

III. RADIOLOGICAL INCIDENTS

Incidents involving radiological materials attract much attention and concern, often placing unique demands on local emergency services. The potential danger to human life and property associated with exposure to and contamination from radioactive materials requires specialized preplanning efforts by local officials.

Preplanning for radiological emergencies is predicated on several reasons. First, technological advances in the nuclear industry have resulted in the increased production of new radioactive products. With the development of these products, potential hazards are created. Second, radioactive products are being transported at increased rates through local jurisdictions. Local officials are often unaware of this movement of nuclear wastes and other radioactive products. Finally, incidents at nuclear power plants can result in mass radiation exposure. This potential danger was most evident at the Three Mile Island reactor emergency that occurred in March 1979 in Middletown, Pennsylvania. Statistics show that as of 30 June 1980, there were 73 nuclear power reactors, 87 under construction, and 17 more planned in the United States. The sheer number of these sites reinforces the need for effective preplanning efforts by local response agencies.

Preplanning for radiological emergencies includes both fixed facility and transportation incidents. In fixed facility incidents, pre-emergency planning entails close coordination and cooperation between proprietors and local emergency response agencies. Responders must be familiar with the facility's products, building construction and layout, and access routes. In both fixed facility and transportation emergencies, procedures must be developed for immediate emergency response and potential secondary impact. These incidents have a rapid onset and an uncertain area of impact. They can vary in size and scope and in number of people affected.

Effective preplanning for radiological emergencies is comprised of several areas. These areas include evacuation, control of fire, rescue, care of contaminated victims, and transport. Other essential areas include communications and care of emergency personnel.

Emergency responders need specialized training and equipment to manage radiological emergencies. Basic training in the use of detection devices such as radiation survey meters is important. Equipment must be available to assess the size and involved areas of a potential release and to confirm the actual occurrence. In addition, emergency personnel should be able to identify the type of release, such as exposure to air, water, or food systems.

Based on the survey responses, training for emergency personnel is generally provided by state and local emergency preparedness agencies. Most of the training is focused on the use of basic detection devices. In some communities, such as those housing nuclear power plants in their response areas, more extensive training for emergency personnel may be provided. The San Clemente, California Fire Department, for example, with a response area of 15 square miles and a population of 27,000, has all department firefighters trained as radiological meter operators through the California Office of Emergency Services. At least nine additional personnel, in three shifts, are trained as a specialized monitoring team. Three personnel are trained as radiological defense officers.

In general, most agencies rely on fire and rescue units equipped with specialized monitoring equipment to serve as radiological response teams. Several of the teams identified in

the directory operate as both hazardous materials and radiological response teams. The Sacramento, California Fire Department, one such team, considers radiological products as one of the eight hazardous materials included in its response capabilities.

In many communities housing nuclear power reactors, local response plans have been developed. The San Clemente Fire Department and Office of Emergency Services have developed a "Nuclear Power Plant Radiological Emergency Response Plan," which is annexed to the City of San Clemente's Emergency Operations Plan. The plan establishes organizational responsibilities, planning and management guidelines, and identifies procedures to be enforced in the event of a radiological emergency at the nuclear power plant.

Local radiological response plans in communities are often prepared in cooperation with state plans. Frequently, the state plan is modified to meet local conditions. It is important that all plans be tested through the use of simulated exercises and modifications made, as necessary.

Many of the communities surveyed indicated that their locally developed training manuals are for both hazardous materials and radiological emergencies. Public and privately developed manuals are frequently used. State departments of emergency preparedness are often a source of training materials.

State radiological offices can provide assistance to local officials in their planning efforts. Other resources include chemists, engineers, and medical physicists located in most major medical facilities. Higher educational institutions may provide further resources.

Most of the reference materials available to local officials consist of federal publications. These references should be reviewed in preplanning for radiological emergencies.

III. RADIOLOGICAL INCIDENTS

A. Training Programs

<u>State</u>	<u>Agency</u>	<u>Contact</u>	<u>Square Miles</u>	<u>Population</u>
Alabama	Birmingham Fire and Rescue Service 1808 Seventh Avenue, North Birmingham, AL 35235 (205) 323-8304	O. N. Gallant Fire Chief	100	275,000
Arizona	Mesa Fire Department 13 West First Street Mesa, AZ 85201 (602) 834-2101	Douglas Ellis Training Captain	68	170,000
	Phoenix Fire Department Room 465 620 West Washington Street Phoenix, AZ 85503 (602) 262-6297	Gary P. Morris Captain	350	800,000
California	Arden Fire District 2200 Park Towne Circle Sacramento, CA 95825 (916) 485-1700	John Dell Assistant Chief	35	180,000
	Los Angeles Fire Department 200 North Main Street Los Angeles, CA 90012 (213) 485-6100	Jack Bennett Assistant Chief	467.63	3,000,000
	Merced Fire Department P.O. Box 2068 Merced, CA 95344 (209) 722-8331	Joe Ortiz Fire Chief	12	34,700
	Sacramento Fire Department Room 3 915 I Street Sacramento, CA 95814 (916) 449-5266	Robert Schultz Deputy Chief, Emergency Operations	94	258,000
	San Clemente Fire Department 100 Avenida Presidio San Clemente, CA 92672 (714) 492-5105	Ronny Coleman Fire Chief	15	27,000

III. RADIOLOGICAL INCIDENTS

A. Training Programs

<u>State</u>	<u>Agency</u>	<u>Contact</u>	<u>Square Miles</u>	<u>Population</u>
Colorado	Barcroft Fire Protection District 3301 South Field Street Lakewood, CO 80227 (303) 989-4307	Bob Porter Assistant Chief	80	155,000
	Denver Fire Department 745 West Colfax Avenue Denver, CO 80204 (303) 575-5522	John Marshall Lieutenant, Bureau of Fire Prevention	117	485,000
	Littleton Fire Department 2255 West Barry Avenue Littleton, CO 80165 (303) 795-3800	Phillip Kessler Training Officer	45	107,000
Connecticut	Hartford Fire Department 275 Pearl Street Hartford, CT 06103 (203) 525-3123	John B. Stewart, Jr. Fire Chief	18.9	150,000
Florida	Coral Gables Fire Department 2815 Salzedo Street Coral Gables, FL 33134 (305) 442-1887	Robert T. Boutelle Deputy Chief	12	45,000* 20,000**
	Jacksonville Fire Division 107 Market Street Jacksonville, FL 32202 (904) 633-5433	E. P. Lowstuter Division Chief of Services	844	600,000
Illinois	Des Plaines Fire Department 405 South River Road Des Plaines, IL 60016 (312) 824-7407	David Clark Deputy Chief, Training	17	57,000
Kansas	Wichita Fire Department City Hall, Twelfth Floor 455 North Main Street Wichita, KS 67207 (316) 268-4451	Jim Sparr Fire Chief	110	285,000

