1996-97	Chair:	Bill Passetti - FL
	Vice-Chair:	Alice Rogers - TX
	Members-at-Large:	Max Batavia - SC, Lawrence Nanney - TN
	Secretary:	Beth Fulmer - SSEB
1995-96	Chair:	Vicki Jeffs - KY
	Vice-Chair:	Bill Passetti - FL
	Members-at-Large:	Eddie Fuente - MS, Alice Rogers - TX
	Secretary:	Beth Fulmer - SSEB
1994-95	Chair:	Robin Haden - NC
	Vice-Chair:	Vicki Jeffs - KY
	Members-at-Large:	Bill Passetti - FL, Eddie Fuente - MS
	Secretary:	Beth Fulmer - SSEB
1993-94	Chair:	Robin Haden - NC
	Vice-Chair:	Vicki Jeffs - KY
	Members-at-Large:	Bill Passetti - FL, Bob Goff - MS
	Secretary:	Beth Fulmer - SSEB
1992-93	Chair:	Kirk Whatley - AL
	Vice-Chair:	Greta Dicus - AR
	Members-at-Large:	Hall Bohlinger - LA, Robin Haden - NC
	Secretary:	Beth McClelland - SSEB
1991-92	Chair:	Leslie Foldesi - VA
	Vice-Chair:	Dayne Brown - NC
	Members-at-Large:	Eddie Fuente - MS, Don Hughes - KY
	Secretary:	Beth McClelland - SSEB

1990-91	Chair:	Mary Clark - FL
	Vice-Chair:	Aubrey V. Godwin - AL
	Members-at-Large:	Dayne Brown - NC, Heyward Shealy - SC
	Secretary:	Alex Thrower - SSEB
1989-90	Chair:	Thomas Hill - GA
	Vice-Chair:	Donald Hughes - KY
	Members-at-Large:	Mary Clark - FL, Dayne Brown - NC
	Secretary:	Jill Paukert - SSEB
1988-89	Chair:	Eddie Fuente - MS
	Vice-Chair:	Donald Hughes - KY
	Members-at-Large:	Lyle Jerrett - FL , Dayne Brown - NC
	Secretary:	Jill Paukert - SSEB
1987-88	Chair:	Greta Dicus - AR
	Vice-Chair:	Donald Hughes - KY
	Members-at-Large:	Lyle Jerrett - FL, Dayne Brown - NC
	Secretary:	Jill Paukert - SSEB
1986-87	Chair:	Lyle Jerrett - FL
	Vice-Chair:	Donald Hughes - KY
	Members-at-Large:	Heyward Shealy - SC, Dayne Brown - NC
	Secretary:	Jill Paukert - SSEB
1985-86	Chair:	Lyle Jerrett - FL
	Vice-Chair:	Donald Hughes - KY
	Members-at-Large:	Heyward Shealy - SC, Dayne Brown - NC
	Secretary:	Jill Paukert - SSEB
1984-85	Chair:	Bobby Rutledge - GA
	Vice-Chair:	Lyle Jerrett - FL
	Members-at-Large:	Bill Aaroe - WV, Ken Miller - MO
	Secretary:	Scott Fellows - SSEB
1983-84	Chair:	Mike Mobley - TN
	Vice-Chair:	Cecil Brown - NC
	Members-at-Large:	Robert Craig - OK, Jim McNees - AL
	Secretary:	Scott Fellows - SSEB
1982-83	Chair:	Mike Mobley - TN
	Vice-Chair:	Cecil Brown - NC
	Members-at-Large:	Robert Craig - OK, Jim McNees - AL
	Secretary:	Scott Fellows - SSEB
1981-82	Chair:	Bill Spell - LA
	Vice-Chair:	Al Gooden - GA
	Members-at-Large:	Don Hughes - KY, Eddie Fuente - MS
	Secretary:	Scott Fellows - SSEB
1980-81	Chair:	Bill Graham - TN
	Vice-Chair:	Aubrey Godwin - AL
	Members-at-Large:	Cecil Brown - NC, Bill Spell - LA
	Secretary:	Scott Fellows - SSEB

1979-80	Chair:	Gary McNutt - MO
	Vice-Chair:	Bill Graham - TN
	Members-at-Large:	Ed Bailey - TX, Chuck Hardin - KY
	Secretary:	Scott Fellows - SSEB
1978-79	Chair:	Dayne Brown - NC
	Vice-Chair:	David Lacker - TX
	Members-at-Large:	Chuck Tedford - GA, Chuck Hardin - KY
	Secretary:	Scott Fellows - SSEB
1977-78	Chair:	David Snelling - AR
	Vice-Chair:	Chuck Hardin - KY
	Secretary:	Scott Fellows - SSEB
1976-77	Chair:	Jim Porter - LA
	Vice-Chair:	David Snelling - AR
	Secretary:	Scott Fellows - SSEB
1975-76	Chair:	Aubrey Godwin - AL
	Vice-Chair:	Jim Porter - LA
	Secretary:	Scott Fellows - SSEB

SMRAP Activation Procedure

Requesting State

Radiation Control Program
To initiate a request for SMRAP assistance from a participating state, the radiation control program personnel determine that assistance is needed and submit a request through channels to the requesting governor's office.

Initial contacts are expected to be made by telephone to expedite actions. The request for SMRAP assistance should include the following information:

1. description of problem;
2. type of resources needed;
3. where resources should be delivered; and
4. what state(s) has the resources.

Concurrent with above actions, informal telephone communication with radiation control program personnel in participating states is encouraged for the purpose of alerting them to the problem and for obtaining any technical information that will be of use in resolving the problem.

Governor's Office
Upon concurrence with the need assessment, as requested by the radiation control program personnel, the requesting governor (office) contacts the responding governor (office) and requests the specified SMRAP assistance.

Responding State

Governor's Office
The responding governor (office) agrees to provide SMRAP assistance and authorizes, through channels, the requested resources to be dispatched to the requesting state. Initial contacts are expected to be made by telephone to expedite actions.

Radiation Control Program

Personnel in the radiation control program, upon a telephone alert from the state's radiation control program, should anticipate the responding governor's (office) authorization to dispatch requested resources to the requesting governor's state.

Upon receipt of the responding governor's authorization to provide SMRAP assistance, the radiation control program should be prepared to expedite response to the assistance request.

Additional information required from the Radiation Control Program in the requesting state will include:

1. clear direction on where to meet or deliver the resources;
2. estimated time the resources are needed; and
3. if the resources include people, what arrangements have been made for housing, etc.

SMRAP Key Contacts

This chapter lists key personnel in the states and federal agencies involved in activating and implementing emergency assistance under SMRAP. Included are:

1. the address and phone number of each state governor and the date each term ends;
2. the name, address and phone number of the emergency services director in each state;
3. the name, address and phone number of the health services director in each state;
4. the name, address and phone number of each governor's designee for receiving advance notification of high-level radioactive waste shipments; and
5. emergency assistance teams to be contacted in the event of a radiological incident.

In addition, contact information is provided for the U.S. Department of Energy, the U.S. Environmental Protection Agency, the Federal Emergency Management Agency, the U.S. Nuclear Regulatory Commission and the Tennessee Valley Authority.

This chapter also includes specific state resource information on quantity, types and location of survey as well as analytical and communications equipment. Since not all states have the same equipment and analytical capabilities, this data is useful to states as they look to the other SMRAP states for specific types of emergency response support.

State Agencies

Alabama

Governor

The Honorable Robert Bentley (Term ends January 2015)
State Capitol
Montgomery, Alabama 36130
(334) 242-7100

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 is 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 Public Health, Office of Radiation Control and other agencies to coordinate federal, state and local response activities and a public information program.

Art Faulkner, Director
Alabama Emergency Management Agency
P.O. Drawer 2160
Clanton, Alabama 35045-2160
(205) 280-2200 (Duty hours)
(334) 242-0700 (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 materials transportation and may inspect waste shipments. The State Health Officer is the director of the Department of Public 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 handles all technical aspects of radiation in an emergency and will provide medical support to local governments.

Donald E. Williamson, M.D.
State Health Officer
The Alabama Department of Public Health
The RSA Tower, Suite 1552
P.O. Box 303017
Montgomery, Alabama 36130-3017
(334) 206-5200

Designee for Advance Notification of Shipments

Col. J. Christopher Murphy, Director
Alabama Department of Public Safety
P.O. Box 1511
301 S. Ripley Street 36102-4425
Montgomery, Alabama 36102-1511
(334) 242-4371

Department of Public Safety Emergency Team Members

Name	Title	Off-Duty Phone
Sgt. Charlton Martin	WMD Coordinator	(334) 328-2813
Cpl. John Driggers	Motor Carrier Safety Unit Field Supervisor	(334) 315-4442

Radiological Emergency Assistance Contacts

Alabama Department of Public Health (800) 843-0699 State EOC Communication Center
Office of Radiation Control (334) 324-0076 (Radiation Control Duty Officer)
P.O. Box 303017, Suite 700 (334) 206-5391 (Work)
Montgomery, Alabama 36130-3017 (334) 206-5387 (Fax)

Emergency Team Members

Name	Title	Off-Duty Phone & Pager Numbers
McNees, James L.	Director, Office of Radiation Control	ph: (334) 277-1380 cell: (334) 850-5293
Appleyard, Tonya	Director, Radiological Emergency Response	ph: (334) 730-5227 cell: (334) 850-5297
Turberville, David	Director, Environmental Radioactivity & Special Projects	ph : (334) 380-1485 cell:(334) 850-5312
Walter, David	Assistant Director, Office of Radiation Control & Director, Radioactive Materials Licensing	ph: (334) 361-1943 cell: (334) 850-5299
Grinstead, Bradley	Director, Medical X-Ray Registration & Compliance	ph: (334) 514-9867 cell: (334) 850-5310
Riley, Myron	Director, Radioactive Materials Inspection & Compliance	ph: (251) 867-9464 cell: (251) 238-0057

(After hours, and on weekends, assistance should be initiated through the Radiation Control Duty Officer)

In addition to the Health Physicists on the Emergency Team Members listed above, the following positions comprise the remainder of the Emergency Response Team:

Health Physicists	9 individuals
Environmentalists	22 individuals
Nurses	22 individuals
Administrative	3 individuals

Laboratory and Analytical Programs

Type of Sample	Type of Analysis	Major Equipment
Air	Gross Beta	Canberra Alpha-Beta 2404
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

(*a portable Canberra Series 10 is also available*)

Field Equipment (Average Inventory)

Ludlum Mobel 14C Survey Meters	51
Ludlum Portable Monitors Model 51-1-1	2
Radeco Portable Air Samplers	11
Explorium Radioisotope Identifier GR 130	1
Canberra MCA Inspector 1000 IN1K	2
Eberline E-520 Survey Meters	4
Eberline Model 19 Survey Meters	10
Eberline Model DNR-4	1
Fluke Pressurized Ion Chamber 451P-RYR	2
Multichannel Analyzer	1
Victoreen Model 660-1	1
Eberline FAG Meter	1
Bicron Micro R Survey Meters	2
MGP Alarming/Rate Dosimeters DMC 2000S	50
RadEye Alarming/Rate Dosimeters	40
Pocket Dosimeters (200mR, 5R, 100R)	100
Ludlum Survey Wand Model 193-6	1

Arkansas

Governor

The Honorable Mike Beebe (Term ends January 2015)
State Capitol
Little Rock, Arkansas 72201
(501) 682-2345

Emergency Services

The Arkansas Department of Emergency Management (ADEM) is Arkansas' Homeland Security and Preparedness Agency, ADEM serves as the state's coordination center for all four (4) stages of emergency management: preparedness, response, recovery and mitigation.

The Director is appointed by the Governor, and the office maintains the Arkansas Emergency Operations Plan.

The State Emergency Operations Center, located at Camp Robinson, North Little Rock Arkansas, operates constantly. In the event of an emergency, the state is divided into five (5) operational areas with an area coordinator for each. The area coordinators serve a liaison function among the ADEM Director, Local Emergency Planning Committees and county and municipal governments.

David Maxwell
Director and Homeland Security Advisor
Arkansas Department of Emergency Management
Camp Joseph T. Robinson
Building 9501
North Little Rock, Arkansas 72199
(501) 683-6700

Health Services

In an emergency, the Arkansas Department of Health's primary responsibilities are: health and medical assistance; water and sanitation inspection; 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 protective action advisories.

