

MASSACHUSETTS
LOCAL EMERGENCY PLANNING COMMITTEE
HANDBOOK

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400 Worcester Road, Framingham, MA 01702

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1. INTRODUCTION

Introduction Letter

On October 17, 1986, the Superfund Amendments and Reauthorization Act of 1986 (SARA) were enacted into law. One part of the SARA provisions is Title III: The Emergency Planning and Community Right-to-Know Act of 1986 (EPCRA). Title III, now more commonly known as EPCRA, establishes requirements for Federal, State, and local governments and industry regarding emergency planning and community right-to-know reporting on hazardous and toxic chemicals.

The legislation builds upon the United States Environmental Protection Agency's (EPA) Chemical Emergency Preparedness Program (CEPP), state and local programs, and the Chemical Manufacturers Association's CAER program aimed at helping communities to better meet their responsibilities in regard to potential chemical emergencies.

The Emergency Planning and Community Right to Know Act establishes Local Emergency Planning Committees and requires them to evaluate hazardous chemicals in storage, use or transportation in the community and to develop plans to respond to emergencies involving these hazardous materials.

Initially, EPCRA provided little guidance for the LEPCs in fulfilling this federal mandate. The National Response Team provided their guidance documents NRT-1 and NRT-1A. These documents provided criteria for what was required in an emergency plan, but did not provide guidance on the actual operation of an LEPC committee.

Many State's Emergency Response Commissions early on recognized this lack of information to the LEPCs and prompted them to provide the necessary guidance that was required to meet the federal mandate. The Massachusetts SERC developed the LEPC Certification process, which provided communities with a formal criteria for establishing an LEPC. The certification process moves the LEPC's through three separate stages the final stage being full certification. A fully certified LEPC meets all of the requirements of the Federal Mandate.

Even with the Certification Process, the SERC recognized that it was difficult for new LEPCs or new LEPC members to grasp all the requirements that a Local Planning Committee must take into consideration in fulfilling its responsibilities. This book is designed as a valuable resource in guiding the Local Emergency Planning Committees in meeting those requirements.

This document is not intended to replace the necessary review of existing laws and regulations or the necessary interaction with local and state emergency response agencies. This book is designed to provide a valuable digest of information that can be used by the committee members in understanding their roles and responsibilities to their communities.

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3. FEDERAL PROGRAMS LAWS AND REGULATIONS

FEDERAL PROGRAMS:

Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA)

Legal Citation: Public Law 99-510. U.S.C. 9601-9675.

Summary of Act: The act enacted in December of 1980 authorizes the federal government to respond to spills and other releases (or threatened releases) of hazardous substances, as well as to leaking hazardous waste dumps. A fund to be used for cleaning up hazardous waste sites was created from taxes generated by this program. This fund is commonly called the "Superfund". It was reauthorized in 1986 as the Superfund Amendment Reauthorization Act (SARA). SARA is covered separately even though it technically a part of CERCLA.

To assure that the most serious hazardous waste sites are addressed, the law calls for a National Priority List (NPL) to be assembled by the Environmental Protection Agency (EPA). It also calls for EPA to develop hazard ranking system (HRS) to construct the National Priority List, which scores such factors as the quantity and nature of hazardous wastes present; the likelihood of contamination of ground water, surface water, and air; and the proximity of the site to population and sensitive natural environments.

The act also created the Agency for Toxic Substances and Disease Registry (ATSDR) in the Public Health Service which is responsible for maintaining a registry of persons exposed to toxic substances; maintaining an inventory of literature, research, and studies on health effects of toxic substance contamination; providing medical care and testing in cases of public health emergencies; and periodically conducting surveys and screening programs to determine the relationship between exposure to toxic substances and illnesses. It also prepares toxicologically profiles of hazardous substances.

Information Generated: The national priority list (NPL) of hazardous waste sites commonly called "Superfund" sites. Information from the Superfund Amendment Reauthorization Act is found below.

Location of Information: Available at the Regional Office of the Environmental Protection Agency. It is also available via the Internet at <http://www.epa.gov/region01/superfund/findsite/fndindex.htm>

The Massachusetts Department of Environmental Protection also provides lists of hazardous waste sites.

Emergency Planning and Community Right to Know Act (EPCRA) also known as the Superfund Amendment Reauthorization Act (SARA)

Legal Citations: Superfund Amendment and Reauthorization Act of 1986; Public Law 99-499. 42 U.S.C. 9601-9675.

Summary of Act. In 1986, Congress passed the Emergency Planning and Community Right-to-Know Act also known as Title III of the Superfund Amendment and Reauthorization Act (SARA) of 1986. This act addresses hazardous materials emergency planning, emergency notification, and reporting of annual routine releases of chemicals to the environment. It has become the primary means to obtain information regarding hazardous materials within the community. The routine reporting requirement, Section 313, requires companies that manufacture, use, or process certain chemicals above specified quantities to report about releases of those materials to the air, water, or ground. All information contained in the various reports required by SARA with a limited numbers of exceptions for trade secret information is open to public disclosure.

Information Generated: Tier 2 Emergency and Hazardous Chemical Inventory Report. Submitted each March 1st by facilities having over 10,000 pounds of at least one hazardous material or 500 pounds of at least one extremely hazardous material on site at any given time during preceding calendar year. The report is required to be sent to the Local Emergency Planning Committee (LEPC), Fire Department, and State Emergency Response Commission (SERC). It contains the facility information, including the name, address, and ownership, emergency contact names for the facility, and a listing of chemicals by name that are over the threshold amounts. For each chemical there is chemical description, physical and health hazards, quantity stored and in what type(s) of containers it is stored. It is at the option of the facility to include a map of the facility. The act also requires the submission of a material safety data sheet upon request. Some information may be protected from public disclosure by trade secret protection provisions.

Location of data: Local Emergency Planning Committees, Fire Departments, and the State Emergency Response Commission (SERC). The Massachusetts Emergency Management Agency, 400 Worcester Road, Framingham, MA 01702-5399 acts as the SERC's record keeper.

Toxic Chemical Release Report, also known as Form R. This form is submitted annually by July 1st to the Mass Dept of Environmental Protection (DEP) Boston Office at One Winter Street, Boston, MA 02108 and to the Environmental Protection Agency (EPA) in Washington at Ariel Rios Building, 1200 Pennsylvania Avenue NW, Washington DC 20460. Facilities meeting certain criteria regarding its size and type of business and using one or more of over 300 specified toxic chemicals must submit the nine page form. The form contains information regarding the facility including name, address, ownership; toxic chemical identities; activities and general uses of the toxic chemicals at the facility; the maximum amount of each reportable toxic chemical on-site at any time during the calendar year; releases of toxic chemicals to the environment (air, water, land, etc.); transfers of the toxic chemicals to off-site locations such as public owned treatment works; transfers to other off-site locations; on-site waste treatment methods and efficiency); recycling activities.

Location of data: This information available to the public either in the Boston DEP office or from an on-line computerized Toxic Release Inventory database. The Environmental Protection Agency (EPA) has a support group number for information regarding the forms (202) 260-1531; Data and useful information can also be obtained on the Internet at <http://rtk.net>. The information is also provided to federal depository libraries on a CD-ROM for public use, check with your local library to determine the nearest depository library location.

Spill Reports (SARA). For releases of chemicals above threshold amounts the facility must submit to the Local Emergency Planning Committee (LEPC), State Emergency Response Commission (SERC), and Environmental Protection Agency (EPA) Washington, a report providing the following information-- Location/address of the release; person doing the reports name and telephone number; chemical name(s) involved in the release; estimate of the quantity released into the environment; medium or media into which the release occurred (air, water, ground, etc.); description of known injuries; any known or anticipated acute or chronic health risks associated with released chemical(s); Actions taken to stop the release and contain any released material(s); Name and telephone number of person(s) to be contacted for further or future information. This report should be submitted within two weeks from the time of the release.

Location of Data: Local Emergency Planning Committees in which the spill occurred and the State Emergency Response Commission (Mass Dept of Environmental Protection), 1 Winter St., Boston 02108.

Local Emergency Planning Committees (LEPC): Detailed more fully in section 6.

State Emergency Response Commission (SERC): Detailed more fully in section 6.

Community Response Plans: The Local Emergency Planning committee must develop written plans tailored to the needs of the community. The plan shall contain nine elements: 1. Identification of facilities using extremely hazardous materials; 2. emergency response procedures to be used for responding to the site(s); 3. Identification of personnel designated as community coordinator and facility coordinators; 4. Procedures to be used during emergencies and probable area and population that could be at risk; 5. methods that will be used to determine when a release has occurred and the probable area and population that could be at risk; 6. description of emergency equipment and facilities that are available to the community; 7. plans for evacuation of effected facilities and potentially affected areas; 8. description of and schedule for holding training programs; 9. description of and schedule for holding exercises designed to test the emergency response. These plans are available at the local emergency planning committee or the state emergency response commission.

Clean Air Act (CAA)

Legal Citation: Public Law 90-148, and numerous amendments. 42 U.S.C.A. 7401 *et seq.*

Summary of Act. Facilities that handle certain hazardous substances were required to develop plans by June 22, 1999 for managing the risks associated with their operations and implement those plans. The plans include three parts: 1. a hazards assessment describing accident release scenarios, potential off-site consequences, and a five year accident history; 2. a prevention program addressing basic safety procedures such as training, maintenance, and safety audits; 3. an emergency response program covering response plans, drills, and coordination with local planners. The public may access publicly accessible information regarding the plans from EPA's website.

Data Generated: Facility Operating Permit: The permit will specify a wide variety of information including emission rates, compliance certifications and schedules, and record keeping and reporting procedures, some data is confidential. The permit is issued for up to five years.

Risk Management Plans: EPA requires the plans to be electronically submitted.

Location of Data: The plans were submitted directly to EPA. LEPCs may request copies from the facility submitting the plan or may retrieve information from the EPA Website.

Clean Water Act (CWA)

Legal Citation: Public Law 92-500, 95-217. 42 U.S.C.A 1300f *et seq.*

Summary of Act: The purpose of the Clean Water Act Amendments of 1977, amended by the Water Quality Act of 1987, is to control pollutants in effluent discharged from a facility by virtually any means to almost any stream or body of water. It establishes standards for wastewater treatment plants (publicly owned treatment works (POTWS)), that include required effluent technologies and pretreatment requirements for industrial discharges of toxic pollutants into the POTWS.

It also established technology-based and water quality effluent standards for discharges from specific industries into the waters of the United States; performance requirements for discharges from any new source from specific industries including organic chemicals, plastics, and synthetic fibers; requires that discharges of oil or hazardous substances in excess of reportable quantity (RQ) established by 40 CFR part 116, be reported to the National Response Center; controls discharges to the nation's waterways through a comprehensive permit system, the National Pollutant Discharges Elimination System (NPDES permits); industrial storm water discharge regulations in 1990 which include permitting and sampling requirements during normal rainfall events.

Data Generated: Facility Operating Permit: The permit will specify a wide variety of information including emission rates, compliance certifications and schedules, and record keeping and reporting procedures, some data is confidential. The permit is issued for up to five years.

Facility monthly or quarterly discharge monitoring reports: Report includes information regarding-flow, ph, temperature, and toxic pollutants.

Location of Data: MA Department of Environmental Protection regional offices.

Oil Pollution Act of 1990 (OPA)

Legal Citation: Public Law 101-380 and numerous amendments. 33 U.S.C. 2701

Summary of Act: The Oil Pollution Act was enacted to expand prevention and preparedness activities, improve response capabilities, ensure that shippers and oil companies pay the costs of spills that do occur, and establish an expanded research program. The primary focus of the Oil Pollution Act is to prepare and to respond to accidents involving a discharge of oil. The law requires owner/operators of facilities using large quantities of oil that because of its location could reasonably be expected to cause substantial harm to the environment by a discharge of oil into or on the navigable waters, adjoining shoreline, or the exclusive economic zone. The facility must prepare an emergency response plan for the worst case discharge of oil. The plan should be coordinated with the local emergency planning committee and be available for public inspection.

Information generated: Emergency response plan containing the following information: Emergency Notification telephone list; equipment list and location; spill response notification form; facility response team; evacuation plan; immediate action plan; facility diagram.

Information location: The plans are available upon request to the State Emergency Response Commission (SERC) and Local Emergency Planning Committees (LEPC).

Limitations: This act only applies to a limited number of facilities impacting waterways.

Resource Conservation and Recovery Act (RCRA)

Legal Citation: Public Law 94-580 and numerous amendments. 42 U.S.C.A. 6901 *et seq.*

Summary of Act: The Resource Conservation and Recovery Act of 1976 (RCRA) established the Federal program regulating solid and hazardous waste management. The Act defines solid and hazardous waste, authorizes the Environmental Protection Agency (EPA) to set standards for facilities that generate or manage hazardous waste, and establishes a permit program for hazardous waste treatment, storage, and disposal facilities. RCRA was last reauthorized by the Hazardous and Solid Waste Amendments of 1984. The Amendments set deadlines for permit issuance, prohibits the land disposal of many types of hazardous waste, required the use of specific technologies at land disposal facilities, and established a new program regulating underground storage tanks.

Sub-title C of RCRA created the hazardous waste management program. A waste is hazardous if it is ignitable, corrosive, reactive, or toxic, or appears on a list of 100 industrial process waste streams and more than 500 discarded commercial products and chemicals. Some wastes are specifically excluded, including irrigation return flows, sanitary/municipal waste water, industrial point sources discharges (regulated under Clean Water Act), and nuclear materials covered by the Atomic Energy Act.

Transporters of hazardous waste must also meet certain standards. These regulations were coordinated by EPA with existing regulations of the Department of Transportation. A manifest system, effective since 1980, is used to track wastes from their point of generation to the place of final treatment, storage, or disposal.

Treatment, Storage, and disposal (TSD) facilities are required to have permits, to comply with operating standards, to meet financial requirements in case of accidents, and to properly close their hazardous waste facilities in accordance with EPA regulations when hazardous waste activities cease.

Information Generated: Facilities must submit a contingency plan which includes information regarding the type of wastes, locations of wastes, spill remedial plans, key personnel, equipment and contractors names. Two reports are also generated in the case of releases, the initial report and final report.