*Permanent
**Student

III. RADIOLOGICAL INCIDENTS

A. Training Programs

<u>State</u>	<u>Agency</u>	<u>Contact</u>	<u>Square Miles</u>	<u>Population</u>
Louisiana	New Orleans Fire Department 317 Decatur Street New Orleans, LA 70130 (503) 581-6200	Richard Blackman Captain	199	565,000
Massachusetts	Boston Fire Department 115 South Hampton Street Boston, MA 02118 (617) 442-8000	Walter Cameron Deputy Chief	47	600,000
	Pembroke Fire Department Fire Headquarters Center Street Pembroke, MA 02359 (617) 293-2300	Robert Silva Fire Investigator	23	13,000
	Plymouth Fire Department 114 Sandwich Street Plymouth, MA 02360 (617) 746-2212	Arthur H. Lamb Fire Chief	109	38,000
Nevada	Carson City Fire Department 111 North Curry Street Carson City, NV 98701 (702) 887-2200	Bernie Sease Fire Chief	146	33,000
New York	New York Fire Department 110 Church Street New York, NY 10007 (212) 566-2049	Homer G. Bishop Chief of Operations	320	7,149,300
Ohio	Cincinnati Fire Department 430 Central Avenue Cincinnati, OH 45202 (513) 352-2315	Robert G. Rathman Assistant Chief	78	385,457
	Columbus Fire Division 200 Greenlawn Avenue Columbus, OH 43223 (614) 222-7384	H. J. Dutko Battalion Chief, EMS	171	670,000
Oklahoma	Oklahoma City Fire Department 820 N.W. Fifth Street Oklahoma City, OK 73107 (405) 235-3314	Bob Mowles Chief Training Officer	640	410,000

III. RADIOLOGICAL INCIDENTS

A. Training Programs

<u>State</u>	<u>Agency</u>	<u>Contact</u>	<u>Square Miles</u>	<u>Population</u>
Oregon	Jackson County Fire District 3 8333 Agate Road Central Point, OR 97503 (503) 826-7100	William Anson Fire Chief	156	20,000
Texas	Dallas Fire Department 1500 Marilla Street Dallas, TX 75201 (214) 670-4565	S. Joseph O'Briant Deputy Chief	378	904,000
Virginia	Fairfax City Fire and Rescue Services 4081 University Drive Fairfax, VA 22030 (703) 385-7874	Joe Bailey Lieutenant, Training Officer	7	22,000
	James City County Fire Department 449 John Tyler Highway Williamsburg, VA 23185 (804) 220-0626	Richard Miller Assistant Chief	148	30,000- 100,000*
Wisconsin	Green Bay Fire Department 501 South Washington Street Green Bay, WI 54301 (414) 497-3777	Gerald Selissen Fire Chief	45	88,000

*Seasonal

III. RADIOLOGICAL INCIDENTS

B. Response Teams

<u>State</u>	<u>Agency</u>	<u>Contact</u>	<u>Square Miles</u>	<u>Population</u>
Arizona	Phoenix Fire Department Room 465 620 West Washington Street Phoenix, AZ 85503 (602) 262-6297	Gary P. Morris Captain	350	800,000
	Tucson Fire Department P.O. Box 27210 Tucson, AZ 85720 (602) 791-4511	D. H. Canterbury Inspector	10,000*	500,000*
California	Sacramento Fire Department Room 3 915 I Street Sacramento, CA 95814 (916) 449-5266	Robert Schultz Deputy Chief, Emergency Operations	94	258,000
	San Clemente Fire Department 100 Avenida Presidio San Clemente, CA 92672 (714) 492-5105	Ronny Coleman Fire Chief	15	27,000
Colorado	Colorado Springs Fire Department 31 South Weber Street Colorado Springs, CO 80903 (303) 471-6820	Richard Smith Fire Chief	103	215,000
	Denver Fire Department 745 West Colfax Avenue Denver, CO 80204 (303) 575-5522	John Marshall Lieutenant, Bureau of Fire Prevention	117	485,000
Kansas	Wichita Fire Department City Hall, Twelfth Floor 455 North Main Street Wichita, KS 67207 (316) 268-4451	Jim Sparr Fire Chief	1,008*	360,000*
Massachusetts	Pembroke Fire Department Fire Headquarters Center Street Pembroke, MA 02359 (617) 293-2300	Robert Silva Fire Investigator	23	13,000

*Multijurisdictional

III. RADIOLOGICAL INCIDENTS

B. Response Teams

<u>State</u>	<u>Agency</u>	<u>Contact</u>	<u>Square Miles</u>	<u>Population</u>
Massachusetts (continued)	Plymouth Fire Department 114 Sandwich Street Plymouth, MA 02360 (617) 746-2212	Arthur H. Lamb Fire Chief	109	38,000
Missouri	Lee's Summit Fire Department 207 South Douglas Street Lee's Summit, MO 64063 (816) 251-2345	Mike Wren Acting Fire Chief	74	30,000
Oregon	Jackson County Fire District 3 8333 Agate Road Central Point, OR 97503 (503) 826-7100	William Anson Fire Chief	156	20,000
	Multnomah County Fire District 10 P.O. Box 16368 Portland, OR 97216 (503) 761-7120	Len Malmquist Fire Inspector	75.2	380,000
Texas	Houston Fire Department 410 Bagby Street Houston, TX 77002 (713) 222-3964	Thomas W. Dawson Administrative Assis- tant to the Chief	556	1,500,000
Virginia	Fairfax City Fire and Rescue Services 4081 University Drive Fairfax, VA 22030 (703) 385-7874	Joe Bailey Lieutenant, Training Officer	7	22,000
	James City County Fire Department 449 John Tyler Highway Williamsburg, VA 23185 (804) 220-0626	Richard Miller Assistant Chief	148	30,000- 100,000*