Paul K. Halverson, DrPH, Director
Arkansas Department of Health
4815 West Markham Street Slot #39
Little Rock, Arkansas 72205
(501) 661-2111

Designee for Advance Notification of Shipments

Bernard Bevill, Section Chief
Radiation Control Section
Arkansas Department of Health
4815 West Markham Street Slot #30
Little Rock, Arkansas 72205
(501) 661-2301 Office
(501) 661-2136 24-Hours
(501) 661-2236 Fax

Radiological Emergency Assistance Contacts

Arkansas Department of Emergency Management
Camp Joseph T. Robinson
Building 9501
North Little Rock, Arkansas 72199
(501) 683-6700 24-Hours
(800) 322-4012 Emergency Reporting Only

Arkansas Department of Health
Radiation Control
4815 West Markham Street Slot #30
Little Rock, Arkansas 72205
(501) 661-2136 24-Hour Communications Center
(800) 633-1735 24-Hour Communications Center

Emergency Team Members

Name	Title	Off-Duty Phone
Bevill, Bernard	Section Chief, Radiation Control	(501) 661-2136
VACANT	Section Chief, Emergency Management Program	(501) 661-2136
Watkins, Sherry	Program Leader, X-Ray & Mammography Program, Radiation Control	(501) 661-2136
Thompson, Jared	Program Manager, Radioactive Materials Program, Radiation Control	(501) 661-2136
Halverson, K. Paul	Director, DrPH., Arkansas Department of Health	(501) 661-2636

In addition to the Emergency Team Members listed above, the following positions comprise the remainder of the Emergency Response Team:

Health Physicists	14 individuals
Administrative/Clerical	10 individuals
Electronics Technicians	2 individuals
Public Information	9 individuals
Radiochemistry	3 individuals
Communication Specialists	6 individuals
Program Manager	5 individuals

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

Laboratory and Analytical Programs

Major Equipment

1. Packard Tri-Carb 2750TR/LL liquid scintillation analyzer with printouts.
2. Tennelec LB5100 Gas Flow Proportional Alpha-Beta Counter.
3. Gamma Spectroscopy System consisting of an MCA, with two Canberra HPGe Detectors and associated software, hardware and shielding.
4. Canberra LB4100 Gas Flow Proportional Alpha-Beta-Gamma Counter with twelve (12) two-inch detectors (Permits our Radiochemistry Laboratory to analyze twelve (12) samples simultaneously!)
5. Ludlum Model 2241-3RK Response Kit with Portable Scaler/Ratemeter
6. Agilent 7500i Series Inductively Coupled Plasma Mass Spectroscopy (ICP/MS) System

Type of Sample	Type of Analysis	Equipment Used
Air	Gross Alpha, Gross Beta	2,3,4
Charcoal Filter	Gamma Analysis	3
Fish	Gamma Analysis	3
Milk	Gamma Analysis Radioiodine	2,3,4
Soil and Silt	Gamma Analysis	3
Vegetation	Gamma Analysis	3,4
Water	Gross Alpha/Beta	2,3,4
Water	Ra-226/228 Sr-89/90 Uranium (natural) Performed using Inductively Coupled Plasma Mass Spectroscopy (ICP/MS) Radon-222 and Tritium (H-3) Performed using the Packard Tri-Carb 2750TR/LL Liquid Scintillation Analyzer	1,2,3,4,6
Wipes	Gross Alpha/Beta	2,3

Field Equipment (Average Inventory)

31 Ludlum Model 3 Survey Meters
14 Ludlum Model 44-2 Gamma Scintillators
14 Ludlum Model 44-9 Pancake Probes
13 Ludlum Model 43-5 Alpha Scintillators
23 Ludlum Model 44-6 Thin Wall Gamma Probes
8 Ludlum Model 17 Ion Chambers
16 Ludlum Model 19 Micro R Meters
4 Ludlum Model 2241-3RK Radiation Detection Emergency Kits
4 Victoreen Model 451-B
5 RADECO Model H-809 Air Samplers
6 Vehicles equipped with other miscellaneous emergency response equipment and 2 communications systems: Arkansas Department of Health radios and Arkansas Department of Emergency Management radios.
46 Canberra MRAD 113
1 Ludlum Model 2350-1 Radiation Detection Emergency Kit

Florida

Governor

The Honorable Rick Scott (Term ends January 2015)
State Capitol
Tallahassee, Florida 32301
(850) 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.

Bryan Koon, Director
Division of Emergency Management
Department of Community Affairs
255 Shumard Oak Boulevard
Tallahassee, Florida 32399
(850) 413-9969 (Direct) or
(850) 413-9900

Health Services

The Florida Radiation Protection Act designates the Department of Health 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, as well as the public, from harmful radiation effects. Therefore, the department also undertakes environmental surveillance activities.

Steven L. Harris, MD, M.Sc.
Deputy Secretary for Health
Department of Health
4052 Bald Cypress Way
Tallahassee, Florida 32399-1741
(850) 245-4321

Designee for Advance Notification of Shipments

John Williamson
Environmental Administrator
Bureau of Radiation Control
Florida Department of Health
P.O. Box 680069
Orlando, Florida 32868-0069
(407) 297-2095 Fax (407) 297-2085
Email: John_Williamson@doh.state.fl.us

Radiological Emergency Assistance Contacts

William A. Passetti
Bureau of Radiation Control
Department of Health, Bin C21
4052 Bald Cypress Way
Tallahassee, Florida 32399-1741
Email: Bill_Passetti@doh.state.fl.us

Phone: (850) 245-4266
Fax: (850) 487-0435

**Orlando Office (407) 297-2095 (24/7/365)

Emergency Team Members

Name	Title	Off-Duty Phone
Passetti, William	Chief, Bureau of Radiation Control	(850) 245-4266 (O) (850) 893-9039 (H) (850) 528-4691 (C)
Williamson, John	Administrator of Environmental Radiation Control Program	(407) 297-2095 (O) (407) 389-0213 (H) (850) 528-4151 (C)
Becker, Cynthia	Administrator of Inspection Program Email: Cindy_Becker@doh.state.fl.us	(850) 245-4266 (O) (850) 251-7522 (C)
Vause, Paul	Administrator of Radioactive Materials Program	(850) 245-4545 (O) (850) 668-2395 (H)
Adams, Charles	Manager of Emergency Response Program	(407) 297-2095 (O) (407) 240-9568 (H) (850) 528-1215 (C)

Laboratory and Analytical Programs

Type of Sample	Analysis	Equipment Used
Air (particulate filter and radioiodine cartridge)	Gross Alpha, Gross Beta (filter) Gamma Analysis (filter + cartridge) Isotopic Uranium by specific chemistry (filter) Isotopic Plutonium by specific chemistry (filter)	1, 2 3 6 6
Swipes	Gross Alpha, Gross Beta Strontium-89, 90 by specific chemistry Gamma Analysis Isotopic Uranium by specific chemistry Isotopic Plutonium by specific chemistry Tritium, Carbon-14 Nickel-63 by specific chemistry Promethium-147 by specific chemistry	1, 2 1, 2 3 6 6 7, 8 7 7
Fauna	Gamma Analysis	3
Milk	Strontium-89, 90 by specific chemistry, I-131 by specific chemistry, Gamma Analysis	1, 2 1, 2 3
Soil	Gamma Analysis Radium-226 by ingrowth of daughters Tritium, Carbon-14	3 4 7, 8
Vegetation	Gamma Analysis	3
Water	Gross Alpha, Gross Beta Radium-226, Radium-228, Polonium-210, Total Uranium, Strontium-89, 90 all by specific chemistry Gamma Analysis Isotopic Uranium by specific chemistry Isotopic Plutonium by specific chemistry Tritium, Carbon-14 Radon-222 Nickel-63 by specific chemistry Promethium-147 by specific chemistry	1,2 1,2 3 5, 6 5, 6 7 7 7 7

Major Laboratory Equipment:

1 (3) low background, gas flow proportional counters with automatic sample changers including one Tennelec LB5100 Series II, one Gamma Products 5000N and one Gamma Products 5020.
2. (2) Eight-Detector, low background, gas flow, proportional counter systems consisting of (2) Protean MDS-8.
3. Gamma Spectroscopy system consisting of Canberra N type 65% ultra low background HPGE detector, Princeton Gamma Tech N type 41% HPGE detector, Princeton Gamma Tech P type 22% HPGE detector, two Ludlum shielded 2" NaI well counter Canberra Genie 2000 PC analysis software.
4. Gamma Spectroscopy system consisting of two 3 x 3 NaI and two 4 x 4 NaI detectors, one FIDLER detector with Canberra Alpha M for VAX analysis software.
5. (2) Ordela PERALS® (Photon Electron Rejecting Alpha Liquid Spectroscopy) spectrometer.
6. (3) Canberra 7401 alpha spectroscopy chambers with PIPS detectors.

7. Packard Tri Carb 2900TR Liquid scintillation counter.
8. Packard Model 307 Sample Oxidizer for preparation of solid samples for H3/C14 analysis.
9. Thermoluminescent dosimetry system consisting of Panasonic Model 716 automatic TLD reader, 300 Panasonic 814 TLD badges.

Emergency Vehicles:

Mobile Laboratory (mounted on 2005 International 4300 Diesel Chassis) complete with:

A.C. Generator (10 KW)
Gamma spectroscopy system consisting of Canberra N type 65% ultra low background HPGE detector , Ortec P type 28% HPGE detector with Canberra Genie 2000 PC analysis software and shield capacities of 3.5 L and 1.0 L Marinelli containers, respectively.
Gamma Products Traveler gas flow proportional counter with sample changer.
Canberra iSolo portable alpha beta counter with radon/thoron rejection
Triathler portable liquid scintillation counter
Spectrum Technologies Universal Computer Spectrometer with 1" NaI detector.
Ortec Detective EX portable HPGE gamma radioisotope identifier system with neutron detection.
(9) CDV-718 with beta/gamma probe, 0-10,000 R/hr
(3) CDV-718A with beta/gamma probe, X-ray probe (for Pu detection) and GM pancake probe.
(1) CDV-718A with beta/gamma probe, 0-10,000 R/hr.
(7) Ludlum 2241 with GM Pancake Probe, 0-999,999 cpm
(3) Eberline ASP-1 with GM Pancake Probe, 0-3,600,000 cpm
(2) Ludlum Model 3 with alpha scintillators, 0-500,000 cpm
(2) Ludlum Model 177 area monitor.
(4) F & J Specialty Products self contained battery powered Low-Vol Air Samplers
Self-Reading Pocket Dosimeters with Chargers: (34) 0-200 mR, (10) 0-5 R, (10) 0-5 R
(25) Siemens EPD Mark 2 Electronic personnel dosimeters
(1) Ludlum Model 52 portal monitor.
(1) Bicron micro R meter.
(20) Thermo RadEye PRD Alarming Personal Radiation Detectors
(12) Canberra Model 213 Ultra Radiacs

Sample Preparation Vehicle
This is a converted 2011 GMC Savana 3500 Cargo Van. It has laboratory benchtop space and equipment to prepare air particulates and radioiodine filters, water, soil and swipes in the field. In addition as laboratory space, decontamination of sampling equipment can also be accomplished.

Sampling Vehicles (Orlando Facility)
(2) 2003 Dodge Grand Caravans with GPS, and satellite comm.
(1) 2007 Ford F-250 Crew Cab P/U with trailering capability, GPS, and satellite comm.
(1) 2009 Dodge Grand Caravan with GPS, satellite comm and light trailering capability.
(1) 2010 Dodge Grand Caravan with GPS, satellite comm and light trailering capability.
(1) 2010 Ford F-150 4 x 4 Crew Cab P/U with trailering capability, GPS, and satellite comm.
Cargo/Equipment Issue Trailers (Orlando Facility)
Wells Cargo 12' x 6' V front dual axel cargo trailer with A/C and generator
Wells Cargo 5' x 8'cargo trailer
5' x 10' open utility trailer

Additional Surveying, Monitoring and Sampling Equipment
(located at the Orlando Facility)
(4) Far West Technology REM 500 neuton rate meter.
(2) IcX Identifinder Ultra $LaBr_3$ radioisotopic identifier system with neutron detection
(1) Canberra InSpector 1000 $LaBr_3$ radioisotopic identifier system with neutron detection
(4) Johnson AM-801 portal monitors
(2) Canberra MiniSentry portal monitor
(2) Ludlum Model 52 portal monitor
(17) Thermo RadEye PRD Alarming Personal Radiation Detectors
(12) Ludlum Model 2401-S Gamma Scintillators
(12) Ludlum Model 2401-P beta gamma pancake
(11) Canberra Model 213 Ultra Radiacs
(3) Ludlum Model 19 micro R meters
(8) High volume Air pumps
(1) ISCO 3700 Portable Water Sampler
(10) Ludlum Model 3 with 44-10-17 directional NaI probe.
(15000) CDV-742 Self Reading Dosimeters 0-200 R
(1,000) Self Reading Dosimeters 0-200 mR, 0-500 mR.