Location of Data: Sent to Department of Environmental Protection only.

Safe Drinking Water Act and Amendments (SDWA)

Legal Citation: Public Law 93-523, 42 U.S.C. 300 *et seq.*

Summary of Act: The Safe Drinking Water Act was enacted on December 16, 1974, and subsequently amended five times is the basis for protecting public drinking water systems from harmful contaminants. The 1986 amendments were the most comprehensive and included provisions requiring the Environmental Protection Agency (EPA) to: 1. Set drinking water regulations for 83 specified contaminants by June 1989; 2. Promulgate requirements for disinfection and filtration of public water supplies and provide related technical assistance to small communities; 3. ban the use of lead pipes and lead solder in new drinking water distribution systems; 4. Establish a wellhead protection program around public water supply wells; 5. establish an elective demonstration grant program for States and local authorities having designated sole-source aquifers to develop ground water protection programs; 6. issue rules for monitoring wells that inject wastes below a drinking water source. The requirements that apply to the water system depend on three factors: 1. whether it is a community system, a non-transient non-community system, or a non-community system; 2. the number of people served by your system; and 3. whether it uses surface water or ground water. There are three major types of requirements in the Safe Drinking Water Act: 1. Sampling and Reporting; 2. Record Keeping, and 3. Public Notification.

Information Generated: Water suppliers are required to keep certain information on file, as follows: Bacteriological results, Chemical results, Actions taken to correct violations, Sanitary Survey Reports, Variance or exemption records.

Information locations: Massachusetts Public Health Department and the local water supplier.

Toxic Substances Control Act (TSCA)

Legal citation: Public Law 94-459. 15 U.S.C. 2601 *et seq.*

Summary of Act: The Toxic Substances Control Act (TSCA) authorizes the Environmental Protection Agency (EPA) to screen existing and new chemicals used in the manufacturing and commerce to identify dangerous products or uses that should be subject to Federal control. To this end EPA may require manufacturers and processors of chemicals to conduct and report results of tests to determine the effects of potentially dangerous chemicals on living things. Based on test results and other information EPA may regulate the manufacture, importation, processing, distribution, use, and/or disposal of any chemical that presents an unreasonable risk of injury to human health or the environment.

Information Generated: Toxic inventory every four years, reports on the new manufactures of chemicals.

Information Locations: Environmental Protection Agency, Washington, DC. Information is also available on the Internet at: <http://msds.pdc.cornell.edu/tscasrch.asp>

Limitations: Subject to heavy trade secret restrictions.

Atomic Energy Act of 1954 & 1975

Legal Citation: Public Law 95-91, 42 U.S.C. 7135 or 5843, 2301 ???

Summary of Act: The Nuclear Regulatory Commission (NRC) was established by the Energy Reorganization Act of 1974 to ensure adequate protection of the public health and safety, the common defense and security, and the environment in the use of nuclear materials. That act and the Atomic Energy Act of 1954 provide the foundation for the regulation of the commercial nuclear power industry. The NRC scope of responsibility includes regulation of

- Commercial nuclear power reactors, research, test, and training reactors.
- fuel cycle facilities, medical, academic, and industrial uses of nuclear materials.
- the transport, storage, and disposal of nuclear materials and waste.

Information generated: The use or storage of most nuclear materials requires permits and licenses. These permits include information regarding the operator, materials used, location, etc.

Information Locations:

Headquarters Public Documents Room
US Nuclear Regulatory Commission
Gelman Building, Lower Level
2120 L St. NW
Washington, DC 20037
(202) 634-3273
Internet: <http://www.nrc.gov>

Limitations: One needing to request information should make their request in writing and some information may not be available to the general public.

4. STATE LAWS AND REGULATIONS

STATE PROGRAMS

AIR POLLUTION

Legal Citation: MGL Chapter 111, Sections 142A-E. 301 CMR 7.00

Summary of Act: The act regulates the pollution or contamination of the atmosphere. It requires a permit for industries discharging into the atmosphere. The permits are issued for up to five-year periods describe the substances and quantities being released. It calls for the creation of air pollution control districts and is linked with the Federal Air Quality Act of 1967. Districts are required to achieve the air quality standards set force in federal standards, and the Department of Environmental Protection is required to review ambient air quality standards and plan for the implementation, maintenance and attainment of such standards.

Information Generated: Air Pollution Control Districts and Plans for the implementation of air quality standards. The plans contain information for contaminants found within the ambient air. The act also requires facilities to obtain permits before discharging into the air, the permits contain the facility specific emissions information concerning: the substances, quantity, and method of emission including fuel use, raw materials, production rates, and operating schedules; methods used to determine the emission rates; identification and description of air pollution control equipment and compliance monitoring devices or activities.

Information Locations: The Regional Department of Environmental Protection (DEP) and Regional planning commissions have copies of air pollution control plans. The Permits are located at the regional DEP offices.

FIRE PREVENTION

Legal Citation: MGL Chapter 148, Section 9. 527 CMR 14.01

Summary of Act: The act regulates the storage and handling of flammable liquids, combustible liquids, flammable solids and flammable gases. Permits are required for the storage of any flammable or combustible fluid, flammable solids or flammable gases above threshold amounts. All tanks, containers, vessels and transport vehicles are to be considered full for the purpose of required permitting.

Information generated: The permit includes information regarding the operator, address, types of materials, quantity in gallons, and any restrictions imposed. The permit is good for one year.

Information location: The local fire department and local licensing authority (city council - board of selectmen).

Hazardous Substances Disclosure by Employers Massachusetts Community Right-to-Know Act

Legal Citations: MGL Chapter 111F. 105 CMR 670.000

Summary of Act: The Massachusetts Right to Know Law gives citizens the right to find out what toxic or hazardous materials are being used or stored by employers in their community if

they believe that these substances may endanger their health or safety. It makes available to community residents material safety data sheets (MSDS) on toxic or hazardous substances (MSL) which are on the Massachusetts Substance List and are used or stored at work places in the community. Access is given through a petitioning process. One may use the Right-to-Know Act if you are concerned that an employer is using or storing a substance that could endanger public health or safety. The petition is submitted to the designated Municipal Right-to-Know Coordinator (usually found in the local health or fire departments) who would in turn contact the employer in question and advise them of the petition. The employer is required to provide copies of the MSDS for the products on the MSL to the Department of Environmental Protection regional office. The Department of Environmental Protection, the Department of Public Health, and Department of Labor and Work Force Development (formerly Dept of Labor and Industries) oversee this act.

Information Generated: Copies of the material safety data sheets (MSDS) for those substances on the Massachusetts Substance List for businesses within your community.

Limitations: Although still on the books, most communities have no active right-to-know program and many do not have a municipal right-to-know coordinator. It does not cover federal agencies or private work places. Public workers (State and municipal) are covered under this statute. This act has been largely overshadowed by Superfund Amendment Reauthorization Act (SARA), see page ??.

For further information:

Mass Dept of Public Health
Environmental Health Assessment
250 Washington St., 7th Fl.
Boston, MA 02108
Tel. (617) 624-5757
Fax: 617-624-5777

Hazardous Waste Facility Siting Act

Legal Citation: MGL Chapter 21D, Section 12. 990 CMR 1.00

Summary of Act: This law is focused primarily on developers proposing to build, maintain, and operate hazardous waste facilities. Developers are required to provide notice of intent to the state, chief executive of the host community, if any, the regional planning agency; and the chief elected officials of all abutting communities. The notice of intent shall include: (1) a description of the types of hazardous waste the developer proposes to accept for treatment, processing and disposal at the facility; (2) a description of the technology and procedures the developer proposes to use to treat, process, and dispose of hazardous waste at the facility; (3) the site, if any, proposed by the developer as a possible location for the construction and operation of the facility; (4) a description of the present suitability of the site, and of what additional measures, if any, will be required to make the site suitable for the purpose of construction, maintaining and operating the facility; or in the event such developer is not proposing a site, the requirements and characteristics of a site that would be appropriate for said facility; (5) preliminary specifications and architectural drawings of the proposed facility; (6) a copy of the most recently published statewide environmental impact report issued by the department; (7) any other information required to be submitted in accordance with the rule, regulations, procedures and standards of the department or the Council of Hazardous Waste Facility Site Council. The Department of Environmental Protection is charged with preparing an annual Statewide Environmental Impact

Report. The report shall describe and evaluate the hazardous waste management situation existing in the state together with such feasible alternative solutions as may be available for the treatment, processing and disposal of hazardous waste. The report shall also include: (a) existing sources of hazardous waste; (b) the types of technologies available for the treatment, processing and disposal of hazardous wastes; (c) the impacts, both favorable and adverse, resulting from the use of each type of technology; (d) actions which might be taken to avoid the dangers, minimize risk, or remedy unavoidable consequences; (e) the kinds of benefits and protective mechanisms which may be made available to host and abutting communities; (f) the existing rules, regulations, procedures and standards which have been established to protect public health, the public safety, and the environment; and (g) the sources and types of hazardous wastes generated in the commonwealth, the adequacy of existing facilities for the treatment processing and disposal of said hazardous waste, and the additional facility capacity needed in order to eliminate the shortfall of capacity if any.

Information generated: Statewide Environmental Impact report and initial notice of intent described in the Summary of Act section; Preliminary project impact report prepared by the developer; the siting agreement.

Location of Information: The Local Assessment Committee; the local Board of Health, The Department of Environmental Protection Regional and State offices.

Limitations of data: The information is subject to trade secret provisions.

Oil and Hazardous Material Release, Prevention and Response Act.

Legal Citations: MGL Chapter 21E. 310 CMR 40.0000

Summary of Act: This act requires any responsible party who has a potential threat/or an actual release of oil/hazardous material into environment above listed thresholds amounts to immediately report the release to the Mass Department of Environmental Protection. The report to DEP normally includes to extent known the name and amount of material(s) released, where the release took place, when it was discovered, any immediate response actions taken to mitigate the release or its impact, DEP records the notification information in a log at one of the four regional DEP offices. The law also requires the responsible party to typically hire a licensed environmental cleanup contractor to clean the site and/or a licensed site professional (LSP) to prepare a Immediate Response Action (IRA) Plan to document the actions to be taken to remove and clean up the release site. The Licensed Site Professional must also submit to DEP a Response Action Outcome (RAO) Statement documenting the amount of materials released, recovered, the impact on the environment, etc. The Immediate Response Actions, steps taken, any test results, his/her finding.

Information Generated: A written Immediate Response Actions Plan, and Response Outcome Statements. These documents provide a description of the names and amounts of the materials released, their immediate and long term impact on the environment, and methodology for removal and disposal of contaminated product and materials it may have contaminates, such as earth, water, building materials, etc. A list of hazardous waste sites is also generated by this law. There are two basic lists produced. The first list all confirmed hazardous waste sites by town providing a very brief description of the address/location and substances found at the site. The second list has been collected since 1994 and provides the Standard Release Report information for all sites established since 1994.

Information Locations: The regional office of the Department of Environmental Protection. Copies of the Response Outcome Statement notices are also sent to the local Health Department and the chief elected official.

Massachusetts Hazardous Waste Management Act.

Legal Citation: MGL Chapter 21C, 310 CMR 30.00

Summary of Act: This act governs the treatment, storage and disposal of hazardous waste. It requires the Department of Environmental Protection to establish: 1, a list of hazardous wastes; 2, criteria and standards for the identification of hazardous wastes; 3, provisions for waiver by the department for any waste which the department determines is insignificant as a potential hazard to public health, safety, welfare of the environment, or the handling, treating, storing, use, processing, or disposal of which is adequately regulated by another government agency consistent with the regulations promulgated under federal Resource Conservation and Recovery Act. The act also sets limits upon the amount of time a company may keep hazardous waste at its facility. It also sets performance standards for storage of materials at the facility. Permits for re-cycling of hazardous waste and waste oil are also covered by the regulations. Closure requirements for facilities which have generated hazardous waste are also covered.

Information generated: Facilities who collect, transport, treat, or dispose of hazardous materials must obtain a license. All waste must be manifested.

Location of Information: Records of closed facilities are sent to the Department of Environmental Protection.

Massachusetts Underground Storage Tank Act

Legal Citation: MGL Chapter 48, Section 37; 527 CMR 4.00 and 9.00

No person shall construct, maintain or use any tank or container of more than ten thousand (10,000) gallons capacity, for the storage of any fluid other than water, unless the same is located underground, without first securing a permit therefor from the Department of Fire Services (DFS). DFS may, after notice and hearing, revoke any such permit for cause. Whoever violates this section of a rule or regulation made under the following section shall be punished by a fine of not less than fifty (50) nor more than one thousand (1,000) dollars.

The Department of Fire Services shall cause such tanks to be inspected annually. The annual inspection fee shall be determined annually by the Commissioner of administration under the provision of section three B of chapter seven. The owner or user of the tank and the local fire department shall be notified of the date of the intended inspection not less than fourteen (14) days prior to the inspection date. Inspections may be made of the premises, tanks, dikes and related equipment at any time during regular business hours.

Section 38A. No underground tank which has been used for the keeping or storage of flammable or combustible fluids shall be removed or relocated unless a permit for such removal or relocation has first been obtained from the state fire marshal or the official designated by him to grant permits in the city, town or district where such tank is located. If the permit is issued by an official of a city, the fee for such permit shall be established by action of the city council or board of aldermen in the form of a duly adopted ordinance

Section 38C. Nothing in sections thirty-seven, thirty-seven A, sections thirty-eight A through thirty-eight I, or any other provision of this chapter shall be construed to limit the authority that the department, the head of a fire department, any other department or agency of the Commonwealth, or a city, town, district, or other body politic has pursuant to any law.

(1) Each owner of an underground tank first put into operation on or after January first, nineteen hundred and ninety-one shall, within thirty days after the tank is first put into operation, notify the department of the existence of such tank, specifying the age, size, type, location, and uses of such tank. The requirements of this subsection (1) shall not apply to any underground storage tank that is (a) a farm or residential tank of one thousand and one hundred gallons or less capacity used for storing motor fuel for noncommercial purposes, or (b) a tank used for storing heating oil for consumptive purposes where stored. In prescribing the form of such notice, the department shall take into account the form of the notice prescribed pursuant to section 9002 of RCRA and the effect on small businesses and other owners and operators.