*Seasonal

III. RADIOLOGICAL INCIDENTS

C. Response Plans

<u>State</u>	<u>Agency</u>	<u>Contact</u>	<u>Square Miles</u>	<u>Population</u>
Alabama	Birmingham Fire and Rescue Service 1808 Seventh Avenue, North Birmingham, AL 35235 (205) 323-8304	O. N. Gallant Fire Chief	100	275,000
	Homewood Fire Department 1903 29th Avenue, South Homewood, AL 35209 (205) 877-8634	H. E. Fields Fire Chief	6.8	25,000
	Hoover Fire Department 1581 Patton Chapel Road Hoover, AL 35226 (205) 823-4060	T.E. Bradley	50	23,000
Arizona	Phoenix Fire Department Room 465 620 West Washington Street Phoenix, AZ 85503 (602) 262-6297	Gary P. Morris Captain	350	800,000
	Tucson Fire Department P.O. Box 27210 Tucson, AZ 85720 (602) 791-4511	D. H. Canterbury Inspector	10,000*	500,000*
	Yuma Fire Department 298 West Fourth Street Yuma, AZ 85364 (602) 782-1831	Jerry L. Chapman Battalion Chief	15	50,000
California	Los Angeles Fire Department 200 North Main Street Los Angeles, CA 90012 (213) 485-6100	Jack Bennett Assistant Chief	467.63	3,000,000
	Sacramento Fire Department Room 3 915 I Street Sacramento, CA 95814 (916) 449-5266	Robert Schultz Deputy Chief, Emergency Operations	94	258,000

*Multijurisdictional

III. RADIOLOGICAL INCIDENTS

C. Response Plans

<u>State</u>	<u>Agency</u>	<u>Contact</u>	<u>Square Miles</u>	<u>Population</u>
California (continued)	San Clemente Fire Department 100 Avenida Presidio San Clemente, CA 92672 (714) 492-5105	Ronny Coleman Fire Chief	15	27,000
Colorado	Barcroft Fire Protection District 3301 South Field Street Lakewood, CO 80227 (303) 989-4307	Bob Porter Assistant Chief	80	155,000
	Boulder Fire Department P.O. Box 791 Boulder, CO 80306 (303) 441-3351	Larry Stern Assistant Chief	20	80,000
	Denver Fire Department 745 West Colfax Avenue Denver, CO 80204 (303) 575-5522	John Marshall Lieutenant, Bureau of Fire Prevention	117	485,000
Connecticut	Hartford Fire Department 275 Pearl Street Hartford, CT 06103 (203) 525-3123	John B. Stewart, Jr. Fire Chief	18.9	150,000
	Tolland Fire Department 3 Rhodes Road Tolland, CT 06084 (203) 871-0002	Ronald Littell Fire Chief	41	11,000
Florida	Hollywood Fire Department 3401 Hollywood Boulevard Hollywood, FL 33022 (305) 921-3448	George Geiser Division Chief	33	130,000
	Jacksonville Fire Division 107 Market Street Jacksonville, FL 32202 (904) 633-5433	Ron G. Gore Captain	844	600,000

III. RADIOLOGICAL INCIDENTS

C. Response Plans

<u>State</u>	<u>Agency</u>	<u>Contact</u>	<u>Square Miles</u>	<u>Population</u>
Florida (continued)	Metro-Dade County Fire Department* 6000 S.W. 87th Avenue Miami, FL 33173 (305) 596-8600	Charles E. Sowers Division Chief, EMS	895	1,000,000
Illinois	Waukegan Fire Department 105 North West Street Waukegan, IL 60085 (312) 689-7503	William Peterson Fire Chief	26	70,000
Kansas	Wichita Fire Department City Hall, Twelfth Floor 455 North Main Street Wichita, KS 67207 (316) 268-4451	Jim Sparr Fire Chief	1,008**	360,000**
Massachusetts	Lexington Fire Department 45 Bedford Street Lexington, MA 02173 (617) 862-0272	John Bergeron Fire Chief	16.5	30,000
	Pembroke Fire Department Fire Headquarters Center Street Pembroke, MA 02359 (617) 293-2300	Robert Silva Fire Investigator	23	13,000
	Plymouth Fire Department 114 Sandwich Street Plymouth, MA 02360 (617) 746-2212	Arthur H. Lamb Fire Chief	109	38,000
	Seekonk Fire Department Town Hall 100 Peck Street Seekonk, MA 02771 (617) 336-8510	John E. Shaw Fire Chief	13	12,000

*Nuclear power plant

**Multijurisdictional

III. RADIOLOGICAL INCIDENTS

C. Response Plans

<u>State</u>	<u>Agency</u>	<u>Contact</u>	<u>Square Miles</u>	<u>Population</u>
Massachusetts (continued)	Springfield Fire Department 605 Worthington Street Springfield, MA 01105 (413) 787-6400	Norris Quinn District Chief, Training	32	160,000
	Sterling Fire Department 1 Main Street P.O. Box 21 Sterling, MA 01564 (617) 422-6633	John Woodsmall Fire Chief	30.5	6,000
Missouri	Lee's Summit Fire Department 207 South Douglas Street Lee's Summit, MO 64063 (816) 251-2345	Mike Wren Acting Fire Chief	74	30,000
Nebraska	David City Volunteer Fire Department P.O. Box 254 David City, NE 68632 (402) 367-3530	Bill Ortmeier Fire Chief	55	5,100
Oklahoma	Oklahoma City Fire Department 820 N.W. Fifth Street Oklahoma City, OK 73107 (405) 235-3314	Bob Mowles Chief Training Officer	640	410,000
	Tulsa Fire Department 411 South Frankfurt Avenue Tulsa, OK 74120 (918) 581-5291	Paul M. Dudley Deputy Chief	193	365,000
Pennsylvania	Philadelphia Fire Department Third & Spring Garden Streets Philadelphia, PA 19123 (215) 686-4700	Joseph R. Rizzo Fire Commissioner	129	1,688,210
Rhode Island	North Kingston Fire Department 8150 Post Road North Kingston, RI 02852 (401) 294-3344	Thomas L. Aylward Fire Chief	44	29,000
Texas	Dallas Fire Department 1500 Marilla Street Dallas, TX 75201 (214) 670-4565	S. Joseph O'Briant Deputy Chief	378	904,000