There are Radiation Control Regional Offices located in:
Ft. Myers (4 inspectors)
Lantana (4 inspectors)
Miami (6 inspectors)
Orange Park (4 inspectors)
Orlando (6 inspectors)
Pensacola (1 inspector)
Tallahassee (1 inspector) co-located with HQ.
Tampa (5 inspectors)
Two County Health Departments also have radiation control programs:
Polk (2 inspectors)
Broward (2 inspectors)

Each inspector has an emergency kit that contains
Thermo Rad Eye PRD Alarming Personal Radiation Detector
Ludlum Model 2401-P beta gamma pancake
Canberra Model 213 Ultra Radiac
Thermo EPD Mark 2 Electronic personnel dosimeter

Additional Surveying and Monitoring Equipment
(7) Canberra InSpector 1000 $LaBr_3$ radioisotopic identifier system with neutron detection (one each in Broward County, Miami, Orange Park, Pensacola, Polk County, Tally HQ, , Tampa)
(7) IcX Identifinder Ultra $LaBr_3$ radioisotopic identifier system with neutron detection (one each in Ft. Myers, Lantana, Miami, Orange Park, Orlando, Tally HQ, Tampa)
(10) Far West Technology REM 500 neuton rate meter (one in each regional office and both county offices.
(8) Johnson AM-801 portal monitors (one each in Ft. Myers, Lantana, Miami, Orange Park, Orlando, Polk County, Tally HQ, Tampa)
(2) Ludlum Model 52 portal monitor (Miami and Tallahassee HQ)
(2) CDV-718A with beta/gamma probe, 0-10,000 R/hr. (Miami and Tallahassee HQ)
(26) Ludlum Model 3 with alpha scintillator probe. (Distributed throughout offices)
(1) 2005 Chevy Silverado extended cab P/U with GPS, satellite radio and trailering capability (Miami)

Georgia

Governor

The Honorable Nathan Deal (Term ends January 2015)
State Capitol
Atlanta, Georgia 30334
(404) 656-1776

Emergency Services

The Georgia Emergency Management Agency (GEMA) prepares and implements the state's Emergency Management Program. During a radiological emergency, the agency can provide communications with state or local agencies from the state emergency operations center and/or a near-site operations center. It will also assist with the response effort by coordinating with various agencies to: activate evacuation procedures; provide information to the public; and obtain additional personnel and equipment.

Charley English
Director,
Georgia Emergency Management Agency
P.O. Box 18055
Atlanta, Georgia 30316
(404) 635-7000
(404) 635-7205 fax

Stephen Clark
Program Director
Radiological Emergency Preparedness
Georgia Emergency Management Agency
P.O. Box 18055
Atlanta, Georgia 30316
(404) 635-7000
(404) 635-7205 fax

The Georgia Department of Natural Resources (DNR) is the lead state agency for response to radiological incidents in or affecting the State of Georgia. DNR provides technical expertise and advice to state and local government officials on measures necessary to protect citizens and to mitigate the effects of a radiological incident.

The Georgia Department of Natural Resources (DNR), the Georgia Department of Transportation (DOT) and the Georgia Emergency Management Agency (GEMA) have a joint communications center. This center is manned 24 hours a day. Upon receipt of a call reporting a radiological emergency, joint communications center staff directly notify the Environmental Radiation Program Manager by telephone, two-way radio or statewide pager.

Carol A. Couch, Ph.D., Director
Georgia Dept. of Natural Resources
Environmental Protection Division
Floyd Towers East, Suite 1152
205 Butler Street, SE
Atlanta, Georgia 30334
(404) 656-4713

Jim Ussery, Assistant Director
Georgia Dept. of Natural Resources
Environmental Protection Division
Floyd Towers East, Suite 1152
205 Butler Street, SE
Atlanta, Georgia 30334
(404) 656-4713
jussery@dnr.state.ga.us

Jim Sommerville, Chief
Georgia Department of Natural Resources
Program Coordination Branch
Floyd Towers East, Suite 1152
205 Butler Street, SE
Atlanta, Georgia 30334
(404) 656-4713

Cynthia Sanders, Manager
Georgia Dept. of Natural Resources
Environmental Protection Division
4220 International Pkwy., Ste. 100
Atlanta, Georgia 30354
(404) 362-2675
csanders@dnr.state.ga.us

Jim Hardeman, Manager
Environmental Radiation Program
Environmental Protection Division
Georgia Dept. Of Natural Resources
4220 International Pkwy., Ste. 100
Atlanta, Georgia 30354
(404) 362-2675
Jim_Hardeman@dnr.state.ga.us

Designee for Advance Notification of Shipments

Captain Bruce Bugg
Special Projects Coordinator
Law Enforcement Division

Georgia Department of Motor Vehicle Safety
P.O. Box 80447
2206 East View Parkway
Conyers, Georgia 30013
(678) 413-8825
(678) 413-8832 fax

Radiological Emergency Assistance Contacts

DNR/GEMA/DOT Communications Center

(800) 241-4113 (24 Hours) In-state calling only
(404) 635-7200
(404) 656-4863 (24 Hours)

Georgia Department of Natural Resources
Environmental Protection Division
Environmental Radiation Program
(404) 362-2675 (8 a.m. - 4:30 p.m.)

Emergency Team Members

Name	Title	Off-Duty Phone
Hardeman, James C.	Manager, Environmental Radiation Program	(404) 386-6607 Cell*
Sanders, Cynthia	Acting Manager, Radioactive Materials Program	(770) 987-1200

* The preferred method of contacting the Emergency Team Members during non-duty hours is to call the 24-hour warning point.

Laboratory and Analytical Programs (DNR)

Type of Sample	Type of Analysis	Major Equipment
Air (filters/ cartidges)	Gamma Spectrum, I-131/Cs-137 Gross alpha/beta, Plutonium, Strontium, Tritium	See List Below
Fish (aquatic species)	Gamma Spectrum, Radiostrontium, Tritium, Plutonium	
Milk	Gamma Spectrum, Tritium, Radiostrontium, Radioiodine	
Soil	Gamma Spectrum, Radiostrontium	
Sediment	Gamma Spectrum, Radiostrontium, Plutonium	
Vegetation	Gamma Spectrum, Radiostrontium, Radioiodine, Tritium, Plutonium	
Water	Gross alpha/beta Radiostrontium, Radioiodine, Tritium	

Routine laboratory analysis of environmental samples is conducted in the Environmental Radiation Laboratory (ERL), a low-level laboratory located on the campus of the Georgia Institute of Technology (Georgia Tech), and operated as a joint venture between DNR and Georgia Tech. The Mobile Radiation Laboratory (MRL), a 40-foot motor trailer pulled by a "dually" pick-up truck, is used for emergency response activities and on-site inspections. Major equipment items in these laboratories are listed below. Items marked with an asterisk (*) are aboard the Mobile Radiation Laboratory.

I. Alpha/Beta Counters:

A) Tennelec LB5100 Low-Level Automatic Alpha/Beta Counter
B) Beckman Wide-Beta Low-Level Automatic Alpha/Beta Counter
C) Gamma Products Automatic Alpha/Beta Counter*

II. Liquid Scintillation Counters:

A) Beckman LS-233 Automatic Liquid Scintillation Counter
B) Packard Tri-Carb 2250 Low-Level Automatic Liquid Scintillation Counter
C) Packard Tri-Carb 2500TR Low-Level Automatic Liquid Scintillation Counter
D) Packard Tri-Carb 2500TR/AB Liquid Scintillation Counter*

III. High-Resolution Gamma Spectrometer Systems:

A) Gamma Detectors
   1) Canberra 12% GeLi with Low-Background Shield
   2) Canberra 25% GeLi with Low-Background Shield
   3) Tennelec 40% Extended-Range HpGe with Low-Background Shield

4) Canberra 20% MAC HpGe with Low-Background Shield
5) Canberra 20% MAC HpGe (for in-situ Studies)
6) Canberra 15% MAC HpGe in Low-Background Shield*

B) Gamma Multi-Channel Analyzers:
1) Canberra S-85 MCA with 4 ADVs to service 4 detectors above at 4096 channels and 0.5 keV/ch
2) Canberra S-10 MCA to service in-situ detector above (4096 ch)
3) Nucleus PCA 4096 channel MCA card as a backup system to maintain at least 1 operable detector, in the event of an outage in item III.B.1 above
4) Canberra GENIE AXP Gamma Spectral Analysis System*

C) Gamma Analysis Processor Hardware and Software:
1) DEC PDP-11/RSX-11M Computer System utilizing Canberra RSX-Spectran Gamma Spectrometry Analysis Software
2) IBM PC/AT Computer System utilizing Quantum GDR 4.2 Gamma Spectrometry Analysis Software

IV. Thermoluminescient Dosimetry:
A) Harshaw 2000 A/B TLD Reader
C) Panasonic TLD Reader

V. Low-Level I-131 (Beta-Gamma Coincidence Counter):
A) Canberra/User Customized System with MDL down to 0.1 Pci/L

VI. Alpha Scintillation Counters (For Radon Gas Counting of Water Supplies):
A) Randam SC-5 System (Quantity = 6 units)

VII. Alpha Spectrometry:
A) Tennelec TC-257 System with 2000 mm^2 detector used with Nucleus PCA MCA card in PC and Quantum GDR 4.5 analysis software
B) Ortec 130 System with 2 Ortec 400 mm^2 detectors used with above referenced PC/MCA analysis system

VIII. Computer Resources & Data Management:
A) Data computational and data entry workstation facilities include 5 networked PCs (1 per user area) tied to shared database and word processing resources. This system is also linked to the G.T. Network campus resources and to the DNR/EPD Prime Computer System. Our database currently utilizes dBase III+ software.
B) The Mobile Lab computational and data entry workstation is a single stand-alone version of the network used in (A) above. However, this unit also functions as a remote link to the network described to facilitate exchanges as needed.

IX. General Radiochemistry Lab Facilities:
A) Mettler Analytical Balances (3 at ERL, 1 at MRL)
B) Fisher Scientific Ph Meter
C) Fisher Scientific Specific Ion Meter
D) Yellow Springs Instruments Conductivity Meter
E) Drying Ovens (3)
F) Fisher Infrared Heat Lamps (3 at ERL, 1 at MRL)
G) Hot Plates (10 at ERL, 1 at MRL)
H) Muffle Furnace (1)
I) Centrifuges (3)

J) Exhaust Hoods with Work Area (3)

X. Primary Radiological Emergency Response Vehicles:

A) 1 - 1994 Chevrolet Suburban 4WD
B) 1 - 1993 Ford F-250 Extended Cab 4WD Pickup
C) 1 - 1993 Ford F-350 Extended Cab Dual Rear Wheel Pickup Truck (used to pull Mobile Radiation Laboratory)
D) 1 - 1996 Ford Bronco 4WD
E) 1 - 1998 Ford F250 Extended Cab Pickup
F) Backup Emergency Response Vehicles
   1) 1 - 1991 Ford F-150 4WD Pickup
   2) 1 - 1991 Ford Aerostar Minivan
   3) 2 - 1991 Ford Taurus Station Wagons
   4) 3 - 1991 Chevrolet Cavalier Station Wagons
   5) 2 – 2000 F-150 Pickup Trucks (Augusta office)
G) 1993 Sea-Ray Laguna Center Console Boat with 175 hp Outboard Motor (for aquatic sampling purposes)
H) 1994 Roughneck 18' aluminum boat with 70hp outboard motor

Note:

Air and water transportation are available through the Law Enforcement section of the DNR Wildlife Resources Division (WRD).

XI. Portable Equipment

A) Air Sampling Equipment (battery, AC and gasoline operated)
B) Survey Meters (ion chamber, GM, alpha, beta, micro-R and neutron)
C) Dosimetry (direct reading pocket, digital alarming)
D) Protective Clothing (coveralls, boots, gloves, etc.)
E) Portable Generators (gasoline)
F) Tritium "Sniffer"
G) Laptop Computers
H) 4 Southern Link Portable 800MHz Radios, 1 Southern Link Base Radio with access to additional units within the division. GEMAand the GeorgiaDepartment of Public Safety also use this radio system.
I) Rados continuous radiation monitoring stations which may be deployed at any location with AC power and telephone.
J) Portable Radionuclide Identifiers (Thermo identiFINDER (1), Exploranium GR-135 (2))
K) GPS units (vehicle-mounted and hand-held)

Kentucky

Governor

The Honorable Steve Beshear (Term ends December 2015)
State Capitol
Frankfort, Kentucky 40601
(502) 564-2611

Emergency Management

The Division of Disaster and Emergency Management, 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.

Malcolm Franklin, Director
Division of Emergency Management
100 Minuteman Parkway
Boone National Guard Center
Frankfort, Kentucky 40601
(502) 607-1682

Health Services

The Cabinet for Health Services administers the agreement state program and monitors sites where radioactive materials exist. Within the cabinet, the Radiation Health & Toxic Agents Branch has primary responsibility for response to peacetime radiological incidents.