Information Locations: Local Fire Departments and The Massachusetts Department of Fire Services,

Massachusetts Pesticide Control Act

Legal Citation: MGL Chapter 132B, 333 CMR 1.00

Summary of Act: The act provides for the regulation of the use and application, disposal, and storage of registered pesticides within the state. It specifically provides for notice to cities and town by utilities before they can spray, release, deposit or apply any herbicides to which it owns or has right of ways. The act also provides for **certifying** and licensing applicators of pesticides.

Information Generated: Annual right of way plans which provide information regarding pesticides used, method of application, and toxicology. The notice shall include the dates of application, type of herbicide to be used and a copy of all information supplied by the manufacturers, the name and address of the contractor who be make the application for the utility or the name, title and business address of the employee who will be responsible for carrying out the application if it is to be made by utility company employees.

Information Location: Local Health Departments and the Bureau of Pesticide Control.

Information Limitations: The act covers only registered pesticides, not consumer products. Trade secret provisions also apply.

Department of Public Health, Radiation Control Program.

Legal Citation: MGL Chapter 111, Section 5N. 105 CMR 120.000

Summary of Act: The Massachusetts Radiation Control Program was created to control the radiation hazards of radioactive materials and machines, which emit ionizing radiation. On March 21, 1997, the Massachusetts Radiation Control Program became responsible for licensing, rulemaking, inspection and enforcement concerning the use of (1) radioactive materials produced as a by-product of the operation of nuclear reactors; (2) uranium and thorium source materials; and (3) small quantities of fissionable materials. This includes most of the medical and industrial users. The US Nuclear Regulatory Commission retains jurisdiction over regulation of nuclear reactors and other major nuclear facilities.

The program regulates the possession and use of naturally occurring and accelerator produced radioactive materials and requires licenses for the use, manufacture, production, transfer, receive, own, or possess any source of radiation unless exempted from the licensing and registration by the department.

To obtain further information from this program one can access its home page on the internet or request in writing from the address below.

Department of Public Health
Radiation Control Program
174 Portland Street
Boston, MA 02114
Tel. (617) 727-6214
Fax. (617) 727-2098
Internet: <http://www.state.ma.us/dph/rcp/radia.htm>

State Emergency Response Commission (SERC)

See Section 6, below

Toxic Use Reduction Act (TURA)

Legal Citation: MGL Chapter 21I; 310 CMR 50.00, 301 CMR 40.00, 301 CMR 41.00

Summary of Act: Toxics Use Reduction ACT (TURA) is a environmental protection program that has been established in Massachusetts to promote safer and cleaner production that enhances the economic viability of Massachusetts firms. TURA is a fundamental form of pollution prevention that focuses on industrial activities. It promotes toxic chemical substitution, product process modification, finished product reformulation, production modernization, improvements in operations and maintenance, and in process recycling of production materials.

The goal of the Toxics Use Reduction program is to reduce the generation of hazardous wastes in Massachusetts by 50 percent by 1997 without limiting the capacity of local firms to grow and prosper. This is a statewide goal. Individual firms may set their own toxic use reduction targets. The program was established in 1989 when the Massachusetts legislature unanimously passed the Toxic Use Reduction Act (TURA).

Every two years each covered firm must prepare a plan documenting how they will use Toxic Use Reduction techniques to reduce the generation of waste. Each plan must provide a corporate policy statement and two- and five-year goals for by-product reduction of each listed chemical. In addition, each plan must include information about current and projected toxic chemical use, the technical feasibility of implementing various techniques, and the economic impacts of each technique; a description of each technique or procedure that is to be implemented; and a schedule for implementation. The plan must be certified by a state-authorized Toxics Use Reduction Planner certified by the Department of Environmental Protection. The plans are kept at the facility but a plan summary is submitted to the Department of Environmental Protection.

The Commonwealth is required to promote the state law through four institutions: (1) The Administrative Coordinating Council which brings together representatives from seven state agencies that oversee environmental, health, labor, and development programs. The purpose of the council is to establish more coordinated approaches promoting industrial development that is environmentally sound and enhances human health. The Council is assisted by an Advisory

Committee made up of members of the public and the business community; (2) The Bureau of Waste Prevention a reorganized unit within the state Department of Environmental Protection is charged with writing regulations, enforcing the law, and collecting and making data available; (3) The Office of Technical Assistance in the Executive Office of Environmental Affairs provides free technical consultation and assistance to firms attempting to implement toxic use reduction programs; (4) The Toxics Use Reduction Institute which provides education and training for professionals and the general public, conducts a technology transfer program, and sponsors research in the development of safer materials and cleaner technologies.

Information Generated: All facilities meeting the reporting requirements must submit an annual report which is known as Form S. Form S identifies the chemicals used by the facility in each production process, the percentage reduction of toxic by-products and toxic emissions, and the toxic use reduction techniques used to reduce the waste. Every other year a Toxic Use Reduction plan summary must be submitted. The plan summary includes information concerning two and five year goals for by-product waste reduction of each listed chemical. It must also include information about current and projected toxic chemical use.

Location of Information: The Department of Environmental Protection (DEP). DEP also makes available to major libraries across the state the information on CD ROM discs.

Limitations: The public availability of the data is subject to some trade secret restrictions and can be complicated to lay users.

5. LOCAL PROGRAMS

There is not an easy means of categorizing all the various local programs. The MA Department of Environmental Protection compiles a listing of local ordinances that contain provisions to regulate or control the use of hazardous materials. The following departments and agencies are potential sources of information and assistance for the LEPC. It should be noted that many local ordinances and by-laws created at the local level have their origins in state or federal laws and regulations. The following departments and agencies would be an appropriate place to inquire for hazardous material information sources.

Conservation Commissions

Conservation Commissions are not a primary location for finding hazardous material information but may be an excellent source for information regarding conservation areas, water ways and determining who the local river watch groups are.

LEPCs should communicate with the local Conservation Commissions anytime there is a spill affecting water ways or conservation commission property. Some LEPCs have developed protocols to deal with emergency clean-up actions on such properties to comply with the statutes dealing with notification and prior approval of work done on such lands.

Check the telephone book under the community listings for the conservation commission, or the main number for the city or town where you live.

Fire Department Hazardous Materials Response and Industry Coordination

The Fire Department is considered the lead agency in a hazardous materials incident. The fire departments have a wide range of responsibilities in the communities' local emergency response plan. They also must coordinate with facilities to reconcile the facilities' contingency plans with the communities' plan. Some fire departments have a hazardous materials response team while others depend on regional teams. In addition, **some** facilities have their own Hazmat response teams.

Submissions of contingency plans to the fire department requires careful analysis of these differences in response and require that planners to become familiar with the following Industry Standards in Hazardous Material Response:

- NFPA 471 Recommended Practice for Responding to Hazardous Materials Incidents. Covers basic operating procedures and require that an incident command system be implemented for hazardous materials operations.
- NFPA 472 Standard for Professional Competence of Responders to Hazardous Materials Incidents. Identifies the knowledge and skills required of the various levels of hazardous materials response personnel.
- NFPA 473 Standard of Professional Competence of EMS Responders to Hazardous Materials Incidents. Identifies the knowledge and skills required for emergency

- medical service providers responding to emergency medical service providers responding to hazardous materials incidents.
- NFPA 1500 Standard on Fire Department Occupational Safety and Health Programs. Reviews the minimum requirements for the various fire department operations that affect firefighter safety and health.
 - NFPA 1991 Standard on Vapor Protective Suits for Hazardous Chemical Emergencies.
 - 1992 Standard for Liquid Splash-Protective Suits for Hazardous Chemical Emergencies.
 - 1993 Standard on Support Function Garments. OSHA Hazardous Waste Operations and Emergency Response. (29CFR 1910.120) specifies levels of training that corresponds to responsibilities at Hazardous Materials incidents.
 - EPA Hazardous Waste Operations and Emergency Response (40CFR part 311) specifies levels of training that corresponds to responsibilities at Hazardous Materials incidents.

Fire Departments must also be familiar with the following Federal & State Laws Regulations and NFPA Standards:

Federal Regulations and NFPA Standards

- OSHA 1910-38 (Facilities) Emergency Action Plan.
- OSHA 1910-1200 (Facilities) Hazardous Communication Standard
- OSHA 29CFR 1910-132 (Facilities) Safety and Health
- National Response Team Interagency Contingency Plan (One Plan)
- EPA 40CFR 265.50-56
- NFPA 45 Standard on Fire Protection for Laboratories Using Chemicals. The purpose of this standard is to provide basic requirements for the protection of life and property through prevention and control of fires and explosions involving the use of chemicals in laboratory-scale operations.
- NFPA 30 Flammable and combustible Liquids Code. The purpose of this code is to provide reasonable requirements for the safe storage and handling of flammable and combustible liquids.
- NFPA Life Safety Code 101 The purpose of this code is to establish minimum requirements that will provide a reasonable degree of safety from fire in buildings and structures.

Massachusetts General Laws and Regulations

- MGL Chapter 148
 - Section 4 Persons authorized to enter and inspect premises
 - Section 9 Regulations relative to explosives and flammable materials, reports of stores and handlers as to quantity and locations.

- Section 10 Regulations relative to fire prevention
- Section 10A Heads of fire departments grants and revocation of permits.
- Section 13 Licenses for land for explosives and flammable materials.
- Section 15 Violation of regulations for transportation of explosives or flammable materials.
- Section 23 Keeping and use of flammable fluids.
- Section 37 Tanks for storage of fluids.
- 527CMR 14:00 Applies to the storage handling of flammable liquids, combustible liquids, flammable solids and flammable gases. This sets permit storage guidelines for flammable liquids, solids and gases. The maximum amounts that can be kept, stored, manufactured or sold without a license are:
 - Class 1 fluids 165 gallons
 - Class 11 fluids 500 gallons
 - Class 111A fluids 500 gallons
 - Class 111B fluids 1,000gallons
 - Flammable gases (within a building) 3,000cu.ft.
 - Flammable gases (outside a building) 10,000cu.ft.
 - Flammable solids 100 lbs.
- 780CMR State Board of Building Regulations and Standards Hazard Groups H-1 H-2 H-3 H-4
- DEP 310CMR 30-520 –524 Hazardous Waste

Health Agents and Departments

Legal citation: MGL Chapter 111C

Local public health departments have responsibility for enforcing state health laws and regulations as well as local public health ordinances. The activity of local boards of health also involve holding hearings and granting permits and licenses for activities within the community that may have an impact on the public health. Many of these activities also involve environmental and hazardous materials issues, which should be of concern to the Local Emergency Planning Committee. EPCRA specifies that the LEPC membership includes a representative from Public Health.

New requirements for Local Emergency Planning Committees to incorporate terrorism preparedness in their emergency plans. This necessitates greater health department involvement because of the use of biological agents by terrorists.

In the event of a hazardous material or terrorism emergency, the public health department is a valuable technical resource to the emergency response agencies. Health departments often have air monitoring and other diagnostic equipment to test for chemical and biological agents. They may also have access to testing laboratories, databases, reference material and other technical resources that may help determine what threats an incident may pose to the health of the emergency responders and the general public. If health department employees are to be used in emergency response, they must be provided with the same hazardous material responder training

as other support personnel. LEPCs need to address the role of health department workers in emergency response as well as appropriate training for that role.

Environmental laws, regulations and local ordinances that health departments enforce include:

- Indoor Air Quality
- Asbestos in place and abatement
- Lead paint in buildings and removal
- Pesticide storage and application
- Food store and restaurant health conditions
- Contagious diseases
- Swimming pools/Chemicals
- Radon
- Radiation and radioactive materials
- Storage of chemicals and fuels
- Regulation of healthcare facilities, such as nursing homes
- Regulation of laboratories and biotechnology companies
- Regulation of public lodging

Many of the regulations enforced by health departments fall under the Massachusetts Department of Public Health Sanitary Code. Public Health Regulation of concern to LEPCs include:

- 105CMR30.00 Hospital Licensure
- 105CMR150.00 Nursing Home Licensure
- 105CMR300.00 Communicable Diseases
- 105CMR400.00 State Sanitary Code
- 105CMR400.00 Chapter V Swimming Pools
- 105CMR460.00 Lead paint
- 105CMR480.00 Infectious and Biological Waste
- 105CMR650.00-680.00 Hazardous Substances
- 105CMR670.00 State Right to Know

Information on health regulation can be found on the Massachusetts Department of Public Health website at <http://www.state.ma.us/dph>

Various Federal Laws and Regulations dealing with public health may also be administered at local level by the health department. Details on federal health law and regulation can be found on the US Department of Health and Human Services website: <http://www.hhs.gov>. Department agencies concerned with environmental health include:

- Agency for Toxic Substances and Disease Registry (ATSDR)
- Centers for Disease Control and Prevention (CDCP)
- Food and Drug Administration (FDA)

Individual cities and towns may also have local health and environmental ordinances administered by local health departments. Local Emergency Planning Committees should work with their boards of health or health department representatives to identify ordinances that should be considered in emergency planning.

The health department is a required and a valuable member of the Local Emergency Planning Committee. Emergency responder and public health considerations are an important consideration in the development of an emergency plan. LEPCs should understand health regulations and the role of the health department, and utilize this resource in their work.

Planning Boards & Departments

Legal citation: MGL Chapter 40

Communities may adopt local zoning ordinances, which can contain provisions for the regulation of land uses including the use and siting of uses using hazardous materials. A common restriction is to allow the siting of uses with hazardous materials only by special permit. Permits normally describe the location, types and amounts of approved hazardous materials. The City-town clerk's office or planning office can normally provide information about permits issued within their jurisdiction.

Each city-town stores their records in different systems but most can respond to indicate whether a specific address has been issued a permit. Not all communities can aggregate numbers of permits issued nor can they easily determine for what hazardous materials the permits were issued. One would have to research each permit to determine the materials approved.

Local Waste Water Treatment Agency

The local wastewater treatment plant may be a source for information for industries and water quality. Depending on the size of the plant, there may be a industrial pre-treat program, which would focus on industrial users who might discharging into waste stream. This program monitors pH levels and chemical discharges. Pre-industrial treatment programs generally require a permit, which would provide information regarding the industrial users' discharges including chemical and pH levels. It also sets discharge limits on the user. The treatment plant also may have test results for water samples taken from the waterway it discharges into and the discharges it makes into the waterway. Local wastewater plants are under the Clean Water Act.