III. RADIOLOGICAL INCIDENTS

C. Response Plans

<u>State</u>	<u>Agency</u>	<u>Contact</u>	<u>Square Miles</u>	<u>Population</u>
Virginia	Alexandria Fire Department 900 Second Street Alexandria, VA 22314 (703) 838-4600	William Brown Chief of Operations	15	110,000
	Fairfax City Fire and Rescue Services 4081 University Drive Fairfax, VA 22030 (703) 385-7874	Joe Bailey Lieutenant, Training Officer	7	22,000
	Hampton Fire Department 22 East Lincoln Street Hampton, VA 23669 (804) 727-6580	William Smith Battalion Chief, EMS	55	125,000

III. RADIOLOGICAL INCIDENTS

D. Training Manuals

<u>State</u>	<u>Agency</u>	<u>Contact</u>	<u>Square Miles</u>	<u>Population</u>
Alabama	Hoover Fire Department 1581 Patton Chapel Road Hoover, AL 35226 (205) 823-4060	T. E. Bradley Fire Chief	50	23,000
	Tucson Fire Department P.O. Box 27210 Tucson, AZ 85720 (602) 791-4511	David H. Canterbury Inspector	112	400,000
	Yuma Fire Department 298 West Fourth Street Yuma, AZ 85364 (602) 782-1831	Jerry L. Chapman Battalion Chief	15	50,000
California	Los Angeles County Fire Department 1320 North Eastern Avenue Los Angeles, CA 90063 (213) 267-2485	Stephen Sherrill Chief of Operations	2,190	2,200,000
Connecticut	Hartford Fire Department 275 Pearl Street Hartford, CT 06103 (203) 525-3123	John B. Stewart, Jr. Fire Chief	18.9	150,000
Massachusetts	Pembroke Fire Department Fire Headquarters Center Street Pembroke, MA 02359 (617) 293-2300	Robert Silva Fire Investigator	23	13,000
	Springfield Fire Department 605 Worthington Street Springfield, MA 01105 (413) 787-6400	Norris Quinn District Chief, Training	32	160,000
Texas	Dallas Fire Department 1500 Marilla Street Dallas, TX 75201 (214) 670-4565	S. Joseph O'Briant Deputy Chief	378	904,000

III. RADIOLOGICAL INCIDENTS

D. Training Manuals

<u>State</u>	<u>Agency</u>	<u>Contact</u>	<u>Square Miles</u>	<u>Population</u>
Virginia	James City County Fire Department 449 John Tyler Highway Williamsburg, VA 23185 (804) 220-0626	Richard Miller Assistant Chief	148	30,000- 100,000*

*Seasonal

III. RADIOLOGICAL INCIDENTS

E. Experienced Persons and Organizations

<u>State</u>	<u>Contact</u>	<u>Agency</u>	<u>Areas of Expertise</u>
Alabama	Godwin, Aubrey V. Director	Division of Radiological Health Alabama Department of Public Health State Office Building 434 Monroe Street Montgomery, AL 36130 (205) 832-5990	Technical Assistance Regulations
Alaska	Heidersdorf, Sidney Chief	Radiological Health Program Department of Health and Social Services Pouch H-01 Juneau, AK 99811 (907) 465-3019	Technical Assistance Regulations
Arizona	Gile, James Division Chief	Phoenix Fire Department Room 465 620 West Washington Street Phoenix, AZ 85504 (602) 256-6595	Training Response
	Morris, Gary P. Captain	Phoenix Fire Department Room 465 620 West Washington Street Phoenix, AZ 85504 (602) 256-6595	Training Response
	Tedford, Charles F. Executive Director	Arizona Radiation Regulatory Agency Suite 2 925 South 52nd Street Tempe, AZ 85281 (602) 765-4845	Technical Assistance Regulations
Arkansas	Palmateer, Robert J. Director	Office of Emergency Services Civic Center 200 East Eighth Street Pine Bluff, AR 71601 (501) 535-5649	Technical Assistance
	Wilson, E. Frank Director	Division of Environmental Health Protection Bureau of Environmental Health Services Arkansas Department of Health 4815 West Markham Street Little Rock, AR 72201 (501) 661-2301	Technical Assistance

III. RADIOLOGICAL INCIDENTS

E. Experienced Persons and Organizations

<u>State</u>	<u>Contact</u>	<u>Agency</u>	<u>Areas of Expertise</u>
California	Ward, Joseph O. Chief	Radiologic Health Section State Department of Health Services 714 P Street Sacramento, CA 95814 (916) 322-2073	Technical Assistance Regulations
	Wynyard, Robert L. Chief of Academic Division	California Specialized Training Institute P.O. Box G Camp San Luis Obispo, CA 94304 (805) 544-7100	Training Programs
Colorado	Hazle, Albert J. Director	Radiation and Hazardous Waste Control Division Colorado Department of Health 4210 East Eleventh Avenue Denver, CO 80220 (303) 320-8333, Ext. 6246	Technical Assistance Regulations
	Jacobi, Warren Chief	Radiation Control Section Colorado Department of Health 4210 East Eleventh Avenue Denver, CO 80220 (303) 320-8333, Ext. 6246	Reactor Emergency Response Training
	Martin, William S. Radiological Defense Officer	Division of Disaster and Emergency Services Camp George West Golden, CO 80401 (303) 279-2511, Ext. 242	Technical Assistance
Connecticut	Huebner, Arthur T. Director	Radiation Control Department of Environmental Protection State Office Building Hartford, CT 06115 (203) 566-5668	Technical Assistance Regulations
Delaware	Tappert, Allan C. Program Director	Office of Radiological Health Division of Public Health Department of Health and Social Services Jesse S. Cooper Memorial Building Capitol Square Dover, DE 19901 (302) 736-4731	Technical Assistance Regulations