James W. Holsinger, Jr., M.D.
Cabinet for Health & Family Services
275 East Main Street
Frankfort, Kentucky 40621
(502) 564-7130

Designee for Advance Notification of Shipments (10 CFR Parts 71 and 73)

Steve Berrier, Manager
Department for Public Health
Division of Public Health Protection and Safety
Radiation Health & Toxic Agents Branch
275 East Main Street
Mailstop HSICA
Frankfort, Kentucky 40621-0001
(502) 564-7818 extension 3664

Radiological Emergency Assistance Contacts

State Police	(502) 695-6300 or 1-800-222-5555
Division of Emergency Management 24-Hour Duty Officer	(502) 564-7815 or (800) 255-2587
Radiation Health & Toxic Agents Branch Department of Public Health Cabinet for Health & Family Services 275 East Main Street Mail Stop HSICA Frankfort, Kentucky 40621-0001	(502) 564-3700 (8a.m.-4:30p.m)

Emergency Team Members (Emergency Response Team)

Name	Title	Off-Duty Phone	Email Address
Crawford, Dewey	Manager	(859) 234-3231 (502) 330-7660	dewey.crawford@ky.gov **Blackberry Pager System
Berrier, Steven	Radioactive Material Specialist III	(502) 227-4533 (502) 330-7657	steven.berrier@ky.gov Pgr: (800) 257-1643
Horky, Ricky	Radioactive Material Specialist IV	(270) 352-2152 (502) 330-7658	ricky.horky@ky.gov Pgr: (800) 258-7228
Scott, Eric	Chemist Supervisor	(859) 245-1123	eric.scott@ky.gov Pgr: (800) 328-0767
McKinley, Matthew	Radioactive Materials Supervisor	(502) 875-3688 (502) 330-7659	matthew.mckinley@ky.gov Pgr: (800) 201-8493
Mills, Phillip	Chemist III	(502) 696-0965	phillip.mills@ky.gov Pgr: (800) 273-9851
Gresham, Robert		(502) 330-8247 (502) 330-8379	robert.gresham@ky.gov Pgr: (888) 214-8467
Guy, Tamara	Administrative Specialist III	(502)-227-2434 (502) 330-7662	tamara.guy@ky.gov

Laboratory and Analytical Programs

Type of Sample	Type of Analysis	Major Equipment
Air Biota Milk or Water Soil Water	Gross Alpha, beta or gamma analysis/soil, water, air, biota, milk, etc., and specific analysis for strontium, radium, tritium, gamma emitters, technetium, carbon-14, uranium and plutonium	Five 100 Sample capacity, automated low background alpha and beta counting instruments Chemistry laboratory (wet chemistry ion exchange system, muffle furnaces, drying ovens, radiochemistry hoods, etc.) Four 200 Sample capacity, automated liquid scintillation counting systems.

Type of Sample	Type of Analysis	Major Equipment
Water (Continued)	technetium, carbon-14, uranium and plutonium	Genie Canberra multichannel analyzer for gamma and alpha spectroscopy (three terminals). Three (3) germanium and two (2) extended range germanium detectors calibrated for the following geometrics: Dry soil/silt sample; Water samples from 20 ml to 3.0 liters capacity; 1.0 liter milk sample; 20 milliliter glass liquid scintillation vial, etc. Canberra portable multichannel analyzer and two (2) portable germanium detectors with ISOCS software. Sixteen (16) passiated implanted planar silicon alpha detectors. Portable survey instruments

Survey Meter Inventory

Quantity	Manufacturer	Model	Probe
1	Bicron	Analyst	Pipe Monitor
5	Eberline	E-120	Thin End Window (1 with HP-260)
1	Ludlum	4	43-90
1	Ludlum	9	
5	Ludlum	14-C	44-9(1) 44-7(4)
5	Ludlum	19 (micro-R)	*2cal. To Ra-226; 3 cal. To Cs-137
1	Ludlum	77-3	
1	Ludlum	2350 (Data Logger)	LM144-10; LM144-2
3	Victoreen	400	
1	Victoreen	410	
2	Victoreen	1490	
1	Exploranium	GR-130 MiniSPEC	
2	Eberline	RO-3	
5	Ludlum	2241-2	44-2, 44-9

Louisiana

Governor

The Honorable Bobby Jindal (Term ends January 2016)
State Capitol
Baton Rouge, Louisiana 70804
(225) 342-0991
(225) 342-7015
(225) 342-7099 - fax

Emergency Services

The Governor's Office of Homeland Security and Emergency Preparedness (GOHSEP), 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. The office coordinates the non-technical response to a radiological incident and assists parish governments with their protective measures, planning, and implementation.

Mark Cooper
Director, Governor's Office of Homeland Security and Emergency Preparedness
7667 Independence Boulevard
Baton Rouge, Louisiana 70806
(225) 925-7345

Radiation Health and Safety Services

The Louisiana Department of Environmental Quality (LDEQ) administers the state's radiation control law and the Nuclear Regulatory Commission (NRC) Agreement State Program. The Department is headed by the secretary, who is appointed by the governor.

The Louisiana Department of Environmental Quality provides technical guidance and assistance to state and parish governments in the areas of licensing, inspections, accident assessment, protective action recommendations, monitoring, sampling and decontamination. The Radiological Emergency Planning and Response Unit within the Emergency and Radiological Services Division (ERSD) of LDEQ also conducts training programs for state and local emergency response personnel and informs the media and the general public about radiation from fixed nuclear power plants, and other sources

Peggy M. Hatch
Secretary
Louisiana Department of Environmental Quality
Box 4301
Baton Rouge, Louisiana 70821-4301
(225) 219-3953
(225) 219-3971 - fax

Designee for Advance Notification of Shipments

Captain Taylor Moss
Louisiana State Police
7919 Independence Boulevard
Baton Rouge, Louisiana 70806
(225) 925-6113

Radiological Emergency Assistance Contacts

Louisiana State Police (225) 925-6595 (24 Hours)

Louisiana Department of Environmental Quality Division
Radiological Emergency Planning & Response
Box 4312

(225) 765-0160 (24 Hours)
Emergency & Radiological Services

Baton Rouge, Louisiana 70821-4312

Louisiana Governor's Office of Homeland Security and Emergency Preparedness
7667 Independence Boulevard
Baton Rouge, Louisiana 70806

(225) 925-7500 (24 Hours)

LDEQ Emergency Response Members

(If unsuccessful in contacting the Staff Duty Officer, contact those below in the order listed.)

Name	Title	Contact Information
Blackwell, Richard	Environmental Scientist Staff	(225) 219-3860 (225) 951-1366 Pager richard.blackwell@la.gov
Noble, Joe	Environmental Scientist Staff	(225) 219-3643 (225) 951-1365 Pager joe.noble@la.gov
Wiley, Ji	Environmental Scientist Supervisor	(225) 219-3621 (225) 951-1364 Pager ji.wiley@la.gov
Troxler, Ann	Environmental Scientist Senior	(225) 219-3991 (225) 951-1724 Pager ann.troxler@la.gov
Ricca, Peter	Environmental Scientist Manager	(225) 219-3616 (225) 202-4345 BB peter.ricca@la.gov

Analysis and Equipment Information

Type of Sample	Type of Analysis	Major Equipment
Water, Milk, Sediment, Vegetation, Air Filters, Fish, Swipes	Gamma Spectroscopy	High Purity Germanium Detectors and MCA and Analytical Software* Canberra Inspector 1000 SAM 940
Water, Air Filters, Swipes	Gross Beta	Canberra/Tennelec S5E*
Water	Liquid Scintillation	Packard TRI-Carb 2900-TR Model Liquid Scintillation System*
Air Sampling	Beta/Gamma	Ludlum Model 2000 Scaler, Charcoal & Silver Zeolite Filters
Industrial Radiography	Gamma density and soil gauges	Pic-6 A's and Ludlum Model 5's
Contamination Incidents	All	Scintillation Detectors, G-M Survey Ratemeters
Medical X-ray	X- and Gamma	MDH Model 1015, Unfor
Nuclear Medicine Radioisotopes	Gamma	Ludlum Model 3, Ludlum Model 14c
Lost Sources	All	Ludlum Model 14c or 3 with Scintillation Probe, GM, or Ionization Chamber to establish exposure rates
NORM	Ambient Gamma	Ludlum Model 19 Micro-R meters
NORM	Ambient Gamma	Ludlum Model 3 with Probe 44-2
Neutron Source	Neutrons	REM BALL
Linear Accelerators	X-and Gamma	Eberline Model PIC-6B Ionization Chamber

*LDEQ Contract Laboratory's Equipment

Mississippi

Governor

The Honorable Phil Bryant (Term ends January 2016)
State Capitol
Jackson, Mississippi 39205
(601) 359-3150

Emergency Services

The Mississippi Emergency Management Agency (MEMA) prepares and coordinates 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 Emergency Management Plan.

Mike Womack, Director
Emergency Management Agency
P.O. Box 5644,
Pearl, Mississippi 39208
(601) 933-6362

Health Services

The Mississippi State Department of Health is the administrative agency for the Board of Health, which implements the state's agreement state program. The Mississippi Radioactive Waste Transportation Act of 1982 requires the Board of Health to develop regulations for transportation permits, fees, pre-notification and emergency response. Emergency response involves technical supervision, site isolation, monitoring and records management.

Mary Currier, MD, MPH
State Health Officer
Mississippi State Department of Health
P.O. Box 1700
Jackson, Mississippi 39215-1700
(601) 576-7634

Designee for Advance Notification of Shipments

Mike Womack, Director
Mississippi Emergency Management Agency (MEMA)
P.O. Box 5644,
Pearl, Mississippi 39208
(601) 933-6362

Radiological Emergency Assistance Contacts

Highway Patrol	(601) 987-1530 (24 Hours)
Emergency Management Agency	(601) 933-6362 (24 Hours) (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) 987-6893 (8am - 5pm) (601) 987-6887 (Fax)

Emergency Team Members

Name	Title	Off-Duty Phone	Pager and Email Address
Smith, B. J.	Director, Division of Radiological Health	(601) 953-5201	(601)813-5787 bjsmith@msdh.state.ms.us
Carson, Jimmy	Health Physicist, Administrative X-Ray Branch	(601) 953-1059	(601)953-1059 jcarson@msdh.state.ms.us
Moak, Jayson	Health Physicist, Administrative Radioactive Materials Branch	(601) 503-0572	(769) 257-4709 Jayson.moak@msdh.state.ms.us
Stringfellow, Sandra	Health Physicist, Administrative Environmental Branch	(662)931-0123	(662) 931-0123 sandra.stringfellow@msdh.state.ms.us

Laboratory and Analytical Programs

Type of Sample	Analysis	Major Equipment
Air(particulate filter and radioiodine cartridge)	Gross Alpha, Beta (filter) Gamma Analysis (filter + cartridge)	1,2 4
Direct Radiation Ambient	Beta, Gamma	3
Swipes	Gross Alpha, Beta Gamma	1,2,4
Meat/Fish	Specific Gamma, Gross Alpha, Beta	1,2,4
Milk	Strontium-89, -90 by specific chemistry I-131 by Gamma Analysis	1,2 4
Soil, Sediment	Gamma analysis	4
Vegetation	Gamma analysis	4
Water	Gross Alpha, Beta, Radium226/228Strontium-89, -90, Uranium by specific chemistry, Gamma analysis, carbon 14, tritium radon-222	1,2 1,2 4 5,6 6

Major Laboratory Equipment

1. (2)-Gamma Products Automatic Alpha/Beta Gas Flow Proportional Counter
2. (2)- Gamma Products G542M Multi-drawer Alpha/Beta Gas Flow Proportional Count
3. Environmental Dosimeter Harshaw 6600 (TLD)
4. Ametek, Ortec PC-Based MCA, Gamma Vision Data Reduction Spectroscopy System Ortec HPGe Detector (3) and Ortec Low Energy Detector (1)
5. Packard 2200CA Liquid Scintillation System
6. Packard Tri-Carb 2900TR - Liquid Scintillation Counter

Emergency Vehicles:

1. 2006 Ford Excursion 4-Wheel Drive with Satellite Radio and Trailer towing Capability.
2. 2004 Chevrolet Suburban 3/4 Ton with Satellite Radio and Trailer towing Capability.
3. Various state-owned vehicles equipped with satellite radios.

Other Equipment

a.Exploranium Portable MCA
b.. Air Samplers (with battery)
c.. Survey Meters (ion, alpha, beta, gamma & scintillometer)
d. Dosimetry Equipment (pocket with readers)
e. Protective Equipment (Anti-Cs, gloves, etc.)
f. Field Chemistry Supplies
g. Sampling Supplies

Missouri

Governor

The Honorable Jeremiah Nixon (Term ends January 2013)
State Capitol
Jefferson City, Missouri 65101
(573) 751-3222

Emergency Services

The State Emergency Management Agency, in the Office of the -,Department of Public Safety is the initial contact point for emergency organizations throughout the state. The agency coordinates both the Missouri Nuclear Emergency -Accident 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.

Paul Parmenter
State Emergency Management Agency
P.O. Box 116
Jefferson City, Missouri 65102
(573) 526-9101 or (573) 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 the department, in coordination with other agencies, to respond to radiological emergencies.

Director, Department of Health & Senior Services
P.O. Box 570
Jefferson City, Missouri 65102
(573) 751-6001

Designee for Advance Notification of Shipments

Paul Parmenter
Director, State Emergency Management Agency
2302 Militia Drive
P.O. Box 116
Jefferson City, Missouri 65102
(573) 751-9109

Radiological Emergency Assistance Contacts

Missouri Department of Health & Senior Services
Division of Community and Public Health
Bureau of Environmental Epidemiology (BEE) (573) 751-2748
P.O. Box 570 (24-hour)
Jefferson City, Missouri 65102

Emergency Team Members

Name	Title	Off-Duty Phone
Baysinger, Cherri	Chief, BEE	(573) 659-9680
Henke, Keith	Planner	(573) 645-8943
Voss, Greg	Environmental Specialist	(573) 230-1684
Brantley, Will	Environmental Specialist	(573) 823-0040

State Laboratory and Analytical Programs

Type of Sample	Type of Analysis	Major Equipment
Environmental Media (air, water, soil, etc.)	Gamma (MCA)	Canberra Genie VMS To be replaced with APEX DSA-1000 Digital Spectrum Analyzer. Canberra APEX-Genie 2000
	Alpha, Beta	Canberra Alpha/Beta Proportional Counter Model S5XLB
	Beta liquid scintillation	Perkin-Elmer Model 3180TR/SL
	Alpha spectrometer	Canberra APEX Alpha Analyst System/ 7200-04

North Carolina

Governor

The Honorable Beverly Perdue (Term ends January 2013)
Office of the Governor
116 W. Jones Street
Raleigh, North Carolina 27603-8001
(919) 733-4240

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.