Communities that are in the Massachusetts Water Resources Authority (MWRA) will not have local plants and should refer to the MWRA for this information. (<http://www.mwra.state.ma.us>)

Public Works

Departments of public works (DPW), also known as local highway departments, are required members of the Local Emergency Planning Committee under EPCRA and bring valuable resources to the committee. DPWs often have professional engineers and other technical experts on their staff that can provide a valuable resource in emergency planning. Public works departments also have heavy equipment, such as dump trucks and front-end loaders that may be used in the response to a hazardous material incident. They often have supplies of sand and other material that may be necessary in containing a spill. Public works departments are responsible for the streets and roads where transportation emergencies occur and have information on drainage and the location storm drains.

Public works employees who may be called to respond to hazardous materials emergencies and work at incidents must have received Hazmat responder training. The use of public works employees and their training should be addressed by the LEPC in the emergency plan.

Public works departments are also involved in the administration and even the enforcement of various federal, state and local environmental laws, regulations and ordinances. The Local Emergency Planning Committee, through its DPW representative, should understand these regulations and how they may apply to the emergency planning and response effort. Some of these regulations include:

- Solid waste - Federal RCRA, Mass MGL c.21H, 310CMR16.00
- Hazard waste - Federal RCRA, Mass MGL c.21C310CMR30-100

- Storm water - Federal 40CFR122
- Underground Storage Tanks (UST) Federal , Mass MGL c.21E, 310CMR40.00
- Water Treatment - Mass MGL c. 13 & 21A, 310CMR22.00
- Wastewater Treatment - Mass MGL c.21C, 314CMR12.00
- Asbestos MGL c. 111, 310CMR7.15
- Hazardous Material Spills MGL c. 21E 310CMR40.00
- Pesticides - MGL c. 132B, 333CMR1.00
- Sewer Connections - MGL c. 21s, 314CMR7.00
- Water Pollution Control - MGL c.21, 310CMR41.00
- Wetlands - MGL c.131s, 310 CMR10
- SPCC - Federal 40CFR112
- Oil Pollution - Federal OPA90, Mass c. 21E, 310CMR40.00
- Local Zoning ordinances

Other environmental concerns of public works departments

- Salt storage
- Abandoned autos
- Construction debris
- Paving materials
- Vehicle maintenance
- Auto body/painting
- Lead paint/bridges
- Solvents
- Midnight dumping

Public works departments are often facilities regulated under EPCRA as they store and use hazardous materials such as gasoline, diesel fuel, motor oil, automotive batteries and various solvents and cleaners. They are required to file annual Tier II Inventory Reports with the LEPC for these substances and provide emergency contact information. As facilities, they are encouraged to participate in the LEPC and information on the hazardous material storage should be included in the emergency response plan.

Public works departments are a valuable member of a Local Emergency Planning Committee, from both a resource and participating facility perspective. LEPCs should understand the environmental regulations that DPWs may administer or be subject to and take these regulations into consideration in emergency planning. DPWs should be included in the response plans and their employees included in responder training. Recognizing their importance, the SERC added DPW representation to the required membership of the LEPC in 2001.

HOSPITAL/AMBULANCE EMERGENCY MEDICAL RESPONSE PLAN

One of the most challenging aspects of the Local Emergency Committee's planning is the Emergency Medical Response Plan. Most medical responders, pre-hospital (ambulance) and fixed facilities (hospitals) lack hazardous materials responder training for treating patients exposed to hazardous materials. Interestingly enough many Federal and State statutes, (see appendix) require hospitals to participate in the planning and care of persons exposed to hazardous materials and to protect their own employees.

Many hospitals are unaware of the requirements by the different federal agencies, as well as the Joint Commission for Accreditation of Healthcare Organizations (JCHO) to participate in community planning for hazardous materials incidents. Under the EPA SARA Title III, it states that a primary responsibility of the Local Emergency Planning Committee's (LEPC) is to develop emergency response plans (ERP). Hospitals and pre-hospital providers are required to be an integral part of the ERP.

EMS has a critical role in the planning as well as the execution of a hazardous materials emergency response. The plans will differ in that some communities have their own Hazmat teams and others must rely on regional Hazmat teams. These teams are responsible for containing releases as well as decontaminating persons exposed to hazardous materials. In these cases, decontaminated patients, after minimal additional decontamination, can be treated and transported to a hospital. Where communities that do not have a Hazmat team available, they must consider in their emergency plans how persons exposed to hazardous materials will be decontaminated and transported.

Providing universal guidelines for all communities is difficult. In formulating a pre-hospital and hospital response plan, the most critical aspects to consider are safe areas of response. Pre-hospital response must always be to the cold zone. Under most Hazmat models Hazmat teams usually perform decontamination in the warm zone and the patient is brought to the cold zone for treatment and transport. Most of the decontamination should be accomplished in the field by trained responders but pre-hospital and hospitals must be aware that in many situations contaminated patients will present themselves to their systems. It is imperative that they have a plan and proper training for decontaminating and treating that contaminated patient. The goal of decontamination is to remove enough contaminated material so any danger of secondary contamination to those providing medical care or to the patient no longer exists.

Decontamination is the process of removing or neutralizing hazardous materials on people or equipment. The removal of chemicals from the skin is most important for a number of reasons: to prevent further injury and to prevent the responder or equipment from being contaminated. Procedures for decontamination usually require the removal of clothing; this alone will remove 80-90% of contaminants. Most decontamination can be accomplished by simple dilution with water unless the contaminant is water reactive such as the alkali metals, sodium, potassium etc. In such cases removal of the metal should be accomplished by removal with forceps and placed in mineral oil. When providing decontamination all water runoff should be collected and not be allowed to spill into ecologically sensitive areas such as storm drains. Hospitals and pre-hospitals must be prepared to care for contaminated patients to protect the patient and their employees. In many cases a patient may be brought to the hospital by a private vehicle or untrained

ambulance personnel may respond to a facility where a contaminated patient is presented to them. EMS is required to participate in disaster response and is also required by OSHA regulations and JCAHO to protect their employees from hazardous material exposure. To meet these requirements and to protect the medical responder hospitals and pre-hospital must be involved in the Local Emergency Planning Committees' community planning.

Training of hospital EMS personnel is the responsibility of the employer.

Appendix

Statutes, Regulations and Guidelines for EMS.

- MGL c. 111C
- EPA SARA Title III Community Right to Know Act 1986
- EPA 40-CFR Part 311 Worker Protection Standards
- EPA Fact Sheet May 2001 LEPC'S and Deliberate Releases (Addressing Terrorist Activities in the Local Emergency Plan)
- National Response Team Integrated Contingency Plan Guidance (ONE PLAN)
- OSHA 29CFR 1910-120 Hazardous Waste Operations and Emergency Response
- OSHA Hazardous Communication Standard
- OSHA 29CFR 1910-132 Safety and Health
- OSHA 1910-38 Emergency Action Plan
- OSHA 29CFR 1910-1200 Hazards Communication Standards
- EPA 40CFR 265.50-265.56 Hazardous Waste
- DEP 310CMR 30.520-30.524 Hazardous Waste
- Joint Commission for Accreditation of Healthcare Organizations (JCAHO)
- EC 1.2.4: Hospital Emergency Preparedness Plans
- EC 1.4.4: Spill and Exposure Procedures
- EC 1.3.3: HAZMAT Training
- EC 1.5.4: Performance Standards
- EC 1.2.3: Management Standards
- EC 1.2.1: Environment Free of Hazards

EMS Resources

- Local Office of Emergency Management
- Fire Department
- Local Emergency Planning Committee
- State Emergency Response Committee (508)-820-2000
- MA. Poison Control Center (617) 232-2120
- Nuclear Incident Advisory Team MA. Dept. of Public Health Office Hours (617) 727-9710 other times Ma. State Police (508) 820-2121

24-Hour Hazardous Materials Assistance

- Center for Disease Control (800) 311-3435
- Chemical Transportation Emergency Center (CHEMTREC) (800) 424-9300
- Agency for Toxic Substances and Disease Registry (414) 639-6320
- National Response Center (800) 424-8802
- The National Pesticide Telecommunications Network (800)-858-7378. Assistance to physicians and first responders pertaining to pesticide accidents.

Free Computer Based Hazardous Materials Information.

The National Library of Medicine -TOXNET Web site: TOXNET A comprehensive data bank for health effects on industrial and environmental exposures. Contains the following:

*Hazardous Substance Bank-Toxicology emergency handling

*Toxline- database covering Toxicological, pharmacological, physiological, or biochemical effects of drugs or chemical substance

- Chemical Carcinogenesis Research Information System
- Integrated Risk Information System (Maintained by EPA)
- Environmental Mutagen Information
- GENE-TOX provides genetic toxicology
- Development and Reproductive Toxicology

CHRIS (Chemical Hazard Response Information System) (800) 247-8737

Website <http://www.uscg.mil/hq/g-m/mor/articles/chris.htm>

EPA- Web site: <http://www.epa.gov>

Center for Disease Control (CDC) (800) 311-3435

Web site: <http://www.cdc.gov>

Information for Hospitals:

*Bio-terrorism Readiness Plan (Template)

*FEMA Incident Command System (ICS) Course

*Hospital Preparedness for Mass Casualty

*Information and treatment protocols

Paid Subscription Computer Based Hazardous Materials Information

Micromedex (800)-525-9083-CD-ROM includes following databases:

*POISONDEX –contains comprehensive acute and chronic toxicity information and medical management guidelines.

- TOMES Plus- Compiles hazard and toxicity information from the National Library of Medicine.

The Massachusetts Emergency Management Agency offers an EMS Operations Course for Hospitals and Pre-hospital: Contact Director of Training Joan Roche (508) 820-2000

6. LOCAL EMERGENCY PLANNING COMMITTEES (LEPCs)

State Emergency Response Commission (SERC)

Legal Citation: Governors Executive Order

Summary of Act: Under the provisions of EPCRA, the Governor of each state must appoint an Emergency Response Commission. The SERC is responsible for several hazardous material issues, including: appointing the local emergency planning committees (LEPCs); reviewing LEPC plans; ensuring hazardous material training is conducted; developing a system for receiving and maintaining information filed by facilities and it is available to the public. The Governor has appointed the Massachusetts Emergency Management Agency (MEMA) as the coordinating entity to carry out the responsibilities of the Massachusetts SERC. The SERC has designated the Department of Environmental Protection (DEP) in Boston as its holder of facility information generated by SARA. It requires the Tier 2 report form to be used for reporting of inventories.

Information Generated: Community Emergency Response Plans (available via Emergency Management Agency), Facility Inventory information and spill reports (available via Department of Environmental Protection). Also standards for local emergency planning committees.

Location of Information:

Massachusetts Emergency Management Agency
400 Worcester Rd,
Framingham, MA 01702-5399
Tel. (508) 820-2000
Internet: <http://www.state.ma.us/mema/>

Local Emergency Planning Committees

The local emergency planning committee (LEPC) created by provisions of the US Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) can provide detailed information regarding facilities and preparedness activities in your community. It has four basic functions by law: 1. To develop a comprehensive emergency plan for the community and keep the plan up-to-date; 2. To receive information about accidental releases; 3. To collect, manage, and provide public access to information on hazards chemicals in the community; 4. To educate the public about risks from accidental and routine releases of chemicals and work with facilities to minimize the risks. The LEPC must provide copies upon request of the Tier 2 forms containing hazardous material inventories and spill reports submitted by the responsible party. It can also request from the facility material safety data sheets for chemicals used by the facility. They also have copies of the communities' response plan and by March 1st of each year have the risk management plans generated by the Clean Air Act. The committee should be able to refer individuals needing additional information or clarification to more specialized help either from a facility representative, state agencies, or other sources that may be applicable.

Unfortunately not every community has an active LEPC, for the name of the local emergency planning committee for your community you may call your local fire department (they are generally members) or the Area office of the Massachusetts Emergency Management Agency, see <http://www.state.ma.us/mema/> for the office that covers your community.

For general information regarding LEPC's, the Environmental Protection Agency has an Internet address: <http://www.rtk.net/lepc>

Certification Process

In 1997, the Massachusetts SERC instituted a certification process for LEPCs to be a management tool and a standard by which to judge LEPC applications equally. The certification process follows the criteria of NRT-1 and NRT-1A and is designed to ensure that all committees meet the goals of EPCRA. The process involves submitting a completed application with supporting documentation. The SERC has delegated to the LEPC Liaison Committee the responsibility of being the review panel for certification applications. This process encourages the more efficient use of limited funding to meet the goals of EPCRA. The process also identifies and documents areas that the LEPC needs to improve. The Liaison Committee acting on behalf of the SERC can then target those needs identified by this process for special attention in the various SERC funding and technical programs.

Certification Levels

Full certification:

A committee that meets the criteria set forth in the legislation and application process. This certification would be valid for 3 years. A committee meeting the full certification level would be in compliance with all the relevant SARA Title III regulations and SERC directives. In addition, it would be eligible to apply for EPA CERCLA Sec. 123 reimbursement grants for Local Governments for Emergency Response to Hazardous Substance Releases. This committee may also apply for limited funding available via SERC grants related to the SARA title III, including planning, training, exercising, etc. Committees for communities who are listed as priority community by the EPA Priority Index may remain independent if they wish to remain so if they meet the committee criteria.

Provisional certification:

A committee that meets most of the criteria set forth in the legislation and application process. This committee would be eligible for funding to meet the remaining application needs only. This certification would be valid for two years only.

Start-Up certification:

A committee that has agreed to meet the criteria set forth in the Full certification criteria, but is not able to meet various criteria due to the newness of the committee. This certification would be valid for one year only. Funding for SARA title III activities will be limited to meet the committee certification criteria activities only.

Non-certified committee:

A committee that either does not meet the minimum criteria for certification or has not applied for certification. This committee will not be eligible for funding. It may also be subject to inclusion in an existing LEPC at some point in the future.

Nuts and Bolts of Committee Operation

This section is a collection of miscellaneous topics related to the operation of a local emergency planning committee. Every committee has unique features and operating requirements, these topics are offered as ideas help prevent “reinventing the wheel.”