III. RADIOLOGICAL INCIDENTS

E. Experienced Persons and Organizations

<u>State</u>	<u>Contact</u>	<u>Agency</u>	<u>Areas of Expertise</u>
District of Columbia	Wood, Herbert, Ph.D. Program Director	Bureau of Occupational and Institutional Hygiene Environmental Health Administration Department of Environmental Services 415 Twelfth Street, N.W. Washington, DC 20004 (202) 724-4358	Technical Assistance Regulations
Florida	Buchanan, John E. South Florida Area Coordinator	Bureau of Disaster Preparedness P.O. Box 1038 Jupiter, FL 33458 (305) 746-4586	Technical Assistance
	Clark, Uray Administrator	Radiological Health Program Department of Health and Rehabilitative Service Ambassador Building Suite 219 Tallahassee, FL 32301 (904) 487-2705	Technical Assistance Regulations
Georgia	Sprinkle, W. Scott Acting Director	Radiological Health Section Department of Human Resources State Office Building 47 Trinity Avenue Atlanta, GA 30334 (404) 894-5144	Technical Assistance Regulations
Hawaii	Anamizu, Thomas Chief	Noise and Radiation Branch Department of Health P.O. Box 3378 Honolulu, HI 96801 (808) 548-3075	Technical Assistance Regulations
Idaho	Funderburg, Robert Program Manager	Radiation Control Section Idaho Department of Health and Welfare Statehouse Boise, ID 83720 (208) 334-4107	Technical Assistance Regulations

III. RADIOLOGICAL INCIDENTS

E. Experienced Persons and Organizations

<u>State</u>	<u>Contact</u>	<u>Agency</u>	<u>Areas of Expertise</u>
Illinois	Neuweg, Maury Deputy Director	Office of Radiation Safety Department of Nuclear Safety 1035 Outer Park Drive Springfield, IL 62704 (217) 546-8100	Technical Assistance Regulations
Indiana	Stocks, Hal S. Chief	Radiological Health Section Indiana State Board of Health 1330 West Michigan Street Indianapolis, IN 46206 (317) 633-8400	Technical Assistance Regulations
Iowa	Babcock, William R. Assistant Professor	Science Department Iowa Central Community College 1725 Beach Street Webster, IA 50595 (515) 832-1632	Radiological Monitoring
	Eure, John A. Director	Radiological Health and Work Related Disease Section Department of Environmental Quality 900 East Grand Des Moines, IA 50319 (515) 281-8854	Technical Assistance Regulations
	Sobottka, Emery Director of Environ- mental Health and Safety	Iowa State University 215 Nuclear Engineering Laboratory Ames, IA 50011 (515) 294-5359	Technical Assistance
	Twaler, William E.	Radiation Protection Office The University of Iowa 311 Grand Avenue Iowa City, IA 52242 (319) 353-3772	Technical Assistance
Kansas	Allen, Gerald W. Director	Bureau of Radiation Control Department of Health and Environment Forbes Field, Building 740 Topeka, KS 66620 (913) 862-9360, Ext. 284	Technical Assistance Regulations

III. RADIOLOGICAL INCIDENTS

E. Experienced Persons and Organizations

<u>State</u>	<u>Contact</u>	<u>Agency</u>	<u>Areas of Expertise</u>
Kentucky	Hughes, Donald R. Manager	Radiation Control Branch Department for Human Resources 275 East Main Street Frankfurt, KY 40621 (502) 564-3700	Technical Assistance Regulations
Louisiana	Spell, William H. Administrator	Nuclear Energy Division State Department of Natural Resources P.O. Box 14690 Baton Rouge, LA 70804 (504) 925-4518	Technical Assistance Regulations
Maine	Hinckley, Wallace Manager	Radiological Health Program Department of Human Services 157 Capitol Street Augusta, ME 04333 (207) 289-3826	Technical Assistance Regulations
Maryland	Corcoran, Robert E. Chief	Division of Radiation Control Department of Health and Mental Hygiene O'Connor Office Building 201 West Preston Street Baltimore, MD 21201 (301) 383-2744	Technical Assistance Regulations
Massachusetts	Drum, D. E., M.D., Ph.D. Department of Radiology	Brigham and Women's Hospital 75 Frances Street Boston, MA 02115 (617) 732-2184	Training Planning Hospital Radiological Response
	Parker, Gerald S. Assistant Commissioner for Environmental Health	Massachusetts Department of Public Health 600 Washington Street Boston, MA 02111 (617) 727-2660	Technical Assistance Regulations
Michigan	Jacobsen, A. P., Ph.D. Professor of Radio- logical Health	School of Public Health University of Michigan Ann Arbor, MI 48109 (313) 764-0523	Radiation Emergency Management Technical Assistance