Doug Hoell, Director
Division of Emergency Management
Department of Crime Control and Public Safety
116 West Jones Street
Raleigh, North Carolina 27603-1335
(919) 733-3825

Health Services

The Department of Environment and Natural Resources administers the agreement state program under the rules and regulations of a governor-appointed Radiation Protection Commission. The department is designated as the lead agency for radiological materials emergency response and radiation protection. Technical response is provided through the department's Radiation Protection Section (RPS). W. Lee Cox, III, Chief, RPS is the State Liaison Officer (SLO) as designated by the Governor. This position advises the Governor on fixed nuclear facility emergencies.

Lee Cox, Acting Chief
Radiation Protection Section
3825 Barrett Drive
Raleigh, North Carolina 27609-7221
(919) 571-4141

Designee for Advance Notification of Shipments

1st Sgt. Shane Manuel
North Carolina State Highway Patrol
4702 Mail Service Center
Raleigh, North Carolina 27699-4702
(919) 319-1523
(919)618-0434

Radiological Emergency Assistance Contacts

Highway Patrol	(919) 733-3861 (800) 662-7956 (only in NC)
Division of Emergency Management	(800) 858-0368
Emergency Medical Services	(919) 733-2285
Radiation Protection Section Department of Environment and Natural Resources 3825 Barrett Drive Raleigh, North Carolina 27609-7221	(919) 571-4141 (919) 571-4148 (RPS Fax)

Emergency Team Members

Name	Title	Off-Duty Phone
Lee Cox	Radiation Protection Section, Chief	(919) 413-2506
James Albright	Radioactive Material Branch Manager	(919) 604-4037
William Jeffries	Nuclear Power Plant Emergency Coordinator	(336) 264-0219
Mills, Grant T.	Incident Response Coordinator	(919) 418-8462

In addition to the above-named individuals, there are approximately 30 professional staff positions available as emergency team members. The state is also expanding the Team of Radiological Emergency Volunteers (TOREV) available for radiological response support.

NCDRP Sample Analytical Program

Type of Sample	Type of Analysis	Major Equipment
Air Filter	-Gross Alpha and Gross Beta -Gamma	See List Below
Air Cartridge	-I-131	See List Below
Finished or Groundwater	-Gross Alpha and Gross Beta -Gamma -Ra-226 and Ra-228 -Total U -ICP-MS for GE samples -H-3	See List Below
Raw Surface Water	-Gross Alpha and Gross Beta -Gamma -ICP-MS for GE samples -H-3	See List Below
Sewage Treatment Effluent	-Gross Alpha and Gross Beta -I-131 -Gamma	See List Below
Precipitation	-Gross Beta	See List Below
Milk	-Gamma - I-131	See List Below
Bottom Sediment	-Gross Alpha and Gross Beta -Gamma -Uranium (GE)	See List Below
Fish	-Gross Alpha and Gross Beta -Gamma	See List Below
Soil	-Gross Alpha and Gross Beta -Gamma -Uranium (GE)	See List Below
Vegetation	-Gross Alpha and Gross Beta -Gamma -Uranium (GE)	See List Below
TLD	-Ambient Gamma	See List Below

* GE – Global Nuclear Fuel (Old Name – General Electric)

NCDRP Laboratory and Analytical Equipment

A. Alpha/Beta Counters

1. One (1) Tennelec LB-4100 Alpha/Beta Counting System with 4- sample drawer (State Lab).
2. One (1) Protean WPC-9310 Low Background Alpha/Beta Counting System (Mobile Lab).
3. Three (3) Canberra XLB type alpha/beta counting systems.
4. One (1) Canberra Alpha Analyst Alpha Spectroscopy System .

B. Gamma Detectors

1. One (1) EG&G Canberra Liquid Nitrogen Free Intrinsic Germanium Detector (P-type; 25% efficiency, 2.0 KeV Resolution at 1332 KeV) (Mobile Lab).
2. One (1) PGT Intrinsic Germanium Detector (N-type; 35% efficiency, 2.0 KeV resolution at 1.33 MeV) (State Lab).
3. Two(2) Canberra High Purity Germanium(HPGe) Gamma Spectroscopy detectors
4. One (1) Eurisys Mesures Intrinsic Germanium Detector (23% efficiency; N-Type).
5. One (1) Portable Canberra In-Situ Intrinsic Germanium Detector (Broad Energy Ge Type; 34% Efficiency; 2.1 keV resolution at 1.33 MeV) (Office Lab).

C. Gamma Analysis MCA and Software

1. Four (4) Canberra Apex MCA/Digital Spectrum Analyzer DSA (State Lab).
2. One (1) Canberra Genie 2000 MCA on laptop (Mobile Lab).One (1) PC Computer Base MCA System (Canberra). Dell Computer, 34 GB Hard Drive, 1 GB RAM Memory (State Lab).
3. One (1) PC Computer Based MCA System (Canberra). Gateway PC has 50 GB hard drive.
4. In-Situ System (see item number 6 in Section C above): Canberra Inspector 2000 MCA, Canberra Genie 2000 Gamma Spec Analysis Package; Canberra ISOCS calibration software (Office Lab- Portable).

D. Liquid Scintillation Counters

1. One (1) TriCarb Model 3170 TR/SL Liquid Scintillation System with automatic sample changer (State Lab).
2. Two (2) Bioscan Model 425-034 Portable Liquid Scintillation Detectors. Portable Detector is able to detect 8 nuclides; currently, systems only configured to detect Tritium and Carbon-14 (Mobile lab and Office Lab, 1 each).

E. Dosimetry & Ambient Gamma Monitoring (TLD- Gross Gamma/Beta)

1. One (1) Panasonic UD-702E Manual TLD Reader with 200 environmental dosimeters and 75 personal dosimeters (Office Lab). This is a backup system for item number 2 below.
2. One (1) Panasonic UD-706-A Semi-automatic TLD Reader with 500 environmental dosimeters (Office Lab).
3. Twenty (20) 0-20 milliRoentgen Self-Reading Pocket Dosimeters (SRPD's). Dosimeter type: gold-coated quartz-fiber electroscope ion chamber (Mobile Lab).
4. Twenty (20) 0-200 milliiRoentgen Self-Reading Pocket Dosimeters (SRPD's). Dosimeter type: gold-coated quartz-fiber electroscope ion chamber (Mobile Lab).
5. Six (6) Chargers for Self-Reading pocket dosimeters (Mobile Lab).

F. Global Positioning Systems/GIS

1. One (1) Trimble Geoexplorer 3 Handheld 8-Channel GPS Receiver (Mapping Grade).
2. Five (5) Garmin Model 12CX Handheld GPS Units (Consumer Grade).
3. Eight (8) Garmin iQue 3600 combination GPS + PDA units (Consumer Grade).
4. One (1) Trimble GeoXT Handheld 12-Channel GPS Receiver (Mapping Grade).
5. Three (3) Licenses for ArcView 9 Desktop with Spatial Analyst, Arc Publisher, and ArcPress extensions.
6. One (1) HP 5500 PS 42-inch large format color printer.
7. One (1) Garmin Model 7 inch GPS (Surburban Response Vehicle)

G. Communications Equipment

1. Nine (9) Portable Cellular Telephones.
2. One (1) Portable Cellular Facsimile Machine (DC, AC, Battery).
3. One (1) Portable Multifunction (Scanner, Fax) Printer (AC Power).
4. One (1) Motorola Model Syntor X-9000 32-Channel Radio (installed in Mobile Laboratory).
5. Four (4) Satellite Radio/Telephone Systems (installed in Mobile Laboratory and three vehicles).
6. Two(2) Stat Phones with wireless internet communication (Suburban Response Vehicle)
1. Twelve (12) Vertex Standard Model VX 160 VHF band portable transceiver radios.

H. Wireless Radiation Detection System

1. Six(6) ESP type probes for placement in the field. Each probe provides exposure rate readings to Mobile Lab base station.
2. 15 EPD type electronic personnel dosimeters and charger/reader equipment.
3. 3 NBR 7 Plastic Scintillator detectors for area monitoring and source detection.
4. 4 FH40G-X Detector display instruments and FHT671 detectors mounted in 3 individual vehicles.

I. Air Samplers and Accessories:

1. Three (3) Battery Powered Portable Air Samplers.
2. One (1) RM Young Company Portable Weather Station

J. Field Counting Instruments:

1. Twelve (12) Ludlum Model 19 Micro R Meters for gross gamma radiation Measurement.
2. Three (3) Eberline Model E-600 Emergency Kits.
3. Two Exploranium GR-130 Portable Gamma Spec Detectors (Sodium Iodide Detector only).

K. Survey Instruments

1. Twelve (12) Ludlum Survey Meters (Model 14C).
2. Two (2) Ludlum Survey Meters (Model 2).
3. Eleven (11) Ludlum Survey Meters (Model 6).
4. Four (4) CDV-718 Survey Meters
5. Twelve (12) Canberra Mini-Radiac Radiation Dosimeters
6. Three (3) He Detector Identifinders (Spectrum Analysis) with Neutron capabilities

L. Vehicles:

1. One (1) Mobile Laboratory (32 foot, custom built bus equipped with satellite radio communications and analysis equipment).
2. Three (3) Satellite Radio-Equipped 4-Wheel Drive Sport Utility Vehicles.
3. One (1) Customized SUV with self contained detectors (Identifinder)

M. Field Team Sustainability

1. Two (2) survival kits for two (2) team members. Will sustain employee for three (3) days.
2. Four (4) rechargeable flashlights.
3. Two (2) jump and run radios.

Oklahoma

Governor

The Honorable Mary Fallin (Term ends January 2015)
State Capitol
Oklahoma City, Oklahoma 73105
(405) 521-2342

Health Services

The Department of Environmental Quality implements policies developed by the State Environmental Quality Board. The Board receives guidance from the Radiation Management Advisory Council in matters concerning radiation protection. Radiological emergency response is under the control of the Radiation Management Section, Department of Environmental Quality.

Steven A. Thompson
Executive Director
Department of Environmental Quality
707 N. Robinson, P.O. Box 1677
Oklahoma City, Oklahoma 73101-1677
(405) 702-7156

Designee for Advance Notification of Shipments

Kevin L. Ward
Commissioner of Public Safety
3600 N. Martin Luther King Avenue
P.O. Box 11415
Oklahoma City, Oklahoma 73136
(405) 425-2424

Radiological Emergency Assistance Contacts

Mike Broderick, or
Radiation Management Section
Department of Environmental Quality
707 N. Robinson, P.O. Box 1677
Oklahoma City, Oklahoma 73101-1677
Mike (405) 702-5155 (during business hours)
(800) 522-0206 (after business hours)

Emergency Team Members

Name	Title	Off-Duty Phone
Broderick, Michael	Environmental Program Administrator	Ph: (405) 702-5155 Cell: (405) 816-4124

Laboratory and Analytical Programs

Type of Sample	Type of Analysis	Major Equipment
Air	Gross Beta	One 3x3 NAI crystal with 8196 channel analyzer and low background steel shield.
Ambient Gamma	TLO	
Water	Gamma Spectrum Gross Beta Gross Alpha Uranium	One GM counter for Hi-Vol filters One GeLi detector with 8196 channel analyzer with low background steel shield and computerized analysis capability. Two thin window proportional counters with 100 sample capacity sample charger. One Victoreen 2800 TLD reader using LIF chips. Six (6) Hi-Vol air samplers

South Carolina

Governor

The Honorable Nikki Haley (Term ends January 2015)
State House
1205 Pendleton Street
Columbia, South Carolina 29201
(803) 734-2100
nikkihaley@gov.sc.gov

Radiological Emergency Response / Health Regulation

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. The Bureau of Land and Waste Management, with personnel from the Division of Waste Assessment and Emergency Response and the Radioactive Waste Management Section, responds to technical issues, environmental monitoring, exposure control, and protective action guidance, and advice on decontamination and disposal of radiological materials involved in fixed nuclear facilities, transportation accidents, and other non-licensed sources and provides state and local response training. The Department's Bureau of Radiological Health responds to technical issues, monitoring needs, exposure control, and protective action guidance for radiological sources licensed by their office.