Frequency of meetings

Aside from the State Emergency Response Commission’s requirement that a full committee meet twice a year, at a minimum, there are no hard rules on how often to meet. The need to meet is predicated on the amount of work the committee has to accomplish and the amount of time committee members are willing to give. Typically it is the amount of work needing to be done that drives the frequency of meetings. Those committees that have a lot to do generally meet more frequently. It is not unusual to meet monthly while there is much to do. This is common in the early stages of committee development. The number of full committee meetings can be reduced by having sub-subcommittees focusing on specific topics, such the Hazmat plan. The sub-committee structure allows members to focus their energies on topics they have an interest in. Mature committees tend not to meet as often as they have accomplished their task, perhaps years ago. They tend to meet between two and four times a year. Each committee will strike a balance on how much their members are willing to attend.

The decision on when to meet is best decided by the membership, the committee should determine which day of week and specific time is most convenient for the membership. Some committees find it easier for their membership to meet during the workday others find evenings or weekends better. Those that meet during the workday generally tend to be early in the morning.

Committee Agendas

The agenda of meetings is based on what needs to be accomplished during the meeting. The agenda can also be limited on how long committee members are willing to meet. Having a crowded agenda with limited time will mean that topics will not get enough attention and that may frustrate members wanting more time. Also there is no hard rule, - most meetings tend to last between one and two hours. In the developmental stages of the committee activity, there are a number of tasks that need to be accomplished (Hazmat plan, by-laws, decisions on record keeping, etc.) which will drive the meeting agendas. However as a committee matures those tasks tend to fade or take much less time and some committees struggle to find suitable topics to talk about. Ideas that have worked to keep the committee active include:

Holding one meeting a year to review the plan. This has each responding department review with the membership their roles and missions during a response according to the plan. This agenda item allows the committee to meet one of few legislated mandates (annual review of the plan).

Holding a meeting around the time (March 1) when the tier 2 forms are due to the committee. This allows industries to hand carry them to the committee and the Fire Department if they are in attendance. Some committees actually provide assistance to industries in helping them prepare the forms. By storing the facility tier 2 reports on a computer with the EPA Tier2Windows software the committees can easily print out the facility

forms. This process helps both the committee and industry in having more accurate forms and more importantly it serves as a reminder to smaller industries that they are due.

Inviting guest speakers to address topics of interest to the members. Topics that are perennial favorites are: cost recovery, district Hazmat team response considerations, industry safety programs, clean up contractor considerations. Governmental agencies such as Mass Department of Environmental Protection (DEP), Hazmat Team representatives, OSHA, EPA, and Clean-up contractor representatives are generally more than willing to come to present material.

Incident or response Review can be a very interesting and educational meeting. Reviewing a local response with an eye toward lessons learned and looking at the specific response can serve as a means of improving overall awareness for committee members.

Reviewing a facility process can serve as an awareness tool for the response community members. Having an industry explain how and why they use hazardous substances can be a beneficial means of improving their awareness of the specific facility and the hazardous substances used. It also familiarizes the responders where the various hazardous substances are used or stored.

A review of any new regulation or law impacting committee recently passed by a governmental body or passed by governing standard organization (National Fire Protection Association). The review allows members keep current on the multitude of laws and regulations.

A review of software that is available to industry or the emergency response community to help with topics associated with committee activities. CAMEO and Tier2Windows or the up-coming Tier2 Submit software are all public domain programs that can provide assistance to response agencies and the LEPC.

Membership

The EPCRA legislation specifies twelve membership categories and the Massachusetts SERC added one additional category (Public Works). The committee must have representation from each of the required categories. An individual may represent more than one category (Fire and Emergency Medical Services). If the community the committee represents has an industry using extremely hazardous substances, it must be a member. Aside from the basic categories, the committee must determine just how big it wants to be. In general, committees tend emphasize either public safety emergency agencies or industrial members. Communities that have few industries in general tend to be more public safety. The use of sub-committees can often provide a means of expanding participation. Membership is more complicated for regional committees, which not only have to consider the basic membership categories they also have to take into account geographical considerations. Regional committees have to decide whether they want every community they represent or representatives of representative communities.

Open Meeting Law considerations

The Local Emergency Planning Committee is a governmental body and as such is subject to the provisions of the Massachusetts open meeting law. A copy of the open meeting guidelines is attached for review. The open meeting law has a few basic aspects that all committee should be aware of. First, the meetings must be posted at least 48 hours in advance. An agenda must be posted in the typical posting area of the local government body. In many communities the town or city clerk's office is the location. The agenda should indicate the location, date and time, location, and the topics to be discussed. The location used for the committee meeting must be assessable to the public. The door in which the meeting is held must be kept "open." The agenda and meeting minutes are public documents and subject to requests from the public.

Although not directly related to open meeting law, committees should also keep in mind the Americans with Disability Act (ADA) requirements. When scheduling meetings, keep in mind accessibility issues for members and potential persons who might want to attend the meeting

Committees

Committee Records

The Local Emergency Planning Committee has a variety of records that is responsible for. First, and perhaps, most important is the Tier 2 annual submissions from facilities located with the committee's jurisdiction. These reports are the foundation to the right to know philosophy of the EPCRA legislation. The Massachusetts Secretary of State office has decreed that they must be kept for at least three years. Committees should consider retention for 20 plus years. Health effects sometimes take years to be recognized. The tier 2 reports can be a useful source of information for investigators both in epidemiological and environmental studies. The tier 2 record is subject to public disclosure and must be provided to any person requesting it. The tier 2 reports are typically stored either by facility name or address. Most committees typically keep a file for each facility or address.

The minutes of meeting and agendas also must be retained for at least three years. The records should be stored to allow for convenient retrieval.

Response Plans

EPCRA specifies that each Local Emergency Planning Committee shall develop an emergency response plan for the community. NRT 1-A provides the criteria which must include sections on: Legal Authorities, Planning Factors, Concept of Operations, Emergency Notification Procedures, Communication Procedures, Public Information, Resource Management, Safety, Incident Assessment, Roles of Police, Fire, EMS, Health and Public Works; Documentation, Procedures for Testing and Updating the Plan. Each plan shall identify the facilities that handle and store hazardous materials within the LEPC's jurisdiction, as well as transportation routes used to transport these substances. The plan must also identify vulnerable populations such as schools, hospitals, nursing homes, etc., as well as resources such as reservoirs that could be impacted by a release. The plan shall coordinate the plans of the facilities with those of the emergency response agencies. It shall address training of the responders.

Local Emergency Planning Committee Community Outreach Programs

Many Local Emergency Planning Committees' adopt a logo to identify their committee to the public. Some committees have had logo design contests in their community and a number of committee's have designed their own. Others have purchased copyrighted logos such as the one below. Whatever the choice it is important for the committee to establish a distinct identity in their community.

Cambridge Local Emergency Planning Committee



For Information contact:

One of the most important functions of the Local Emergency Planning Committee is to develop outreach programs. The public must be informed of:

- Potential hazards present at facilities in their community.
- The community's emergency preparedness to cope with a hazardous materials emergency.
- Protective measures that can be taken by the public to minimize adverse public health.

LEPC'S in many communities can provide education and information to the public in a number of ways by:

- Establishing an LEPC Web Site
- Providing guest speakers from their public information committee to address community organizations or facilities.
- Holding informational seminars
- Educating the public in specific hazardous material matters by cooperative printing and mailings with utility companies and other facilities doing business in the community.
- Coordinating LEPC plans with facilities federal and state mandated plans such as their emergency contingency plans.
- Insuring that companies that store, use or transport hazardous materials have their own emergency response plans.
- Assisting Industry with developing Risk Management Plans under the EPA section 112 of the Federal Clean Air Act.
- Keeping the community up to date with the changing Federal and State hazardous materials regulations through meetings, community access television and local newspapers.

Most important is to listen and address the public's concerns about hazardous materials in their community.

7. INCIDENT COMMAND SYSTEM OVERVIEW

In the early 1970's, a series of major wildland fires in Southern California prompted municipal, county, state, and federal fire authorities to form an organization known as Firefighting Resources of California Organized for Potential Emergencies (FIRESCOPE). Organization difficulties involving multi-agency responses were identified by FIRESCOPE. Other difficulties included ineffective communications, lack of accountability, and lack of a well-defined command structure. Their efforts to address these difficulties resulted in the development of the original Incident command System for effective incident management. Although originally developed for wildland settings, the system ultimately evolved into an "all risk" system, appropriate for all types of fire and non-fire emergencies.

There are many systems that are in use throughout the nation for direction and control of resources at emergency events. But the one, the Incident Command System (ICS) as developed by the National Fire Academy (NFA), has been recognized as the model tool for command, control, and coordination of resources and personnel at the scene of an emergency. For hazardous material incident response, the use of the ICS is mandated by federal regulations (OSHA 1910-120).

The Incident command System is based upon business management principles. In a business or government environment, managers and leaders perform the daily tasks of planning, directing, organizing, coordinating, communicating, delegating, and evaluating. The same is true for an Incident Command System when dealing with evolving emergency situations. These tasks are performed under the overall direction of the incident commander. In brief, an Incident Command System is a management tool consisting of procedures for organizing personnel, facilities, equipment and communications at the scene of an emergency.

The Incident Command System endorses a number of philosophies that are the key to its success. They include:

- The use of common terminology.
- A top down modular structure with five functional areas (Command, Operations, Planning, Logistics, and Finance).
- Integrated communications
- Span of control

The use of common terminology is essential to the effective operation of an Incident Command System. Within the National Fire Academy's INCS, major functions are pre-designated and titled. Common names are established for all personnel and equipment resources conducting tactical operations within the ICS network as well as for all facilities in and around the incident area.

The incident command System is organized in a modular format. This TOP-DOWN organization is used for any incident that occurs. Modules are organized on a functional basis, with five primary functional areas. These are:

- Command
- Operations
- Logistics
- Planning
- Finance

While each function is recognized in any implementation of the ICS, each function does not require independent staffing. In small incidents, one person may be responsible for several functional areas. As the incident grows in size or complexity, these responsibilities may be divided further to have one individual lead each functional area.

Integrated Communications involves the management of incident scene communications through the use of an integrated and coordinated communications plan. This plan includes communications procedures to receive, record, and acknowledge incoming and outgoing communications, of any form or type. The ICS stresses the use of plain language in all communications.

Span of control is an essential component of the ICS. This is defined as the number of subordinates one supervisor can manage effectively. The guidelines for the desirable range are from three to seven persons reporting to a supervisor with an optimum number of five

The location from which the ICS is managed is the Command Post (CP). It may consist of an ad hoc designated vehicle or it may be a vehicle specifically designed for that purpose. In larger incidents, a structure may be designated the location. It is important that all responders and know the location of the CP. There should only be one command post per incident. In large or complex incidents, the community emergency operations center may be opened to support the field operations.

Depending on the incident, command may be vested in one-agency or multi-agencies jurisdictions. The concept of unified command is employed in multi-agency operations. Unified command is shared responsibility for over-all management of an incident as a result of a multi-jurisdictional or multi-agency operations. All involved agencies will contribute to the command process. In a unified command structure there will still be one person in overall charge of the event, the INCIDENT COMMANDER. The lead agency for the command is sometimes designated by legislation such as in hazardous material incidents, which in Massachusetts is the local fire department. The local ranking fire officer becomes the incident commander.

COMMAND: The command function consists of those actions that involve directing, ordering, and/or controlling resources by virtue of explicit legal, agency, or delegated authority. Incident commanders are selected on the basis of whom has the primary authority for overall control of the emergency event. The incident commander may change at various stages of the emergency. The incident command staff has three support positions, safety officer, public information officer, and liaison officer.

OPERATIONS: The operations function is responsible for the management of tactical operations at the incident. The operations function is coordinated by the Operations Section Chief, who reports to the incident commander. The Operations section chief has primary responsibility for the tactical operations taking place at any specific phase of the emergency's evolution.

PLANNING: The planning function is responsible for the collection, evaluation, dissemination, and the use of information about the development of the incident and the status of resources. The section is also responsible for developing an Action Plan which should include strategic goals, tactical objectives, and all support activities and actions that are required. In large or complicated incidents, this function may include specific operational time periods. The Planning Section chief reports directly to the incident commander.

LOGISTICS: The Logistics function is responsible for locating, organizing, and providing facilities, services, and materials for the incident. It directed by the Logistics Sections Chief who reports directly to the incident commander. This function assumes greater importance with larger, long termed operations.

FINANCE: The Finance function is frequently overlooked but can play an important role in the cost recovery process. It is responsible for tracking all incident costs and evaluating the financial considerations of the incident. This function assumes a greater important in larger and long-term incidents. The Finance Section Chief does not have to be a public safety agency type. Consideration should be given to having an individual from the local finance department staff this function. The Finance chief reports directly to the incident commander.

It is not the intent of this essay to document every last detail of the incident command system and how it works but it is highly recommended that individuals avail themselves of the series of incident command system classes offered by the Massachusetts Emergency Management Agency (MEMA) or the Fire Academy. MEMA offers three ICS courses from the basic to the more advanced. Persons interested in learning about or taking these courses should contact the MEMA Training office or the Regional Offices.

References:

Overview of the Incident Command System, Student Manual. Emmitsburg, Md.: Emergency Management Institute, 1992.

National Fire Protection Association, NFPA 1561, Standard for Fire Department Incident Management Systems.

8. POPULATION PROTECTION MEASURES

Perhaps the most important activity along with mitigation efforts during a hazardous material release is the population protection measures the incident commander employs to protect the community residents. It is a multifaceted effort and it requires rapid decision-making. The following is a quick review of the process and some issues related to it.

The incident commander has two basic options that can be employed to protect the public from a substance that may be putting them at risk. First, is to move the population away from the danger (EVACUATION); second is to have the population go indoors and seal themselves off from the outside danger (SHELTER in PLACE) or a combination of both. The following is intended to review in a generic way the steps necessary to decide on what measures to employ and some tactical suggestions to implement them.