III. RADIOLOGICAL INCIDENTS

E. Experienced Persons and Organizations

<u>State</u>	<u>Contact</u>	<u>Agency</u>	<u>Areas of Expertise</u>
Michigan (continued)	Jury, Milton J. Corporate Nuclear Emergency Planner	Radiological Services Department Consumer Power Company 1945 West Parnall Road Jackson, MI 49201 (517) 788-2440	Nuclear Reactor Planning Transportation Emergency Medical Services
	Mahaney, Richard C. General Fire Safety and Training Supervisor	Property Detection Department Consumers Power Company 212 West Michigan Avenue Jackson, MI 49201 (517) 788-2485	Training, Fire
	Van Farowe, D. E., P.E. Chief	Division of Radiological Health Department of Public Health 3500 North Logan Street P.O. Box 30035 Lansing, MI 48909 (517) 373-1578	Technical Assistance Regulations
Minnesota	Dolezal, Alice T. Chief	Section of Radiation Control Minnesota Department of Health 717 Delaware Street, S.E. Minneapolis, MN 55440	Technical Assistance Regulations
	Quirk, William C. Director of Fire Training	Minnegasco Minneapolis, MN 55454 (612) 372-5022	Training Planning
Mississippi	Fuente, Eddie S. Director	Division of Radiological Health State Board of Health Felix J. Underwood Building P.O. Box 1700 Jackson, MS 39205 (601) 354-6657	Technical Assistance Regulations
Missouri	Miller, Kenneth V. Administrator	Bureau of Radiological Health Division of Health Department of Social Services 1511 Christy Lane P.O. Box 570 Jefferson City, MO 65101 (314) 751-2713	Technical Assistance Regulations
	Pape, Bill Fire Specialist	Lee's Summit Fire Department 207 South Douglas Street Lee's Summit, MO 64063 (813) 251-2360	Radiological Monitoring Multimedia Programs Response Training

III. RADIOLOGICAL INCIDENTS

E. Experienced Persons and Organizations

<u>State</u>	<u>Contact</u>	<u>Agency</u>	<u>Areas of Expertise</u>
Montana	Lloyd, Larry L. Chief	Occupational Health Bureau Department of Health and Environmental Sciences Cogswell Building Helena, MT 59601 (406) 449-3671	Technical Assistance Regulations
Nebraska	Simmons, H. Ellis Director	Division of Radiological Health Department of Health 301 Centennial Mall, South P.O. Box 95007 Lincoln, NE 68509 (402) 471-2168	Technical Assistance Regulations
Nevada	Vaden, John D. Supervisor	Radiological Health Section Health Division State Department of Human Resources 505 East King Street Carson City, NV 89710 (702) 885-4740	Technical Assistance Regulations
New Hampshire	Stanton, John R. Chief	Bureau of Environmental Health Division of Public Health State Department of Health and Welfare P.O. Box 148 Concord, NH 03301 (603) 271-4587	Technical Assistance Regulations
New Jersey	Fisher, Eugene Assistant Director Radiation, Pesti- cides and Environ- mental Laboratories	Division of Environmental Quality Department of Environmental Protection 380 Scotch Road Trenton, NJ 08628 (609) 292-5586	Technical Assistance Regulations
New Mexico	Baca, Thomas E. Director	Environmental Improvement Division Department of Health and Environment P.O. Box 968 Santa Fe, NM 87503 (505) 827-5271	Technical Assistance Regulations

III. RADIOLOGICAL INCIDENTS

E. Experienced Persons and Organizations

<u>State</u>	<u>Contact</u>	<u>Agency</u>	<u>Areas of Expertise</u>
New Mexico (continued)	Mettler, F., Jr., M.D. Associate Professor of Radiology	University of New Mexico Hospital Albuquerque, NM 87131 (505) 277-2161	Preplanning for Reac- tor Emergencies Training Simulation Exercises Nuclear Power Plant Response
	Mosely, Robert D., M.D. Chairman U.S. Delegate to the United Nations Committee on the Effects of Atomic Radiation	Department of Radiology University of New Mexico Hospital Albuquerque, NM 87131 (505) 843-2260	Resource Identification
	Voelz, George L., M.D. Health Division Leader	Los Alamos National P.O. Box 1663 Los Alamos, NM 87545 (505) 667-4218	Diagnosis and Treat- ment for Radiation Contamination Exposures
New York	Director	Bureau of Radiation Control State Department of Health Empire State Plaza Tower Building Albany, NY 12237 (518) 474-2846	Technical Assistance Regulations
	Rimawi, Karim A., Ph.D. Director	Bureau of Environmental Radiation State Department of Health Empire State Building Tower Building Albany, NY 12237 (518) 473-3393	Technical Assistance Regulations
North Carolina	Brown, Dayne H. Chief	Radiation Protection Section Division of Facility Service Department of Human Resources P.O. Box 12200 Raleigh, NC 27605 (919) 733-4283	Technical Assistance Regulations

III. RADIOLOGICAL INCIDENTS

E. Experienced Persons and Organizations

<u>State</u>	<u>Contact</u>	<u>Agency</u>	<u>Areas of Expertise</u>
North Dakota	Mount, Dana K. Director	Division of Environmental Engineering North Dakota Department of Health Missouri Office Building 1200 Missouri Avenue Bismarck, ND 58501 (701) 224-2348	Technical Assistance Regulations
Ohio	Kereiakes, J. G., Ph.D Professor of Environ- mental Health and Radiology (Physics)	University of Cincinnati Medical Center General Hospital Cincinnati, OH 45267 (513) 872-4282	Planning Biological Radiation Effects, Acute and Late
	Maxon, Harry R., M.D. Associate Professor of Radiation and Medicine	University of Cincinnati Medical Center General Hospital Cincinnati, OH 45267 (513) 872-4282	Planning Training Biological Radiation Effects, Acute and Late Medical Care for External Radiation and Contamination
	Quillin, Robert M. Director	Radiological Health Program Department of Health 264 North High Street P.O. Box 118 Columbus, OH 43216 (614) 466-1380	Technical Assistance Regulations
	Saenger, E. L., M.D. Professor of Radiology	University of Cincinnati Medical Center General Hospital Cincinnati, OH 45267 (513) 872-4282	Planning Training Biological Radiation Effects, Acute and Late Medical Care for External Radiation and Contamination
	Silberstein, Edward B., M.D. Professor of Radiology Associate Professor of Medicine	University of Cincinnati Medical Center General Hospital Cincinnati, OH 45267 (513) 872-4282	Planning Training Biological Radiation Effects, Acute and Late Medical Care for External Radiation and Contamination