C. Earl Hunter, Commissioner
Department of Health and Environmental Control
2600 Bull Street
Columbia, South Carolina 29201
(803) 734-4880
hunterce@dhec.sc.gov

Emergency Support/Coordination Services

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

George McKinney, Director
South Carolina Emergency Management Division
Office of the Adjutant General
2779 Fish Hatchery Road
West Columbia, South Carolina 29172-2096
(803) 737-8500
gmckinney@emd.sc.gov

Designee for Advance Notification of Shipments

Susan Jenkins
South Carolina Department of Health and Environmental Control
Bureau of Land and Waste Management
Manager, Radioactive and Infectious Waste Management
2600 Bull Street
Columbia, South Carolina 29201
(803) 896-4240
jenkinse@dhec.sc.gov

Radiological Emergency Assistance Contacts

South Carolina Emergency Management Division	(803) 737-8500
South Carolina Department of Health and Environmental Control (SCDHEC) 2600 Bull Street Columbia, South Carolina 29201	(803) 253-6488 or (888) 481-0125 (toll-free) (nights, weekends and holidays)
SCDHEC Nuclear Response and Emergency Environmental Surveillance	(803) 896-4095 (8:30am - 5pm)

Emergency Management Members

Name	Title	Off-Duty Phone	Email Address
Susan Jenkins	Manager, Radioactive and Infectious Waste Management	(803) 667-0019	jenkinse@dhec.sc.gov
Threatt, Sandra	Manager, Nuclear Response and Emergency Environmental Surveillance	(803) 920-4846	threatsj@dhec.sc.gov
Bright, Mary Nguyen	Public Information Director, Nuclear Response and Emergency Environmental Surveillance	(803) 730-7211	brightmn@dhec.sc.gov
Staton, Chris	Director, Division of Waste Assessment and Emergency Response	(803) 730-5321	statoncd@dhec.sc.gov
Peterson, Jim K.	Division, Director of Radioactive Materials Licensing and Compliance	(803) 667-1486	petersjk@dhec.sc.gov
Gantt, Aaron	Chief Radiological Health Branch	(803) 667-1487	ganttaa@dhec.sc.gov

The **Nuclear Response and Emergency Environmental Surveillance Section** is designated as the lead for radiological emergencies and technical response and radiation protection.

The **Radioactive Waste Management Section** provides technical support, radiological evaluations and scoping surveys. In addition, the section responds to NORM, RAM and HL/LLRW Transportation Incidents.

A. Dosimetry (TLD- Gross Gamma/Beta):

1. Fifty-three (53) Rados, RAD-60R alarming dosimetry.
2. Personal TLD.

B. Communications Equipment:

1. Six (6) Programmable Motorola 800 Model XTS 5000 portable radios.
2. Six (6) Portable Cellular Telephones.
3. Two (2) Portable Facsimile Machines (DC, AC, Battery).
4. Two (2) Portable Multifunction (Scanner, Fax) Printer (AC Power).
5. Two (2) Satellite phones.

C. Air Samplers:

1. Ten (10) Portable air samples with charcoal/silver zeolite cartridges and filter paper for low volume air samplers.

D. Field Counting Instruments:

1. Four (4) Ludlum Model 19 Micro R Meters for gross gamma radiation measurement.
2. Thirteen (13) Eberline Model E-600 with hot dog, pancake, rem ball (2), 100cm2 Alpha/Beta (6), 2 inch sodium iodide low energy gamma detectors (3) smart probes.
3. FH40 G-L Multipurpose Meter with underwater probe, neutron probe (in counts per second), several scintillation probes and a 10-foot teletector.
4. Four (4) portal monitors two with standard GM detectors, two with plastic scintillation counters adaptable to vehicle or livestock surveys.

E. Survey Instruments:

1. Eight (8) Ludlum Survey Meters (Model 2241-2).
2. Two (2) Ludlum Survey Meters (Model 2241 Alpha).
3. Twelve (12) Ludlum Survey Meters (Model 3).
4. Two (2) RAD ID isotope identifier.
5. Nine (9) RO-20 Ion Chamber.
6. Three (3) ICS-4000 isotope identifier.

F. Emergency Vehicles:

1. 2 Chevrolet Suburban 3/4 Ton with Trailer towing Capability
2. 2 Chevrolet Suburban 3/4 Ton with Trailer towing Capability equipped with lights and sirens and the following equipment:
    - Hi-Volume 4 inch diameter filter paper Portable Air Sampler
    - Survey Meters (ion chamber and GM for detecting alpha, beta, gamma, and neutron radiation)
    - Dosimetry Equipment (RADOS) electronic self reading and alarming
    - Personal TLD
    - Protective Equipment (mask, tyvex, gloves, flashlights, etc.)
    - Sampling Supplies
    - Stat Phone
    - One (1) REM Ball
    - Personal laptop

- One vehicle has a Thermo ViewPoint 7 liter NBR Gamma Detection Probe and a Neutron Detection Probe. Five MATRIX ESP drop probes with 10 microR per hour to 1000R/hr proportional detector.

Type of Monitoring	*Type of Analysis*	*Equipment*
Alpha Contamination (Fixed and Non-Fixed)	Direct Field Measurement Readings. Removable Contamination (Detection range from BKG-1.0E+06 dpm)	Eberline E-600 w/380AB 100cm^2 scintillation detector wipes counted on Canberra/Tennelec Series 5E, Gas Proportional Counter
Beta Contamination (Fixed and Non-Fixed)	Direct Field Measurement Readings. Removable Contamination (Detection range from BKG-1.0E+06 dpm)	Eberline E-600 w/380AB 100cm^2 scintillation detector wipes counted on Canberra/Tennelec Series 5E, Gas Proportional Counter
Gamma (Ambient, Contamination Fixed and Non-Fixed)	Direct Field Measurement Readings. (Detection range from BKG-50.0 R/hr) Removable Contamination (Detection range from BKG-1.oE+06 cpm) Field Isotopic Identification	Eberline E-600 w/SHP-360 GM detector, SHP-270 GM detector w/Beta Shield or SSPA-3 2X2 NaI(T1) scintillation detector. Eberline R-02 Ion-Chamber. Ludlum Model 19 Micro R 1X1 NaI scintillation detector. Eberline ESP-1 “scaler” w/HP-210T/SH-4A, shielded probe BTI-Microspec-2 portable MCA w/2X2 NaI scintillation detector ORTEC/Transpec portable MCA high purity germanium gamma scintillation detector (20% efficiency)
Neutron (Ambient)	Direct Field Measurement (Types of detectable neutrons include thermal to 10 MeV) (Detection range from BKG to 500 R/hr)	Eberline E-600 w/SNRD BF_3 detector.

SC DHEC Radiochemistry Laboratory's Analytical Programs

Type of Sample	Type of Analysis	Major Equipment
Air Filter	-Gross Alpha and Gross Beta -Gamma	See List Below
Smears	-Gross Alpha and Gross Beta -Gamma -Tritium	See List Below
Air Cartridge	- Gamma, I-131	See List Below
Water	-Gross Alpha and Gross Beta -Gamma -Tritium -Strontium 89 & 90 -Radium 226 -Radium 228 -Uranium -Technetium 99	See List Below
Milk	-Gamma -Tritium	See List Below
Sediment	-Gross Alpha and Gross Beta -Gamma	See List Below
Soil	-Gross Alpha and Gross Beta -Gamma	See List Below
Tissue	-Gross Alpha and Gross Beta -Gamma	See List Below
Vegetation	-Gross Alpha and Gross Beta -Gamma	See List Below

List of Major Laboratory Equipment for Fixed and Mobile Laboratories:

A. Alpha / Beta Counters
   1. One Protean IPC 9025 Low Background Thin Window Gas-Flow Proportional Counter equipped with automatic sample changer. (Fixed Lab)

2. One Protean WPC 9350 Low Background Thin Window Gas-Flow Proportional Counter equipped with automatic sample changer. (Fixed Lab)
3. One Protean WPC 9550 Low Background Thin Window Gas-Flow Proportional Counter equipped with automatic sample changer. (Fixed Lab)
4. One Tennelec LB5100 Low Background Thin Window Gas-Flow Proportional Counter equipped with automatic sample changer. (Fixed Lab)
5. One Protean ASC DP Dual Phosphor Counter equipped with automatic sample changer. (Mobile Lab)
6. Three Protean MD58 MPC9604 Low Background Thin Window Gas-Flow Proportional Counter equipped eight detectors each. (Fixed Lab)

B. Liquid Scintillation Counters
1. One Packard 2300TR Liquid scintillation System with automatic sample changer. (Fixed Lab)
2. One Packard TRI-CARB 1050 TR/LL Liquid scintillation counter with printout. (Mobile Lab)

C. Gamma Detectors
1. One Canberra HPGE Coaxial Detector – 95% efficiency. (Fixed Lab)
2. One Canberra HPGE Coaxial Detector – 90% efficiency. (Fixed Lab)
3. One Canberra HPGE Coaxial Detector – 57% efficiency. (Fixed Lab)
4. One Canberra HPGE Coaxial Detector – 54% efficiency. (Fixed Lab)
5. One Ortec HPGE Coaxial Detector – 100% efficiency. (Fixed Lab)
6. One Ortec HPGE Coaxial Detector – 100% efficiency. (Fixed Lab)
7. One Ortec HPGE Coaxial Detector – 100% efficiency – Has a marrinelli autosampler. (Fixed Lab)
8. One Ortec HPGE Coaxial Detector – 40% efficiency. Has a planchet autosampler. (Fixed Lab)
9. One Ortec HPGE Coaxial Detector – 60% efficiency. (Mobile Lab)
10. One Ortec HPGE Coaxial Detector – 60% efficiency. (Mobile Lab)

D. Alpha Spectroscopy
1. One Ortec Octete Plus eight Silicon Surface Barrier Detectors with Vacuum Chambers for Alpha Spectroscopy.

E. Vehicle
1. One Mobile Laboratory – Ford E-450 truck equipped with on board generator.
2. One trailer with portable generator and supplies.

Tennessee

Governor

The Honorable Bill Haslam (Term ends January 2015)
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 agency responsible for coordinating state response to all emergencies, including peacetime radiological accidents. TEMA also provides an Emergency Operations Center that is operational 24 hours a day. TEMA maintains, calibrates and provides radiological instrumentation to state and local government agencies for use in the detection of radiation. Additionally, TEMA coordinates and conducts radiological training for state and local first responders.

Jim Bassham, Director
Tennessee Emergency Management Agency
State Emergency Operations Center
3041 Sidco Drive
Nashville, Tennessee 37204-1502
(615) 741-0001

Health Services

The Department of Environment and Conservation administers the state's radiation control 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.

Robert J. Martineau, Jr. Commissioner
Department of Environment and Conservation
L & C Annex, First Floor
401 Church Street
Nashville, Tennessee 37243-0435

Designee for Advance Notification of Shipments

Jim Bassham, Director
Tennessee Emergency Management Agency
State Emergency Operations Center
3041 Sidco Drive
Nashville, Tennessee 37204
(615) 741-0001

Radiological Emergency Assistance Contacts

Emergency Management Agency	(615) 741-0001 (24 Hours) (800) 262-3300 (In TN) (800) 258-3300 (Out Of TN)
Division of Radiological Health Department of Environment and Conservation 3rd Floor, L & C Annex 401 Church Street Nashville, Tennessee 37243-1532	(615) 532-0364

Emergency Team Members

Name	Title	Off-Duty Phone
Debra G. Shults	Director	(931) 362-4166
Arnott, Charles W.	Manager, RM Specific Licensing	(615) 889-3639
Crosslin, Ruben K.	Manager, Technical Services	(615) 849-9298
Flanagan, Elizabeth N.	Supervisor, Emergency Preparedness and Training	(615) 824-5839
Freeman, Billy H.	Manager, Inspection & Enforcement	(865) 573-4786
Graves, Johnny C.	Manager, Licensing, Registration and Planning	(615) 359-5032
Grewe, Allen E.	Manager, Memphis Area Office	(901) 365-1950
Seeger, Steve	Manager, Chattanooga Area Office	(423) 842-0343
AnthonyW.Hogan	Deputy Director	(615) 776-2481
Jerry Bingaman	Radioactive Waste Management	(615) 672-8295
JerryBingaman	Manager, Personnel & Environmental Monitoring	(931) 552-3779
Andrews, Mark	Manager, Knoxville Area Office	(865) 693-6139
Heriges, Robin	Manager, Nashville Area Office	(615) 868-5927

**In addition to the above listed individuals, there are 33 Health Physicists available for emergency response.

Laboratory and Analytical Programs

Type of Sample	Type of Analysis	Major Equipment
Air Filter	Gamma Spectroscopy	Ortec Gamma Vision Gamma Spectroscopy System with two HP Germanium detectors
Cartridge (I-131)	Gross Alpha	
Fish	Gross Beta	
Milk	Radium 226-228	Perken Elmer 3100 TR
Sludge	Strontium 89-90	
Soil	Total Uranium Tritium	Protean Automatic 100 Sample capacity (2) Protean four drawer manual
Vegetation	Technetium 99	
Water		

Current Inventory of Radiological Equipment for the State of Tennessee

1	Ludium 12-4 BF3 Rem Ball
9	Ludium 12-S Internal NaI
6	Bicron Micro-Rem Organic Scintillators
3	Aptec Multi-Channel Analyzers
3	Eberline RO-2 Ion Chamber
5	Eberline RO-2A Ion Chambers
1	Technical Associates IBM 3P2, Energy Compensated GM
4	Ludium 5 Internal GMs
9	Canary II 4080 Electronic Personnel Dosimeters
9	Canary III 4083 Electronic Personnel Dosimeters
3	Keithley 36155 Ion Chambers
9	Ludium 43-2 ZnS Scintillators
7	Ludium 43-5 ZnS Scintillators
12	Ludium 44-2 NaI Scintillators
1	Ludium 44-3 NaI Scintillator
4	Ludium 44-38 Energy Compensated, Side Window GMs
8	Ludium 44-4 End Window GMs
19	Ludium 44-9 Pancake GMs
4	HP-270Energy Compensated, Side Window GMs
8	Ludium 12 Survey Meters
6	F & J HV-1BC Air Samplers
9	Ludlum 3 Survey Meters
2	Ludlum 14A Survey Meters
3	Exploranium Handheld Multichannel Analyzers
3	Canberra “Inspector 1000” Multichannel Analyzer
5	Ludlum M 9-3 Radiation Survey Instruments

Texas

Governor

The Honorable Rick Perry (Term ends January 2013)
State Capitol
Austin, Texas 78711
(512) 475-4101

Emergency Services

The Texas 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.