The population protection process requires addressing four basic issues. First, identifying the substance and knowing its risk characteristics. Second, establishing zones where the substance is and could cause harm. Third, deciding whether to isolate, evacuate, shelter in place or a combination of them. Finally, determining a means of communicating your instructions to the affected populations both in and out of the zones.

IDENTIFICATION:

The identification of the substance or substances that have been released and the risk characteristics of the substances are critical to resolving the problem. The identifications of substances involved in transportation accidents can normally be done by determining the placard number(s) on the shipping vehicle or the shipping papers if they are available. By referencing the UN number found in the Emergency Response Guidebook, one can typically get the name of the product and first responder instructions including initial isolation and evacuation distances if warranted. The Guidebook provides information on three different processes, isolation zones, downwind evacuations, and potential blast areas.

In facility accidents, the facility staff normally assists by providing information what was involved. The U.S. Department of Transportation ORIES (Operation Respond Emergency Information System) can also provide valuable information by using the transportation container (tanker trailer number). The use of pre-existing pre-plans and Tier 2 reporting forms are also useful tools to help in determining what substance may be at a particular address or location. Both provide inventory and location data. Useful information needed for release substances related to protection the public is not different than what is needed to protect responding public safety personnel.

A number of factors will need to be considered. The physical state of the product: Liquid? Gas? Or solid? If the product is a gas, is it lighter or heavier than air? Is it flammable or explosive? Does it readily evaporate? Is it toxic? Are the various exposure limits known? Finally has the release stopped or is it on-going? Substances that present an airborne or explosion risk to the public are prime candidates for implementing population protection measures.

Air modeling programs such as ALOHA can assist in projecting how far the contaminants may go from the site. Air monitoring will be needed to determine accurately the concentration in the environment.

DETERMINING ZONES:

Once it has determined that the substance(s) released may pose a risk to community, the incident commander will need to establish exclusionary zones to protect both responders and the general public. Typically the zone will be larger at night than during the day. The Emergency Response Guide may assist in creating initial zones until more scientific methods such as ALOHA plume modeling or actual air monitoring results can be obtained. The zones are general created based on risks. The following are the terms used by hazardous material teams and the Emergency Response Guidebook.

Hot Zone: An initial area of contamination determined by first responders at the operational and awareness level. It is an area which technicians/specialist may alter upon their assessment of the situation. The hot zone contains the area most immediately affected by the hazardous materials release. It also contains an area or safe refuge and is the beginnings of the decontamination (contamination reduction) corridor. It is a restricted area to which no one should have access unless properly trained and protected and from which, to the degree possible, everyone needs to be evacuated. The Incident Commander sets the parameters of this zone after giving due consideration to the product, the volume released, the container involved, the prevailing meteorological conditions, and the potential effects on local topography. Those working in the hot zone would wear personal protection equipment (PPE) appropriate for the hazardous substance.

Warm Zone: An operational area that may be established by operations level personnel, a technician or specialist. It is safe from hazardous material exposure. The area includes the decontamination corridor where decontamination continues. It is also the area in which access control points connecting the hot and cold zones are established. Those working in the warm zone should wear personal protection equipment.

Cold Zone: The area outside the hot and the warm zones in which personnel provide the support for the hot zone operations. It is here that the incident command post will be found. Because it is assumed that the area will be free of all contamination, no personal protection equipment will be needed for personnel working within it.

Level of concern: The value set for population protection is Level of Concern (LOC). Ambient air contamination levels do not automatically provide the incident commander with set levels on which to base population protection measures. Information regarding exposure limits is typically based on healthy adults. Consequently these exposure limits may not be appropriate for children, the elderly, or persons in poor health. The incident commander will have to convert occupational exposure limits to values on which population protection measures will be based. The value set for population protection is the Level of Concern (LOC). The populations need to be protected before the harmful levels are reached. For flammable materials, ten percent of the lower explosive limit (LEL) is the level of concern. For substances with Immediate Dangerous to Life and Health (IDLH) again ten percent is the level of concern at which to initiate protective actions. The lower limits are recommended to allow persons to initiate protective actions before the effects of the substances prevent from doing so. CAMEO is an excellent source for determining the exposure limits.

Emergency Planning Response Guidelines: Another set of values created by the American Industrial Hygiene Association (AIHA) providing advice on various airborne risk substances and the impact of air concentrations of them. There are three guidelines.

Emergency Response Planning Guidelines 1: The maximum airborne concentration below which it is believed nearly all individuals could be exposed for up to one hour without experiencing other than mild transient adverse health effects or without perceiving a clearly defined objectionable odor.

Emergency Response Planning Guidelines 2: The maximum airborne concentration below which it is believed nearly all individuals could be exposed for up to one hour without experiencing or developing irreversible or other serious health effects or symptoms that could impair an individual's ability to take protective action.

Emergency Response Planning Guidelines 3: The maximum airborne concentration below which it is believed nearly all individuals could be exposed for up to one hour without experiencing life threatening health effects.

ESTABLISHING ZONES:

In releases involving zones of a small size, simply marking with barrier tape may be all that is needed. Barrier tape is often used to identify and warn of the various zones. Once taped, uniformed security is generally needed to ensure that the barriers are respected by pedestrians, public safety vehicular traffic and general vehicular traffic.

For those zones involving larger areas, more planning will be needed. Some one will be needed to determine and to start deploying resources to seal off (isolate) the area. If the zone covers several blocks, key major intersections will need to be identified and should be blocked first. Once the major intersections are closed, the secondary roads, and then residential side streets should be blocked. Pedestrian traffic must be also considered if it is possible for pedestrians to enter the exclusionary zones. Typically, all roadblocks should be staffed to reduce chances of the public ignoring the barricades.

Due to the potential for the zones to change, communication between law enforcement personnel on the perimeter lines and incident staff responsible for determining them is critical. Personnel staffing perimeter lines should be instructed to report any change in conditions at their location to a designated area.

Water (rivers, lakes, etc) and railroads must be considered if inside the exclusionary zones. The air space above the exclusionary zones can be restricted by contacting the Federal Aviation Administration or the Massachusetts Emergency Management Agency. The request to restrict the space can be defined in a number of ways: complete, above a certain altitude, limited approved traffic, etc.

Delineating and isolating the exclusionary zones will be important to prevent further exposures. The area of great risk is the HOT zone and typically its access is controlled by the hazardous material specialists on scene. Evacuation from this area is typically requires careful consideration of personal protection for workers entering it for any reason. Flammability, toxicity and route of exposure considerations of the substance will guide the level of personal protection equipment (PPE) for workers. Populations found inside the hot zone should be taken or directed to go to the area of refuge at the edge of the hot zone. Removal of population from

the HOT zone must be accomplished as quickly as possible due to the severe hazards typically found within it.

It is important to keep in mind that zones are dynamic and affected by many factors including wind direction.

POPULATION PROTECTIVE ACTIONS

As mentioned before, the incident commander after determining the substance involved and area that is or could be affected by it, has two basic choices to protect the population—evacuation-or sheltering-in-place.

Evacuation: Evacuation involves ordering the population - both residential and workers - to leave the area. From a psychological perspective most people generally feel safer leaving an area affected by hazardous substances rather than staying. This can be accomplished by asking persons inside the area to leave by using their own transportation, and/or by transportation provided by the emergency responders (buses, chair vans, etc.), or by simply walking away from the site. Evacuation can be complicated by the presence of any special needs populations, such as schools, nursing homes, elderly housing, hospitals, group homes, etc. Depending on the situation, responders may not have ability (lack of personal protection equipment) to enter the zone to assist residents in leaving. The evacuation order should include the direction by which to leave, where emergency shelters for relocation are located, an emergency telephone number for residents to call if they need transportation, and encouragement to have residents warn their neighbors. The message should be short so it is easily understandable and can be repeated frequently. A pre-scripted warning message makes it easier for responders to give and remember. To completely evacuate a typical neighborhood requires time. Consideration should be given to opening a shelter or shelters for those that have not made their own arrangements. Many persons will arrange for their sheltering, by staying with family or friends. The media should be advised to broadcast the shelter location(s). For larger areas, the special needs populations numbers will increase in proportion to the total population. In addition to being time consuming, evacuation is also labor intensive since transportation is generally needed to accomplish it. Responders may not have all the assets needed to physically accomplish the tasks in the required amount of time.

Sheltering in Place: Sheltering in Place essentially asks the population to immediately go indoors and take steps to prevent outside air from entering inside. There are three ways in which air can enter (and exit) a structure—Natural ventilation (open doors and windows), mechanical ventilation (fans, air conditioning, heating systems), and infiltration (leakage through cracks and small opening around windows, doors, and through walls). Rates of outdoor air ventilation are typically expressed in units of air changes per hour (acph). ACPH is the number of building volumes of outdoor air that enters the building in the course of an hour. For example, if a building has an internal volume of 10,000 cubic feet, and 20,000 cubic feet of outdoor air enters the building each hour, its total “fresh air” ventilation is said to be 2.0 acph. If only 5,000 cubic feet of air enter the building in the same span of time, the rate becomes 0.5 acph. The average American home is 0.8-0.9 acph, and “leaky” homes may experience 2.5 acph or so, especially under poor weather conditions with high winds and low temperatures. The average office building has an average infiltration rate of 1.0 acph. The best candidates for the sheltering in place process are typical single family homes in good condition. The basic concept is to protect occupants from a small cloud while it blows over the their

structure. The smaller the cloud, the more effective the process is. After the cloud has passed over, the structure and the air is clear, residents must be informed and asked to essentially reverse the process in order to air out the structure and flush out any product that may have seeped in.

The process of sheltering involves the following: Closing and preferably locking all doors and windows to the outside. (Locking is preferred since it general means the door or window is shut tight.) Closing all internal doors to reduce internal drafts. Shutting off the heat or air conditioning. Shutting off all air handling systems, such as floor fans, vent vans, etc. Shutting off clothes dryers. Closing the fireplace flue if the fireplace is not in use. Please note that a structure with a burning fire in the fireplace is NOT a good candidate for sheltering-in-place. Sealing off any cracks causing leakage to the outside. Residents who shelter in place must have a means of knowing what is going on in the outside. We recommend a battery operated radio to listen to further instructions that might be given by the responders.

The sealing of a structure is typically most effective during the spring and fall when the outside and inside ambient temperatures are the same. The worst season is the winter when outside temperatures are much colder than inside.

Not every structure is a good candidate for the process of sheltering. Structures in poor condition in particular may not be able to be sealed effectively. Broken windows and holes may allow air infiltration. High rise structures with trash chutes, elevator shafts, stairway corridors all contribute to creating natural air drafts with the warmer air rising and cooler (outside) air replacing it. Please note that the air handling controls in many structures are not readily accessible to the occupants.

Another factor relating to sheltering in place is the ability of residents to accomplish the sheltering steps. Frail elderly populations may not be physically able to accomplish the tasks required.

WARNING:

Both evacuation and sheltering-in-place require that the affected population be informed of the protective action ordered. Public information is a critical step in implementing either action. In rural areas, the warning process may be more difficult than in urban areas due the larger distances between homes. Broadcast media should be utilized to get the emergency instructions on the air as soon as possible. The use of the emergency broadcast system should also be considered. The public information officer should do a quick assessment of the affected population to determine if multi-lingual instructions should be used. Instructions should be suitable for hearing impaired populations. Scripted messages across the bottom of the television are very effective.

Warning the affected population is a labor-intensive operation. The initial focus should be warning the population closest to or most affected by the release. The incident commander can get warning out in a number of ways, including door to door warning, street by street, public safety public address systems, sirens, automatic telephone dialers, etc.

The street by street public warning is probably the most commonly used by communities. It can be implemented if the ambient air concentrations allow for worker exposure. Based on air monitoring measurements, personal protection equipment may be needed to protect workers. Vehicles giving warnings should be assigned specific streets to ensure that every street or area is warned. The vehicle should come to a complete stop, give a tone or siren alert, then give their verbal message. A pre-scripted message makes it easier for the officer. The pre-scripted message(s) should be incorporated into the response procedures for those departments who are charged by the local community Hazmat plan. As the officers complete their warning assignments, they should report in and request further instructions. Personnel assigned to the warning function should be advised where shelters have been opened in case residents approach them and ask where the shelters are located.

Communities with non-English speaking residents should have plans for broadcasting evacuation messages in the language of the residents. Consideration should also be given for hearing impaired populations.

The incident command post should record the areas warned as they are done. Throughout the entire warning and evacuation process, air-monitoring readings will be needed for worker safety and to determine current zone boundaries.

The incident's public information officer should be advised as soon as possible to release information regarding area (zones) affected by the release, population protection measures being initiated, where shelters are being opened, any traffic rerouting recommendations. Radio is the most effective means to warn drivers. The community's Hazmat plan may wish to pre-identify stations. Television is extremely effective for residential and more limited extent non-residential viewers. If possible faxing a map indicating the affected areas is much more effective than trying to give it verbally. The emergency alert system (EAS) is very effective in ensuring that the stations carry the message. Unfortunately, EAS does not already reach cable or satellite stations. Premium stations are also sometimes not covered by EBS.

If community sirens are used, the public should be familiar with procedures to follow should the sirens be used. "Voice sirens" are extremely effective for communicating warning instructions. These systems are essentially a very powerful megaphone system.

IMPLEMENTATION DECISION PROCESS:

In deciding which course to follow, the incident command staff must quickly review a number of factors.

First: the substance and its associated risks. Does the substance present an airborne or explosion risk to responders or the general population? What is the route of exposure for it and the personal protection equipment needed to protect against it? Information regarding the risks can often be obtained from a Material safety data sheet, CAMEO, CHEMTREC, industry specialist, etc. The NIOSH book is also an excellent reference for this purpose.

Second: The duration over which the discharge takes place. Releases are typically characterized as either being instantaneous or continuous. Instantaneous releases are those that take place over the course of few seconds or a minute or so and then stop. The result is typically a "puff" of vapor or gas or a distinct cloud. Continuous discharges take place over a longer period of time and produce a long stretched-out "plumes" of gas or vapor. Those releases, which are longer than instantaneous but too short in duration to create a continuous plume, are commonly called a finite duration release. The venting of a small pressurized cylinder is a common example of a

finite duration release. Releases lasting substantially more than two-three hours are not practical candidates for sheltering as the air change per hour factor will negate the protection factor. In many cases the responders to an incident may not know how long the event is going to last or they may think is going to be a “long time.”