III. RADIOLOGICAL INCIDENTS

E. Experienced Persons and Organizations

<u>State</u>	<u>Contact</u>	<u>Agency</u>	<u>Areas of Expertise</u>
Ohio (continued)	Thomas, S. R., Ph.D. Associate Professor of Radiology	University of Cincinnati Medical Center General Hospital Cincinnati, OH 45267 (513) 872-4282	Planning Biological Radiation Effects, Acute and Late
Oklahoma	McHard, J. Dale Chief	Occupational and Radiological Health Services State Department of Health N.E. Tenth and Stonewall Streets P.O. Box 53551 Oklahoma City, OK 73152 (405) 271-5221	Technical Assistance Regulations
	Parasich, John P. Training Officer	Oklahoma City Fire Department 820 N.W. Fifth Street Oklahoma City, OK 73107 (405) 235-3314	Training
Oregon	Parrot, M. W., D.Sc. Manager	Radiation Control Section State Health Division P.O. Box 231 Portland, OR 97201 (503) 229-5797	Technical Assistance Regulations
Pennsylvania	Brennan, James T. President (Professor Emeritus)	Medical Consultation Corporation 9120 Germantown Avenue Philadelphia, PA 19118 (215) 248-0294	Medical Aspects of Ionizing Radiation
	Gerusky, Thomas M. Director	Bureau of Radiation Protection Department of Environmental Resources P.O. Box 2063 Harrisburg, PA 17120 (717) 787-2480	Technical Assistance Training
	Linnemann, R. E., M.D. President	Radiation Management Suite 400 3508 Market Street Philadelphia, PA 19104 (215) 243-2950	Technical Assistance Training

III. RADIOLOGICAL INCIDENTS

E. Experienced Persons and Organizations

<u>State</u>	<u>Contact</u>	<u>Agency</u>	<u>Areas of Expertise</u>
Pennsylvania (continued)	Turk, Andrew W. Fire Prevention Administrator	Westinghouse Electric Corporation Advanced Reactor Division P.O. Box 158 Madison, PA 15663 (412) 722-5757 (412) 722-5161 (24-hour)	Training Response
	Wald, Niel, M.D. Chairman	Department of Radiation Health Graduate School of Public Health University of Pittsburgh Pittsburgh, PA 15261 (412) 647-3495	Biological Radiation Effects, Acute and Late Medical Management of Radiation Injuries
Rhode Island	Amato, Santo Director	Defense Civil Preparedness Agency State House Providence, RI 02903 (401) 421-7333	Technical Assistance
	DiMeglio, A. Francis Director	Rhode Island Atomic Energy Commission Rhode Island Nuclear Science Center South Ferry Road Narragansett, RI 02882 (401) 789-9391	Planning, Reactor Emergencies
	Hickey, James E. Chief	Division of Occupational Health and Radiation Control Department of Health 206 Cannon Building Davis Street Providence, RI 02908 (401) 277-2438	Technical Assistance Regulations
South Carolina	Shealy, Heyward J. Chief	Bureau of Radiological Health Department of Health and Environmental Control 2600 Bull Street Columbia, SC 29201 (803) 758-8354	Technical Assistance Regulations

III. RADIOLOGICAL INCIDENTS

E. Experienced Persons and Organizations

<u>State</u>	<u>Contact</u>	<u>Agency</u>	<u>Areas of Expertise</u>
South Dakota	Smith, Joel Administrator	Office of Air Quality and Solid Waste State Department of Water and Natural Resources Joe Foss Office Building Pierre, SD 57501 (605) 773-3329	Technical Assistance Regulations
Tennessee	Graham, J. A. Bill Director	Division of Radiological Health Department of Public Health C2-212 Cordell Hull Building Nashville, TN 37219 (615) 741-7812	Technical Assistance Regulations
	Knight, Wendell M. President	Environmental and Safety Designs, Inc. P.O. Box 34207 Memphis, TN 38134 (901) 372-7962	Planning for Federal Compliance Training Response
	Ricks, R. C., Ph.D. Associate Director	Radiation Emergency Assistance Center/Training Site Oak Ridge Associated Universities Oak Ridge, TN 37830 (615) 576-3130	Training, Emergency Medical Services
Texas	Lacker, David K. Chief	Bureau of Radiation Control Texas Department of Health 110 West 49th Street Austin, TX 78756 (512) 458-7760	Technical Assistance Regulations
Utah	Anderson, Larry Director	Bureau of Radiation and Occupational Health State Department of Health 150 West North Temple P.O. Box 2500 Salt Lake City, UT 84103 (801) 533-6734	Technical Assistance Regulations
Vermont	McCandless, Raymond Director	Division of Occupational and Radiological Health Department of Health Administration Building 10 Baldwin Street Montpelier, VT 05602 (802) 828-2886	Technical Assistance Regulations

III. RADIOLOGICAL INCIDENTS

E. Experienced Persons and Organizations

<u>State</u>	<u>Contact</u>	<u>Agency</u>	<u>Areas of Expertise</u>
Virginia	Klimenko, Nicholas A.	P.O. Box 1076 Williamsburg, VA 23187 (804) 220-3640	Training, Emergency Medical Services Response
	Price, Charles R. Supervisor	Bureau of Radiological Health State Department of Health 109 Governor Street Richmond, VA 23219 (804) 786-5932	Technical Assistance Regulations
Washington	Strong, Terry Head	Radiation Control Section (M/S LD-11) Department of Social and Health Services Industrial Park Olympia, WA 98504 (206) 753-3468	Technical Assistance Regulations
West Virginia	Aaroe, William H. Director	Industrial Hygiene Division State Department of Health 151 Eleventh Avenue South Charleston, WV 25303 (304) 348-3526	Technical Assistance Regulations
	Slack, S. T., Ph.D. Associate Professor	Department of Radiology School of Medicine West Virginia University Morgantown, WV 26506 (304) 293-3413	Medical Physics Safety Monitoring
Wisconsin	McDonnell, Lawrence J. Chief	Radiation Protection Section Division of Health Department of Health and Social Services P.O. Box 309 Madison, WI 53701 (608) 266-1791	Technical Assistance Regulations
Wyoming	Chief	Radiological Health Services Division of Health and Medical Services Fourth Floor Hathaway Building Cheyenne, WY 82001 (307) 777-6015	Technical Assistance Regulations