Nim Kidd, State Coordinator
Texas Division of Emergency Management
Department of Public Safety
P.O. Box 4087
Austin, Texas 78733
(512) 424-2000

Department of State Health Services

Texas' radiation safety statute designates the Department of State Health Services (DSHS) as the radiation control agency. The Radiation Control Program (RCP) within the agency administers the agreement state program. The RCP develops and maintains the DSHS radiological emergency management (REM) plan and procedures. In the event of a radiological incident, the RCP is responsible for detection, measurement and supervision of clean-up of materials that are released into the environment. The RCP also provides an assessment of the incident as the basis for the assignment of protective recommendations and responses.

David Lakey, M.D.
Commissioner
Department of State Health Services
1100 West 49th Street
Austin, Texas 78756
(512) 458-7375

Designee(s) for Advance Notification of Shipments*

10 CFR Part 71	10 CFR Part 73
Richard Ratliff	Col. Steve McCraw
Radiation Program Officer	Director
Department of State Health Services	Texas Department of Public Safety
P.O. Box 149347-9347	5805 North Lamar Blvd.
Austin, Texas 78756	Austin, Texas 78752
(512) 834-6679	(512) 424-2000

* Texas has two separate agencies that are designated to receive advance notification for the two types of shipments.

Radiological Emergency Assistance Contacts

(Mailing Address) Radiation Control Program Department of State Health Services Inspection Unit – MC1986 P.O. Box 149347 Austin, Texas 78714-9347	Fax (512) 834-6654 (For routine communications) Fax (512) 832-9715 (For emergency use only)
(Physical Address) Radiation Control Program The Exchange Building 8407 Wall Street Austin, Texas	(512) 834-6770 (8am - 5pm) (512) 458-7460 (24 Hours)
Texas Division of Emergency Management Texas Department of Public Safety 5805 N. Lamar Blvd. Austin, Texas 78773-0001	(512) 424-2000 Ext. 2138 (8am - 5pm) Ext. 2277 (24 Hours)

Emergency Team Members

Name	Title	Off-Duty Phone
Ratliff, Richard	Radiation Program Officer	(512) 346-5130 richard.ratliff@dshs.state.tx.us
Rogers, Alice	Manager, Radiation Inspections Branch	(512) 453-6332 alice.rogers@dshs.state.tx.us
Free, Robert E.	Manager, Environmental Monitoring Group	(512) 759-2292 robert.free@dshs.state.tx.us
Corbin, Glenn	Emergency Planner	(512) 912-8052 glenn.corbin@dshs.state.tx.us
Walker, Rae	Emergency Planner	(512) 924-4178 rae.walker@dshs.state.tx.us
Moore, Chris	Emergency Planner	(512) 291-8865 chris.moore@dshs.state.tx.us
Hutchison, William	Emergency Planner	(256) 279-3767 william.hutchison@dshs.state.tx.us

Emergency Team Composition

The Radiation Control Program (RCP) Radiological Emergency Response Team (RERT) can provide one shift of personnel which includes the following manpower and skills:

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

Detection, Measurement and Evaluation Systems

Fixed Laboratory Facility:

The Texas Department of State Health Services has in its headquarters laboratory the following equipment:

1 Gamma Spectroscopy System
2 Automatic Sample Changers (Out of Service: Upgrade Pending)
1 High Purity (>30%) Germanium Detectors
7 Manual Alpha-Beta Proportional Systems
9 Ludlum Model 200 Scalers with Scintillation Detectors
2 Liquid Scintillation System
4 Alpha-Beta Proportional System with Automatic (100 capacity) Sample Changer
16 Alpha Spectroscopy Channels

Mobile Laboratory:

The RCP mobile analysis laboratory is contained within a 32' gooseneck-type trailer.
1 Gamma Spectroscopy System
2 High Purity (>25%) Germanium Detectors (1 p-type, 1 n-type)

Emergency Response Vehicle:

The RCP 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. Analysis is performed using a SAMS 940 multi-channel analyzer, Thermo HandECount or by survey meters capable of measuring alpha, beta or gamma radiation.

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

5	Power Inverters (12vdc to 115vac, 60Hz)
23	Low Volume Air Samplers
3	High Volume Air Samplers
10	Ludlum 2241-3 Scaler/Survey Meters
50	Ludlum 14-C Survey Meters with:
100	Ludlum model 44-6/44-38 Thin Wall Gamma Probes
70	Ludlum model 44-2 High Energy Gamma Scintillators
30	Ludlum model 44-3 Low Energy Gamma Scintillators
55	Ludlum model 43-2 Alpha Scintillators
4	Ludlum model 44-40 Shielded Pancake Probes
50	Ludlum model 44-9 Pancake Probes
8	Ludlum model 44-7 End Window Geiger-Muller Probes
30	0-500 r/hr Personal Electronic Dosimeter (Canberra Mini-Radiac)
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
6	Hand-Held 5-watt Radios
2	(25-watt) Base Radios (porti-mobile)
13	(40-watt) 36 Channel Programmable Mobile Radios
25	Eberline E-600s
25	Eberline Smart Low Energy Gamma (SLEG-1) Probes
25	Eberline Smart Alpha/Beta Scintillators (SHP-380AB) Probes
25	Eberline Smart Geiger-Mueller (SHP-270) Probes
25	Eberline Smart Pancake (SHP-360) Probes
6	Eberline Smart Low Energy Gamma (PG-2) Probes
4	Eberline Alpha Air Monitors (Alpha-6A) with Air Flow Pumps
2	SAC-4 Alpha Scintillation Counters
7	Fidler Probes with E-600 Survey Meters
1	Violinist with Fidler Probe
1	SAM 940 LaBr MCA with neutron detector and GPS
1	SAM 940 NaI MCA with neutron detector
3	SAM 940 NaI MCA
2	SAM 935 NaI MCA
2	Thermo RadEye Gamma Scintillator
2	Thermo RadEye-ER Gamma Scintillator
6	Thermo RadEye-G Gamma Scintillator
8	Thermo Electron Handheld Interceptor MCA & neutron detector
1	Thermo HandECount™ alpha/beta wipe analyzer
12	Portable Garmin GPS units

Virginia

Governor

The Honorable Robert F. McDonnell (Term ends January 2014)
State Capitol
Richmond, Virginia 23219
(804) 786-2211

Emergency Services

The Department of Emergency Management(DEM) 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. With respect to radiological emergency response, DEM works jointly with the Department of Health (Division of Radiological Health) and other agencies if necessary to coordinate federal, state and local response activities and a public information program.

Michael M. Cline, State Coordinator
Department of Emergency Management
10501 Trade Court
Richmond, Virginia 23236
(804) 674-2400

Health Services

In an emergency the Department of Health has primary responsibility for health and medical assistance. The department's Division of Radiological Health is responsible for maintaining a state Radiological Emergency Response Team, which has radiological monitoring and dose assessment capabilities. The Radiological Emergency Response Team may be activated upon request by the Department of Emergency Management.

Karen Remley, M.D., M.B.A., F.A.A.P.
State Health Commissioner
Department of Health
P.O. Box 2448
Richmond, Virginia 23218
(804) 864-7005

Designee for Advance Notification of Shipments

Department of Emergency Management
10501 Trade Court
Richmond, Virginia 23236
(804) 897-6570

Radiological Emergency Assistance Contacts

Department of Emergency Management
(804) 674-2400 (24 Hours)

Department of Health
Division of Radiological Health
109 Governor St., Room 730
Richmond, Virginia 23219
(804) 864-8150

Emergency Team Members

Name	Title	Off-Duty Phone
Foldesi, Leslie P.	Director	(804) 285-7931
Rideout, Marvin	Assistant Director, Environmental Surveillance	(804) 674-2400
Orchel, Jr., Stanley	Assistant Director X-Ray Protection	(804) 674-2400
Welling, Michael	Assistant Director, RAM Licensing	(804) 674-2400

**Other Division staff are available as required.

Laboratory and Analytical Programs

Type of Sample	Type of Analysis	Major Equipment
air (filter), water, wipe test	Gross Alpha	Ludlum Model 3030
	Gross Beta	Ludlum Model 3030
water, wipe test	tritium	Packard Tri-Carb 2900TR Liquid Scintillation Counter
air (charcoal), biota, milk, water, wipe test	gamma analysis	Canberra Genie-PC spectroscopy system with 3X3 sodium iodide detector and high purity germanium detector
ambient gamma	Environmental TLD	Landauer's mircroStar reader OSL environmental dosimeters

Emergency Vehicles:

Mobile Command Radiological Laboratory- 2007 Pierce Enforcer, 50,500 lbs. GVW, Height 12 feet 6.75 inches , Generator (30KW)
Mobile Radios, FAX Machine, Satellite Telephone, GPS, Portable Monitoring Equipment including air samplers, Personal Dosimetry, Protective Clothing, and Potassium Iodide Tablets, Canberra Genie-PC Gamma Spectroscopy System, Canberra Low Background Alpha/Beta System, and Packard Tri-Carb Liquid Scintillation Analyzer

Auxiliary Mobile Lab (Ford 2004 Model E450, with ambulance box), Generator (6KW)
Mobile Radios, FAX Machine, Satellite Telephone, GPS, Portable Monitoring Equipment including air samplers, Personal Dosimetry, Protective Clothing, and Potassium Iodide Tablets, Canberra Inspector 2000 with ISOCS In-Situ Gamma Spectroscopy System, and Ludlum Model 3030 Solid State Alpha/Beta System

Federal Agencies

Federal Emergency Management Agency

Region III (District of Columbia, DE, MD, PA, VA, WV)

Acting Regional Director: Jonathan Sarubbi
FEMA, Region III
615 Chestnut Street, 6th Floor
Philadelphia, Pennsylvania 19106

Commercial: (215) 931-5608
Fax: (215) 931-5621

Region IV (AL, FL, GA, KY, MS, NC, SC, TN)

Regional Director: Phil May
FEMA, Region IV
3003 Chamblee Tucker Road
Atlanta, Georgia 30341

Commercial: (770) 220-5200
Fax: (770) 220-5230

Region VI (AR, LA, NM, OK, TX)

Regional Director: Gary Jones
FEMA, Region VI
Federal Regional Center
800 N. Loop 288
Denton, Texas 76209-3698

Commercial: (940) 898-5104
Fax: (940) 898-5325

Region VII (IA, KS, MO, NE)

Regional Director: Dick Hainje
FEMA, Region VII
9221 Ward Parkway, Suite 300
Kansas City, Missouri 64114-3327

Commercial: (816) 283-7060
Fax: (816) 283-7582

A. Authorities. FEMA has been assigned, by a Presidential directive dated December 7, 1979, lead responsibilities for all federal offsite radiological emergency preparedness. This directive consolidated, under FEMA, those emergency response activities previously assigned to three agencies: the Defense Civil Preparedness Agency (DCPA), the Emergency Preparedness Agency and the Federal Disaster Assistance Agency (FDAA). FEMA has published rulemaking to fulfill this directive.

1. 44 CFR 350 (48 FR 44335, September 28, 1983 and as amended). This rule describes the criteria for reviewing, evaluating and approving state and local radiological emergency plans and preparedness. It also describes the process FEMA uses to evaluate and determine the state and local governments' capability to effectively implement these plans and preparedness during drills and exercises.

   FEMA and the NRC jointly published their guidance document, NUREG 0654/FEMA-REP-1, Revision 1, in November 1980. This document contains the established 16 federal planning standards and related evaluation criteria for evaluating offsite (utility, state and local government) radiological emergency planning. The 16 planning standards are incorporated into the NRC rule (10 CFR 47 (a) (1-16)) and the FEMA rule (44 CFR 350 (1) (1-16)). REP-15 has been superceded by the Evaluation Criteria, which was published

in the Federal Register on September 11, 2001. Additionally, FEMA-REP-10 provides guidance in evaluating state/local alert and notification systems and EPA 400-92-R-001 provides guidance on protective action recommendations.