Situations presenting an explosion hazard should be evacuated.

The incident commander staff should review the neighborhood affected by the release. Are most of the structures inside the zone appropriate for sheltering? Is the affected population able to accomplish the sheltering process? Does the incident command staff have the resources to evacuate the affected area? In most neighborhoods other than inner-city neighborhoods, the typical household has at least one automobile. Assuming the neighborhood residents receive the warning, they can leave by their own transportation and may be able to assist with neighbors.

SPECIAL NEEDS POPULATIONS:

The evacuation of special needs populations particularly the elderly, those in nursing homes, and hospitals, schools should give a high priority. The command staff should focus their resources on the populations at greatest risk from the exposure, typically children, the elderly, and populations in poor health. To the extent practical, warning must be given individually to institutional (schools, nursing homes, etc.) locations. This can be done by telephone and/or by responders going to the address whenever if possible. Institutional locations should be instructed to advise the command of the number of persons at the location, their transportation needs, and potential relocation destination(s). The staff should organize residents for rapid evacuation, assembling them at one inside location closest to where they might be pick up by transportation. Patient records, medications, special diets should be assembled and taken along with the residents/patients. If possible, evacuees should have identifying tags with their names and the institutional name and address. Transportation should be provided to extent possible by the most rapid means possible. Busses, chair vans, ambulances should be obtained and staged to effect a rapid process to transport persons needing transportation. The relocation destination should ideally be a similar type of institutional location (nursing home to nursing home, etc.). Schools should always be relocated to another school. The public information officer should inform parents of students of the relocation address as soon as it is known. School officials should also ensure that administrative telephone numbers typically called by parents are also informed of the student’s relocation. Parents should be assured that responsible school officials are going to stay with the relocated children until picked by parents. Pre-planning should encourage institutions to arrange for emergency relocation locations. Ideally there should be two locations at different ends of the compass. The locations must not be too close or too far. Whenever possible, a list of those facilities evacuated and their destinations should be made.

RESPONDER PERSONAL PROTECTION EQUIPMENT:

Whereas hazardous material teams are well equipped with personal protection equipment to accomplish their missions, the typical community police or emergency medical provider may not have any. A major issue that will typically surface during any population protective action is personal protection equipment for emergency responders. Information regarding the hazardous substance and its risk to responders must be reviewed. The focus should be on whether it is possible or advisable to send in emergency responders to perform emergency life saving evacuations and what PPE is necessary to protect those responders. The incident safety officer will have a critical role here to ensure that the worker is not allowed to rescue persons inside the exclusionary zones. An air monitoring system to determine air contaminate levels and to monitor

them will need to be established. Attention should be given to the incident/substance(s) that have multiple -risks, such as being both toxic and flammable for example. Multiple air monitoring meters may be needed. If it is determined that personnel are going to work in inside the exclusionary zones, a safety officer should be appointed to oversee their operations and report to the incident's safety officer. During the pre-plan phase, communities should identify possible sources for personal protection equipment and for air monitors and tubes. Medical surveillance information might also be gathered to determined from a very basic level who might or might not be able wear PPE.

BIOLOGICAL EVENTS:

Incidents involving biological materials may require a difference in the response methodology and protection actions. Unless the source is known at the outset, the gestation periods causing symptoms maybe 48 or more hours or more after the exposure. Consequently, it will become a public health event rather than an emergency response event. The State Labs in Jamaica Plain would be responsible for the specific identification of the agent. The priority will be to conduct an epidemiological study to identify the source(s) of the exposure and those who might have been exposed. This study is typically conducted by health care professionals with the assistance of law enforcement. Emergency response departments will need to determine from health care professionals the protective actions needed to protect response personnel. The Massachusetts Department of Public Health and the federal Center for Disease Control are the primary information sources for this type of information.

In the event, the biological agent is identified at the outset by a message sent indicating that the occupants of "x" have just been exposed to a biological agent, responders will need to consider a means of isolating the exposed occupants until medical care can be brought to them. This may require moving them out of the "contaminated" location to a clean one if possible. Health care professional will provide guidance to emergency responders relative to decontamination, patient treatment protocols, and personal protection equipment. Responders need to remember that biological terrorism events should be treated as a crime scene situation.

SUMMARY:

Information from on scene personnel, 9-1-1 telephone callers and off site responders is going to provide rapid initial information on the location and perceived severity of the incident. Scientific information regarding the identification of the substance(s) involved and their risk must be gathered to make informed decisions regarding which protection action if any to implement. The incident commander must ensure that both the responders and to the extent possible the general public are protected from the risks. Once a decision is made on the protective action, staff and resources must be directed to implement it. The public must be informed to carry out its instructions.

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9. HAZMAT TEAM OPERATIONS

WHO'S ON FIRST?

As previously discussed, the term "Hazmat team" has broad applications ranging from designated members of a facility maintenance department to massive joint task forces and strike teams. Depending upon the location, who is speaking and who is listening, the statement that a "Hazmat team" is responding or is needed may evoke differing expectations. In fact, it is possible and not unlikely that any significant hazardous materials incident will end up with several "Hazmat teams" on site and that none of these Hazmat teams will have the same training, equipment, functions or knowledge. The really confusing part is that, that's okay!

The following section will focus on the Hazardous Materials Emergency Response Mitigation Team, that is, generally speaking, the fire department based Hazmat team. It would be easy to state that this is the "first" Hazmat team to become involved, but even that may not be true. Beyond the entertainment value of continuing this line of explanation it is important to point out that the true first team may be that of the facility involved in the emergency and that such teams are often of critical importance to the fire department and to subsequent arriving Hazmat teams. In large facilities or those using extremely hazardous materials, sophisticated hazardous materials teams may be found and may include well-trained technicians and subject matter experts on the materials and processes involved. Members of these teams should not be dismissed, nor ignored and should be immediately introduced to subsequent responders

INITIAL RESPONSE

Not all emergencies involving hazardous materials require a hazardous materials team response. Many incidents that pose an "special" environmental risk do not require the specialized training; equipment and protection afforded by hazardous materials teams. The most common type of hazardous materials incidents involve flammable liquids and are routinely managed, even in large scale by local fire fighting resources.

In any hazardous materials emergency involving a public response, the local fire department should assume the lead. This position can be supported by two facts: 527 CMR 1.03(8), "Duties of the Head of the Fire Department," place hazardous materials incidents into that realm of responsibilities and, the emergency response assets to address any threat to health and safety of the public are under the general control and system of fire department response.

Hazardous materials responses are, by their nature slow moving and cautious. Any initial response must include an assessment of the products and conditions involved. Initial response assessments can be initiated using on hand information, such as knowledgeable employees of the facility or vehicle operator, shipping papers, MSDS or Tier two facility plans. Standard equipment on any emergency vehicle to aid in this assessment should include the DOT and NIOSH guides.

Following the initial assessment, the incident commander has several choices. Based upon the threat posed and local capabilities, the incident commander may opt to mitigate the release using local equipment and his/her own personnel. While few fire departments in Massachusetts have their own "Hazmat team," many have "special hazards" trailers or vehicles that contain absorbents, absorbent pads and booms. Defensive actions may be all that are necessary prior to turning over the incident to environmental and clean-up authorities. Beyond this level, the

capabilities of local departments range broadly, up to and including well equipped and trained, full Hazmat teams.

HAZMAT TEAMS

The decision to call upon more advanced and better-equipped resources may or may not entail the response of fire department type equipment. In stable situations, and in consultation with responsible parties, other options may be suitable to the incident commander. Many companies engaged in the regular use or transportation of hazardous materials have contracts in place with private hazardous materials teams to manage releases. The use of these teams, when offered and available must always be considered as the responsible party will ultimately challenge any cost recovery.

In unstable, hazardous materials emergencies, a response team is warranted. Emergency response teams may be operated by a single fire department or as a regional system. Both models operate in Massachusetts. Several of the state's largest cities operate their own hazardous materials teams. Those who do not rely upon the state Hazmat response system operated by the Department of Fire Services. The distinction is not, however, exclusive. Fire departments operating their own team may call upon the state teams and several communities that rely upon the state teams have overlapping mutual aid agreements with departments that operate their own teams.



***Springfield Fire Dept.
Hazmat Unit***

The emergency Hazmat team operates under the direction of the fire department incident commander, always. The team has a structure and specific tasks that are first and foremost aimed at the safety of the team and must be adhered to very closely. To the uninitiated, the movement of the Hazmat team may seem painfully slow. The very nature of hazardous materials requires methodical decision-making and pre-entry procedures such as:

- Hazard and Risk Assessment
- Product Identification

- Personal Protective Equipment Selection
- Pre-Entry Medical Monitoring
- Site Safety Plan
- Mitigation Plan



**Boston Fire Dept. Hazmat
Unit**

The above measures are as required, either by federal regulation or by the standards of the NFPA, which are widely accepted for hazardous materials operations. The overall incident operation can be divided into four phases as follows:

Assessments – Prior to and upon the arrival of the Hazmat team, the steps listed above are carried out to determine a course of action and insure that the product(s) are evaluated as well as the current conditions. These evaluations profile the expected behavior of the products and tell the team what risks they will face and the probability of adverse impacts. The selection of personal protective equipment (PPE) involves several decisions and reference to chemical and PPE properties. In essence, though PPE has advanced greatly over the years, there is no suit of armor that will protect the entry team from all chemicals. The inventory of suits, boots, gloves and breathing equipment must be referenced for its protection against each chemical and against the expected levels of contamination. Research must also be conducted on what detection and measuring devices will be effective for the specific products involved.

Before entry is made, federal regulations require that a site safety plan be developed and posted, regardless of the emergency. The site safety plan must identify the “science” conducted on the product, map the scene and identify hazard areas and safe areas as well as other information. The requirements of the site safety plan can be found in 29 CFR 1910.120. Once all of the data is collected, the team is briefed on the plan and assignments carried out.

Reconnaissance – Because access to the actual point of release may be prevented prior to protected entry, a specific entry may be necessary to ascertain the nature of the leak and/or actual presence of contaminants. It is not unheard of to make a reconnaissance only to find that no actual release occurred. The Recon may involve metering, photography and consultation between the entry team and facility personnel via radio while the team is in the “hot” zone. Upon completion of reconnaissance, the entry team returns, undergoes decontamination and conducts a briefing to determine a mitigation plan

Mitigation – This aspect may be as simple as ventilating an area or may involve multiple entries by multiple teams to carry out anything from delicate separation of chemicals to the manipulation of damaged tanks, valves and pipes. What mitigation does not include is clean up. During and following mitigation, reconnaissance must be continually conducted to identify the presence and area of contamination.

Demobilization – Because the Hazmat team has made entry into a contaminated environment, equipment must be decontaminated and assessed for disposal. Disposable items such as PPE and decon pools must be assembled and packaged for disposal by the clean-up contractor. Finally, extensive documentation has to be completed before the team can be released.

While Hazmat teams, their affiliation, size and capabilities may differ between fire departments or between local and state systems, operate in essentially the same manner. It is important that the local capabilities and interaction with supporting systems, such as those obtained through mutual aid or from the state system, be understood by the LEPC. In any community, and in any plan, these teams should be considered as extensions of the local fire department and not as independent assets that may be tasked by any official. With proper understanding of capabilities and coordination, the Hazmat team serves as a great resource available to virtually any community.

Massachusetts Hazmat Response

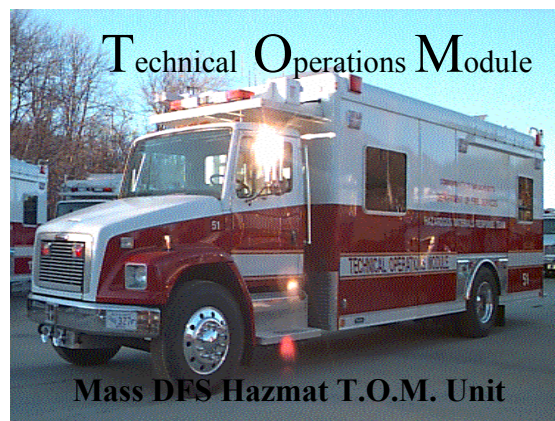
The Hazardous Materials Response Division of the Department of Fire Services evolved from separate teams operated in the various fire districts of the state. At present, there are six (6) districts within the Hazardous Materials Response Division of the Department of Fire Services (see Fig. 1).

Each Hazardous Materials Response team is comprised of three (3) vehicles that are owned, supplied and maintained by the Commonwealth. Upon request, and dependent upon the scale of an incident some combination of one to three of these units are activated and staffed by certified Hazardous Materials Technicians who are firefighters employed by participating fire departments.

Each district has one (1) Technical Operations Module (TOMs) which is deployed for hazard risk assessment and incident management. The TOMs (Fig. 2) unit carries a series of on-board computers to access an array of technical databases and chemical incident management systems to identify the risks from a given chemical and provide recommendations in managing its release. TOMs units also carry instruments for measuring atmospheric content and determining danger levels. Finally, these units are equipped with a wide array of communications capabilities to provide the interagency coordination necessary to manage chemical incidents

One or two Operation Response Units (ORUs) are assigned to each district, depending upon district size. The ORUs (Fig.3) contain specialized personal protective equipment, decontamination equipment and containment equipment to allow the technicians to enter the hazardous environment, mitigate the hazard and to be properly decontaminated. One or two ORUs may be dispatched to an incident based upon the size of the incident, complexity of the mitigation measures to be undertaken and the expected volume of personnel and equipment needed.

The Massachusetts Hazardous Materials Response Division has responded to incidents throughout the Commonwealth. While the potential for incidents increases in large urban areas with significant commerce, the nature of these incidents has resulted in response to even the most rural of communities. On average, the system responds to 37 chemical releases or potential chemical releases per year. Response data and statutory requirements present an imperative to the presence of a Hazardous Materials Response System in Massachusetts. The experiences of the system illustrate far more effectively the value of the innovative program that the Massachusetts Hazardous Materials Response Division has become. In concert with the many fire departments that provide personnel to support this system, Massachusetts can provide a response to its communities far beyond what they could sustain independently.