III. RADIOLOGICAL INCIDENTS

E. Experienced Persons and Organizations

<u>United States</u>	<u>Contact</u>	<u>Agency</u>	<u>Areas of Expertise</u>
Federal			
Region I	Warren, Skip	Federal Emergency Management Agency Room 452 McCormick Post Office and Court House Boston, MA 02109 (617) 223-3754	Radiological Emergency Preparedness
Region II	Picciano, Joe	Federal Emergency Management Agency Room 19-100 26 Federal Plaza New York, NY 10278 (212) 264-4981	Radiological Emergency Preparedness
Region III	Hardy, Tom	Federal Emergency Management Agency Curtis Building Sixth and Walnut Streets Philadelphia, PA 19106 (301) 597-0137	Radiological Emergency Preparedness
Region IV	Richardson, Jack	Federal Emergency Management Agency Suite 667 1275 Peachtree Street, N.E. Atlanta, GA 30309 (912) 226-1761	Radiological Emergency Preparedness
Region V	Wenger, Gordon	Federal Emergency Management Agency Federal Center Battle Creek, MI 49016 (616) 968-8142	Radiological Emergency Preparedness
Region VI	Lookabaugh, Al	Federal Emergency Management Agency Federal Center Denton, TX 76201 (817) 387-5811	Radiological Emergency Preparedness
Region VII	Ferris, Steve	Federal Emergency Management Agency Second Floor 911 Walnut Street Kansas City, MO 64106 (816) 374-5587	Radiological Emergency Preparedness

III. RADIOLOGICAL INCIDENTS

E. Experienced Persons and Organizations

<u>United States</u>	<u>Contact</u>	<u>Agency</u>	<u>Areas of Expertise</u>
Region VIII	Alley, Paul	Federal Emergency Management Agency Building 710 Denver Federal Center Denver, CO 80225 (303) 234-2557	Radiological Emergency Preparedness
Region IX	Eldridge, Jack	Federal Emergency Management Agency Room 220 211 Main Street San Francisco, CA 94105 (415) 556-9412	Radiological Emergency Preparedness
Region X	Donovan, Richard W.	Federal Emergency Management Agency Federal Regional Center 130 228th Street, SW Bothell, WA 98011 (206) 481-8800	Radiological Emergency Preparedness

RADIOLOGICAL INCIDENTS

F. Reference Materials

Books and Reports

National Council on Radiation Protection. Management of Persons Accidentally Contaminated with Radionuclides. No. 65. Washington, D.C.: Government Printing Office, 1980.

National Transportation Safety Board. Special Investigation Report: Onscene Coordination Among Agencies at Hazardous Materials Accidents. NTSB-HZM-79-3. Washington, D.C.: Government Printing Office, 1979.

Purington, Robert G. and Patterson, H. Wade. Handling Radiation Emergencies. Boston: National Fire Protection Association, 1977.

State Planning Council on Radioactive Waste Management. Report to the State Planning Council on Radioactive Waste Management. Washington, D.C.: Government Printing Office, 1981.

U.S. Department of Transportation. Handling Radioactive Materials Transportation Emergencies. 1st ed. DOT/RSPA/MTB-79/7. Washington, D.C.: Government Printing Office, 1979.

_____. Radioactive Material Transportation Information and Incidents. DOT/RSPA/MTB-79/8. Washington, D.C.: Government Printing Office.

_____. Response to Radioactive Materials Transport Incidents. DOT/RSPA/MTB-79/8. Washington, D.C.: Government Printing Office.

_____. A Review of the Department of Transportation Regulations for Transportation of Radioactive Materials. Rev. 1980. Washington, D.C.: Government Printing Office, 1980.

U.S. Environmental Protection Agency, Office of Radiation Programs. Manual of Protective Action Guides and Protective Action for Nuclear Incidents. Washington, D.C.: Government Printing Office, 1975.

U.S. Nuclear Regulatory Commission and Federal Emergency Management Agency. Criteria for Preparation and Evaluation of Radiological Response Plans and Preparedness in Support of Nuclear Power Plants. NUREG-0654; FEMA-Rep-1; Rev. 1. Washington, D.C.: Government Printing Office, 1977.

U.S. Nuclear Regulatory Commission. Guide and Checklist for Development and Evaluation of State and Local Government Radiological Emergency Response Plans in Support of Fixed Nuclear Facilities. NUREG-75/111. Washington, D.C.: Government Printing Office, 1971.

_____. Review and Assessment of Package Requirements (Yellowcake) and Emergency Response to Transportation Accidents. NUREG-0535. Washington, D.C.: Government Printing Office, 1980.

III. RADIOLOGICAL INCIDENTS

F. Reference Materials

Books and Reports (continued)

U.S. Nuclear Regulatory Commission. Survey of Current State Radiological Emergency Response Capabilities for Transportation Related Incidents. NUREG/CR-1620. Washington, D.C.: Government Printing Office, 1980.

_____. Transportation of Radionuclides in Urban Environs: Draft Environmental Assessment. NUREG/CR-0743. Washington, D.C.: Government Printing Office, 1980.

III. RADIOLOGICAL INCIDENTS

F. Reference Materials

Articles in Journals

- Harper, Randolph K. "Special Care Needed at Any Radiation Exposure Incident." Fire Engineering 134 (November 1981): 32-35.
- Herman, L. Paul. "Nuclear Fire Protection: A Fourth Dimension." Fire Journal (July 1980): 51-55.
- Lindell, Michael K. and Perry, Ronald W. "Evaluation Criteria for Emergency Response Plans in Radiological Transportation." Journal of Hazardous Materials 3 (1980): 335-348.
- Mobley, Michael H. "Handling of Radiation Accident Victims." Emergency Product News (September-October 1976): 72-73.
- Richter, Linda L., et al. "Immediate Care of Patients After a Radiation Accident." The EMT Journal 4 (December 1980): 21-25.
- Rommel, W. Murray. "Radiation Incident Exercise." Fire Chief Magazine 25 (February 1981): 37-39.
- Staten, Clark L. "Handling Radiation Accident Victims: A Pre-hospital Care Point of View." Fire Command 48 (January 1981): 14-19.
- Townley, John P. "Fighting Fire in Nuclear Power Plants." Fire Chief Magazine 24 (October 1980): 35-37.