2. 44 CFR 351 (47 FR 10759, March 11, 1992 and as amended). This regulation assigns federal agency responsibilities for assisting state and local governments in emergency planning and preparedness for fixed nuclear facility accidents and transportation incidents involving radioactive materials. FEMA also has published a Federal Radiological Emergency Response Plan (FRERP) (50 FR 46542, November 8, 1985) which assigns emergency response functions to federal agencies and provides a structure for effectively coordinating federal assistance to state and local governments for accidents at nuclear power plants. This plan has the concurrence of twelve federal agencies. FEMA is now developing a radiological annex to the comprehensive, all-hazards Federal Response Plan (FRP) which was published in April, 1992. The FRERP will remain as the primary federal plan for peacetime radiological emergencies in the absence of a Presidential Declaration of Emergency or disaster.
3. 44 CFR 352, (FR August 2, 1989). This rule established policies and procedures for a licensee submission of a certification of a "decline or fail" situation should state or local governments choose not to participate in radiological emergency planning. It described FEMA's determination concerning federal assistance to the licensees. It also provided procedures for review and evaluation of the adequacy of the licensee offsite radiological emergency planning and preparedness, which is a precondition to its submission of a "decline or fail" certification.
4. 44 CFR 353 (FR March 6, 1991). This rule established a structure for assessing user fees to NRC licensees to reimburse the federal government for some costs of the radiological emergency preparedness program. This rule has been superseded by 44 CFR 354.
5. 44 CFR 354 (FR July 1, 1993). This rule authorized FEMA to assess fees to NRC licensees for commercial power plants for recovery of not less than 100 percent of the amounts anticipated by FEMA to obligated for the radiological emergency preparedness program for fiscal year 1993. This rule has been extended for each of the following fiscal years.

B. FEMA Regional Offices. (Only those states that are a part of SERC are listed.) FEMA Region II is located in New York City and serves Puerto Rico; FEMA Region IV is located in Atlanta, Georgia and serves the states of Alabama, Florida, Georgia, Kentucky, Mississippi, North Carolina, South Carolina and Tennessee; FEMA Region VI is located in Denton, Texas and serves the states of Arkansas, Louisiana, New Mexico, Oklahoma and Texas; FEMA Region VII is located in Kansas City, Missouri and serves Iowa, Kansas, Missouri and Nebraska.

C. State Emergency Offices. In each state a lead agency has been designated for radiological emergency preparedness. In most states this agency is either the State Emergency Management Agency or the Radiological Health organization in the State Health Department. The designated lead state agency works closely with their corresponding FEMA Regional office to develop state and local capabilities to respond to peacetime nuclear and radiological accidents/incidents. Each state Emergency Management office has a staff member designated as a Radiological Officer and most states have Radiological Instrument Inspection, Maintenance and Calibration Facility. These personnel and facilities are, in part, funded by FEMA. Each state has personnel who are licensed users of multi-curie radiation sources.

D. Instrumentation. As of August, 1994, over 36,100 radiological instrument sets have been granted by FEMA to the States of Region IV and over 22,500 sets have been granted to the states of Region VI. Additional sets have been granted to the State of

Missouri and to Puerto Rico. These sets, which were developed in the 1960s, were originally intended for use in the high gamma radiation environment that would have followed a nuclear war. These instruments include 25,800 sets for self-protection monitoring by emergency services and vital facility personnel (RADEF Instrument Set types CDV-777 and CDV-777-1); 6,800 sets for weapons effects stations (RADEF Instrument Set type CDV-777A); and over 26,000 sets for fallout shelters (RADEF Instrument type CDV-777-2). The different sets contain various combinations of radiation survey meters and dosimeters with scales ranging from 0-200 mR to 500 R. The instrument **sets** would be of small utility in a peacetime radiological incident, but some of the instruments that they contain could be valuable under these conditions. These sets were distributed throughout the FEMA Regions and are under the control of state and local emergency preparedness organizations. Sets for self-protection and weapons effects reporting are located at many facilities in the states. Shelter sets and additional instrument sets are stored under local control. In addition to the instrument sets mentioned above, FEMA has granted to each state two or more specially modified CDV-700-M GM survey meters equipped with a thin-end-window GM Tube and probe housing. This instrument has an increased detection sensitivity for alpha and beta radiation.

E. Communications. FEMA has the capability to provide a multifaceted communications capability to connect national, regional, state and local governments for emergency communications. Among the systems available are:

- FEMA National Radio System (FNARS). A high-frequency radio system that provides connections to each state in each FEMA Region, and connections to FNARS stations at the National level, other FEMA Regions, other federal agencies and military installations. This system uses single sideband modulation for voice transmission and data communications.
- FEMA Wide Area Network (WAN). A computer network connecting each state with their FEMA Region, and which also provides data communications with stations at FEMA National and with other FEMA Regions.
- National Warning System (NAWAS). A full-time leased wire system operating between two National Warning Centers, each of the ten FEMA Regions, state and local governments and various warning points strategically located throughout the regions. All primary warning points are staffed for 24-hour operation.
- Mobile Emergency Response Support (MERS) Detachment. The five FEMA MERS Detachments stationed at strategic locations around the nation are multi-vehicle organizations designed to support federal emergency response operations. The communication, logistic, operation, and life support service provided by these Detachments is fully independent of local infrastructure. Communication support is based around a large mobile communications truck, called the Multi-Radio Vehicle (MRV), that carries high frequency (HF), very high frequency (VHF), ultra high frequency (UHF), line-of-sight microwave and KU band satellite radios to support voice and data transmissions, along with telephone, modem, FEMA LAN/WAN, video conference, and television broadcast capabilities. The MRV, using the KU band satellite, can provide high quality, multi-line telephone service to any remote location in a very short time frame. Additionally, the Detachment in Denton, Texas is equipped with an Emergency Operations Vehicle (EOV) that can provide a comfortable, well-equipped space for 20 people to manage response operations. Other vehicles under MERS control can further augment radio or telephone capabilities from disaster sites, provide logistics and life support services to federal disaster teams, provide electrical generation capability, provide environmental control to special operating sites and provide fuel to operate all of the above for extended periods. The majority of the MERS vehicles are air transportable by military

transport aircraft and can be on-scene and operational at a disaster site in less than 24 hours.

Recommended Composition of RADEF Instrument Sets

Set Types	Quantity and Types of Instruments in Sets				
	CDV-700	CDV-715	CDV-717	CDV-742	CDV-750
CDV-777	1	2	0	6	1
CDV-777A	1	1	1	6	1
CDV-777-1	1	1	0	6	1
CDV-777-2	0	1	0	6	1

U.S. Department of Energy

Radiological Emergency Assistance Contacts

Emergency Operations Center (202) 586-8100

Radiological assistance from the U.S. Department of Energy Regional Coordinating Offices is available 24 hours a day and can be requested by calling the emergency assistance numbers listed.

Region 2 (AR, KY, LA, MS, MO, PR, TN, VI, VA, WV)

Regional Response Coordinator: Steven M. Johnson
Oak Ridge Office
U.S. Department of Energy (865) 576-1005
P.O. Box 2001, OS-204
Oak Ridge, Tennessee 37831-8543

Region 3 (AL, FL, GA, NC, SC)

Regional Response Coordinator: Christina T. Edwards
Savannah River Site Office
National Nuclear Security Administration (803) 725-3333
P.O. Box A
Aiken, South Carolina 29802

Region 4 (AZ, KS, NM, OK, TX)

Regional Response Coordinator: Kent Gray
Albuquerque Complex; NA-42
U.S. Department of Energy / NNSA (505) 845-4667
P.O. Box 5400
Albuquerque, New Mexico 87185-5400

U.S. Environmental Protection Agency

Radiological Emergency Assistance Contacts

National Air and Radiation Environmental Laboratory (NAREL)
U.S. Environmental Protection Agency
540 South Morris Avenue
Montgomery, Alabama 36115-2601

On-Duty: (334) 270-3401

Emergency Team Members

Name	Title	Off-Duty Phone
Fraass, Ron	Director	(334) 277-7637 (334) 549-9333 Cell
Lee, Larry	Center Director, Environmental Monitoring and Emergency Response	(334) 491-0168 (334) 462-9006 Cell
Poppell, Sam	Emergency Response Coordinator	(334) 277-1519 (334) 546-7214 Cell

Laboratory and Analytical Programs

Mobile Laboratory

One (1) Mobile Environmental Radiation Laboratory (MERL), semi tractor-based
One (1) Sample Preparation Trailer

Mobile Power Systems

Two (2) 20 Kw Semi Tractor Mounted Generators
Twenty-five (25) 2.0 Kw-5 Kw Gasoline Generators

Communications

Ten (10) digital handheld portable Radios
Cellular telephones
Two (2) Satellite telephones (Iridium)
Satellite uplink with VOIP/phone/internet

Analytical

Alpha energy spectrometry (fixed lab), gamma energy spectrometry (NaI and high purity germanium)(fixed lab and MERL), Gross alpha-beta proportional counting (fixed lab and MERL) and Liquid Scintillation Counting (LSC) for alpha and beta emitting radionuclides (fixed lab and MERL)

Mixed Waste Organics, (fixed lab): volatiles, semivolatiles, pesticides/PCB and trace metals analysis.

Field Instruments

2” Low volume and 4” High volume air samplers. Pressurized Ionization Chamber (PIC) survey meters and High pressure ionization chambers (HPIC) for airborne low level gamma environmental monitoring. Portable digital multipurpose survey meters

coupled with a multitude of detector types used to perform routine alpha, beta, and gamma survey work. Portable digital NaI multichannel analyzers for isotopic identification and measurement of multiple radionuclides and special nuclear materials. Passive, long term GM dose rate detection instruments. Waterproof, telescopic GM dose rate meters. Electronic personal dosimeters that respond to beta and gama radiation. RadNet Deployable Units (20), a near real time radiation monitoring system with low and high volume air samplers.

U.S. Nuclear Regulatory Commission

Radiological Emergency Assistance Contacts

NRC Emergency Operations Center Rockville, MD	(301) 816-5100 (301) 951-0550 (backup) (301) 415-0550 (backup) (301) 816-5151 Fax

Region II (AL, FL, GA, KY, NC, PR, SC, TN, VA, VI, WV)

Regional Administrator: Luis Reyes U.S. Nuclear Regulatory Commission Region II 245 Peachtree Center Avenue, NE Suite 1200 Atlanta, Georgia 30303-1257	(404) 997-4000 - Main (404) 997-4410 - Direct

Region III (IL, IN, IA, MI, MN, MO*, OH, WI)

Regional Administrator: Mark Satorius U.S. Nuclear Regulatory Commission Region III 2443 Warrenville Road, Suite 210 Lisle, Illinois 60532-4351	(630) 829-9500 (630) 829-9657

Region IV (AK, AR, AZ, CA, CO, HI, ID, KS, LA, MS, MT, ND, NE, NM, NV, OK, OR, SD, TX, UT, WA, WY, Pacific Territories and the Callaway Nuclear Power Plant in MO*)

Regional Administrator: Elmo E. Collins, Jr. U.S. Nuclear Regulatory Commission Region IV 612 E. Lamar , Suite 400 Arlington, Texas 76011-4005	(817) 860-8100 (817) 860-8225

** Region III is responsible for the entire state of Missouri except the Callaway Nuclear Power Plant. Region IV is responsible for the Callaway Nuclear Power Plant.*

NRC Emergency Response Teams are activated to respond to incidents at NRC-licensed facilities by calling the NRC Operations Officer at (301) 816-5100. Team composition depends on the specific facility and includes NRC personnel qualified to respond to an emergency at that facility. Radiological assessment expertise is available upon DOE request.

Tennessee Valley Authority

Radiological Emergency Assistance Contacts

Tennessee Valley Authority
Emergency Preparedness
1101 Market Street
6B Lookout Place
Chattanooga, Tennessee 37402-2801

TVA Operations Duty Specialist
(423) 751-1700 (24-hours)

Emergency Team Members

Name	Title	Off-Duty Phone
Marks, B. K.	Manager, Emergency Preparedness	(423) 751-1700
Parshall, J.M.	Manager, Emergency Preparedness Program Planning and Implementation Section	(423) 751-1700

Capacity to Dispatch:
Two Environs Radiological Monitoring Teams - two staff per team.

Laboratory and Analytical Programs

Subject to TVA's commitment to its ongoing nuclear power programs, the following services or facilities could possibly be made available as a part of the regional radiation emergency response plan. These are:

1. Two (2) Environs Radiological Monitoring Vehicles: TVA has dedicated vehicles for emergency radiological monitoring which are equipped with radio/cellular telephone communications, onboard generators, air samplers and monitoring instruments. Scalers include NaI and GM detectors. Protective clothing, floodlights and items for transportation accident response are onboard.
2. Instrumentation Calibration and Repair Facilities: These facilities could be available for limited use.
3. Radiological Laboratory Services: The Western Area Radiological Laboratory is located in Muscle Shoals, Alabama. Analytical services from the fixed facility could be available in extreme emergencies, but only for short periods of time due to the ongoing commitment in support of TVA nuclear programs.
4. TLD Services: Services based at the Sequoyah Nuclear Plant Training and Visitor Center could be available for limited use. TLD services include NVLAP accreditation for Panasonic 710 readers and 802 dosimeters.