10. TERRORISM

Although terrorism was not specifically addressed in the Emergency Planning and Community Right to Know Act of 1986, the fact that many terrorist acts involve the deliberate release of hazardous materials places dictates that counter terrorism planning be included in the role of a LEPC. The US Environmental Protection Agency Chemical Emergency Preparedness and Prevention Office (CEPPO) published a fact sheet *LEPCs and Deliberate Releases* (EPA 550-F-01-005) in May 2001, which instructs Local Emergency Planning Committees to incorporate counter-terrorism measures into their plans. This fact sheet builds on the NRT-1 planning guide. The 1996 Nunn-Lugar-Domenici Domestic Preparedness Act addresses terrorism training and designated the federal agencies that coordinate training to local responders.

Many of the plans and procedures developed by the LEPC that apply to the accidental releases of chemicals would also apply to a deliberate release of the same chemical. Chemicals used in terrorist activities, would likely be the same ones used by industry within the community or found in transport on our highways, as they are readily available at reasonable prices on the open market.

In addition to chemical agents, terrorist organizations may also use biological or nuclear material in their activities. Because nuclear material is so highly controlled by the government and difficult to transport and detonate, this is the least likely of the three, nuclear, biological and chemical (NBC) categories, used by terrorists. Biological agents are more readily available than nuclear, and more difficult to obtain than chemicals, but because a very small quantity can have a devastating impact on a large area, they can be the most dangerous of the three categories.

The inclusion of counter-terrorism planning in a Local Emergency Planning Committee's activities may mean a slight change in the thinking of the committee. Whereas a hazardous material incident is, by law, under the jurisdiction of the fire department, terrorism is a criminal activity and a terrorism incident would be considered a crime scene and under the jurisdiction of law enforcement agencies. As these incidents often involve injuries and destruction of property, fire and emergency medical service will definitely be involved, but not the incident commander. Traditionally law enforcement agencies have played a support role in the work of the LEPC, an understanding of the police functions is important to LEPC members in counter-terrorism planning. In addition to local police, state and federal (FBI, ATF, Justice Department) law enforcement agencies may be involved and should be considered in the planning. If the FBI declares the incident a "Terrorism" event, they would have jurisdiction and a FBI agent would be the incident commander.

In addition to law enforcement, the military, including the National Guard, would play a role in any terrorism incident. Local health departments and hospitals, which have always been designated as a member of the LEPC, would play a more important role in planning for incidents involving biological agents. Other expertise from the community, such as colleges, and pharmaceutical or biotech companies may also be welcome additions to the LEPC.

Biological incidents, because their impact may not be realized immediately but develop over time and only identified when numbers of people become ill and start showing up at hospital emergency rooms, would not fall into the traditional definition of a Hazmat incident. Instead a

biological incident would become primarily a "public health operation." Here a local or state public health official would likely be in charge and thus the incident commander. This long term development of the incident and even longer term, days or weeks, to identify and treat large numbers of victims over possibly a large area, involving multiple jurisdictions requires substantially different planning than has been done in the past by Local Emergency Planning Committees. LEPCs should work with their local health departments, EMS, hospitals as well as state and federal public health agencies in updating plans to address the long-term public health operations that a biological terrorism incident may cause.

Terrorism considerations for Local Emergency Planning Committees

- **Emergency Contact Information** - As noted above, law enforcement and public health agencies and play an increased role in terrorism incidents. These state and federal agencies should be included in the emergency contact section of the emergency plan along with National Guard and military contacts. The National Response Center (800-424-8802) is the sole federal point of contact for reporting terrorism as well as chemical emergencies.
- **Incident Command** - The Incident Command System is the designated emergency management system for terrorism as well as hazardous material emergencies. As previously noted law enforcement, including the FBI, has the leadership role in a terrorism incident. The Massachusetts Emergency Management Agency (MEMA) would coordinate state resources and the Federal Emergency Management Agency (FEMA) would coordinate federal resources. In a biological incident, health officials likely would be in charge, and would need to be trained in the Incident Command System.
- **Communications** - Because of the large number of responders, often on different radio frequencies, radio communication between responders may be difficult. Plans should address the coordination of communications between agencies.
- **Public Information** - Communication in a terrorism incident may be even more critical than in a hazardous materials emergency. Because of larger areas, potential for a large number of injuries and public hysteria, the ability to effectively communicate with the public on a timely basis needs to be adequately addressed in the emergency plan. The FBI or lead law enforcement agency would likely handle this responsibility. This may be different than public information at a hazardous material incident.
- **Public Health and Safety** - The LEPC Plan's Public Notification and Information section should be expanded to include Weapons of Mass Destruction emergencies. Deliberate chemical releases would be likely be addresses in a similar manor to a Hazmat emergency. Biological and nuclear incidents, however, would be quite different and need to be addressed. Biological incidents could impact large populations over several days, possibly the first information on the incident would be large numbers of people becoming seriously ill. Plans should involve effectively communicating with these people and preventing panic in the community. Plans also need to address effectively providing medical attention to large numbers of people. Evacuation and sheltering procedures should be reviewed to confirm that they would be appropriate for terrorism events.
- **Responder Training and Equipment** - Responder training and equipment needs for terrorism incidents should be identified in the plan. Additional training and new equipment may be required by the response agencies.

- Hazard Analysis - Existing plans may focus on chemical facilities and transportation routes as the likely location of hazardous material emergencies. Terrorism incidents are likely to occur in very different places. Terrorists often target government buildings, modes of transportation or public gathering places. Potential targets within a community need to be identified in the plan and the protection of the occupants of these facilities and the surrounding populations needs to be addressed.

Information Resources available to assist LEPCs in incorporating terrorism considerations in their plans include:

- The U.S. Environmental Protection Agency Chemical Emergency Preparedness and Prevention Office (CEPPO)
- US Department of Justice Office for State and Local Domestic Preparedness Support
- Federal Bureau of Investigation (FBI)
- Federal Emergency Management Agency (FEMA)
- US Department of Energy
- US Department of Defense
- US Army Program for Domestic Preparedness/Counterterrorism
- National Domestic Preparedness Office
- National Response Team
- US Department of State
- US Critical Infrastructure Assurance Office
- US Department of Health and Human Service Office of Emergency Preparedness
- Massachusetts Emergency Management Agency

United States Office of Solid Waste EPA 550-F-01-005 Environmental Protection and Emergency Response August 2001 Agency (5104) www.epa.gov/ceppo

LEPCs and Deliberate Releases:

Addressing Terrorist Activities in the Local Emergency Plan

In recent years, the threat of terrorist incidents involving chemical and biological materials has increased. Local emergency planning committees (LEPCs) should consider the possibility of terrorist events as they review existing plans and consider how to incorporate counter-terrorism (CT) measures into their plans. CT planning and preparedness is often an extension of existing activities, rather than a totally new effort. This factsheet discusses how LEPCs can incorporate CT issues when they review and update their local plans. This factsheet builds on the National Response Team's Hazardous Materials Emergency Planning Guide (NRT-1) and supersedes "Thinking about Deliberate Releases: Steps Your Community Can Take."

BUILD ON CURRENT ACTIVITIES

Local emergency planning committees (LEPCs), established under the Emergency Planning and Community Right-to-Know Act (EPCRA), prepare and maintain comprehensive emergency plans. These plans address the extremely hazardous substances listed under EPCRA as well as thousands of hazardous chemicals for which OSHA requires Material Safety Data Sheets. Many LEPCs are already addressing CT, even if they do not use the word "terrorism." If you have developed a plan for possible accidental releases of chemicals in your community, you can use the same general planning principles for deliberate releases caused by terrorists. You may need to spend some time considering biological agents. This factsheet includes some suggestions for how you can modify your current activities to include deliberate chemical and biological releases.

MAINTAIN BROAD-BASED MEMBERSHIP

LEPC membership includes a wide variety of stakeholders, such as elected State and local officials; police; fire, civil defense, public health, environmental, hospital, and transportation officials; representatives of facilities where chemicals are stored or used; community groups; public works departments; and the media. Identify any specific roles each of these groups might have in the event of a terrorist attack. In addition, you might add a few new members who would bring specific expertise during a release involving biological agents (e.g., the coroner, morticians, chemistry and biology labs, and university experts).

UPDATE AND REVISE YOUR PLANS

LEPCs should review their emergency response plans annually. Before you begin specific consideration of CT issues, ensure that your emergency plan is up-to-date. Simply adding CT materials to an outdated plan will not create an effective emergency plan. For example, review your plan for outdated contact information, unique hazards presented by facilities that may have been constructed after the emergency response plan was first written, or new public works facilities. Also review the annual inventory reports filed under EPCRA Section 312 to determine if new chemicals or hazards are present in your community. In addition, check Risk Management Plans submitted by facilities in your community to ensure that you address the specific hazards identified by each facility. After you have generally updated your plan, consider adding information and procedures related to potential terrorist incidents involving weapons of mass destruction (WMD). Table 1 (page ****) defines each type of WMD and explains the consequences and response difficulties associated with each type.

One overall difference in dealing with a WMD incident is that law enforcement officials will be involved in the response as investigators. Officials from local, State, and Federal agencies will be on the scene of an incident to collect evidence and interview survivors. Their priorities may create emergency response coordination challenges that your LEPC should address in its plan.

This portion of the factsheet suggests changes you can make to specific sections of your emergency plan.

Emergency Contact Information

In the event of a terrorist incident, rapid and secure communications will be crucial to ensure a prompt and coordinated response. Your plans should include current contact information for fire, emergency medical services (EMS), law enforcement, medical, and other local departments and supporting organizations. Contact information for State officials, including those at public health agencies, the State Emergency Response Commission (SERC), State Police, and emergency management agencies also should be included.

The emergency assistance telephone roster in your emergency response plan should include regular phone numbers, cell phone numbers, pager numbers, and other emergency contact information for those individuals (Federal, State, local, and private sector) who have specific CT functions. The National Response Center (NRC) continues to be the sole Federal point of contact for reporting oil and chemical spills, and now provides the service of the Chemical and Biological Hotline. The NRC telephone number (800-424-8802) should be part of your emergency plan. NRC Duty Officers take reports of actual or potential domestic terrorism and link emergency calls with the Department of Defense (DOD) for technical advice on dealing with weapons of mass destruction and with the FBI to initiate the Federal response actions. The NRC also provides reports and notifications to other Federal agencies as necessary. All local plans should also include contact information for the local FBI Field Office.

Response Functions

Incident Command/Unified Command. Your emergency plan should address direction and control of responders in the event of terrorist attack. Local responders respond to an incident scene and should notify local, State, and Federal authorities if terrorism appears to be involved. Local response authorities (such as a senior fire or law enforcement official) should establish control of the incident scene. The Incident Command System (ICS) that is initially established will likely transition into a Unified Command (UC). The UC structure used at the scene will expand as mutual-aid partners, and State and Federal responders arrive to assist with response operations.

The FBI is the overall Lead Federal Agency (LFA) for a domestic terrorist incident involving WMD and will lead the crisis management activities (including law enforcement activities) of the response.

The Federal Emergency Management Agency (FEMA) is the lead agency for coordination of Federal support to State and local responders during consequence management activities of the response. Although the FBI is always involved in response to a credible terrorist threat or attack, FEMA support is provided only after a Presidential declaration, typically after State and local agencies request their assistance. Consequence management includes measures to protect public health and safety after an explosion or release; restore essential government services; and provide emergency relief to governments, business, and individuals. When crisis management activities have been completed, the U.S. Attorney General may transfer the overall Lead Federal Agency role to FEMA. EPA, the Department of Health and Human Services (DHHS), and DOD

also have specific CT-related functions. EPA's role in counter-terrorism activities is described in a factsheet by that name, available at www.epa.gov/ceppo/ct-publ.htm#factsheet.

EPA's Role in the Federal Response Plan

The multi-agency disaster response program that helps states during and after a disaster is the Federal Response Plan (FRP), which groups Federal assistance into 12 functional areas called Emergency Support Functions (ESFs). EPA is the primary agency for ESF 10, Hazardous Materials, which provides for a coordinated response to large-scale releases of hazardous materials by incorporating the response mechanisms of the National Contingency Plan (NCP). EPA assists in determining what sort of hazardous substance may be, or has been, released in a terrorist incident, and follows up with response to the incident, assisting with environmental monitoring, decontamination, and long-term site cleanup.

Public Information. Rapid and secure communications help to ensure a prompt and coordinated response to communications among emergency responders, law enforcement officials, clinicians, emergency rooms, hospitals, and mass care providers is extremely important. Your emergency plan should include the use of accurate and timely public notification measures and warning systems in the event of a terrorist attack. Work in advance with local news media representatives to ensure their cooperation at the time of an incident. Ongoing communication of accurate and up-to-date information will help calm fears and limit the effects of the attack. The FBI will establish a Joint Information Center (JIC) to coordinate the collection and dissemination of public information.

Activities of human services organizations, such as the Red Cross, should be included in the emergency plan. Among other activities, these organizations may use public information systems to provide human services information to the community, perform crisis counseling, provide insurance information and assistance, and provide translation services. Public and First Responder Health and Safety. Your emergency plan should address public health and medical issues as they relate to terrorist events. The plan should include procedures to identify and treat victims, store and distribute antidotes, and handle fatalities. Mass care issues that may be different during a terrorist WMD event include decontamination, multihazard/multiagent triage, mortuary services, and notifying and working with families of any fatalities.

The emergency plan should also consider the personal safety of emergency responders in the event of a terrorist attack. A terrorist chemical, biological, or radiological release may not be immediately known or apparent. Caregivers, emergency response and law enforcement personnel, and other first responders are in danger of becoming casualties before anyone realizes that a crime has occurred. Incidents could escalate quickly from one scene to multiple locations and jurisdictions.

The emergency plan should be flexible enough to accommodate evacuation or in-place sheltering. Evacuation may be required outside the perimeter of the scene to guard against further casualties from contamination by a released agent or from the possibility of additional WMD. In-place sheltering may be required if the area must be quarantined or if people are safer in a particular location.

Hazards Analysis

The hazards analysis section of an emergency plan should identify potential hazards, determine the vulnerability of an area as a result of hazards, and assess the risk of a hazardous materials release or spill. In the identification step, you should consider explosive, chemical, biological, and nuclear WMD as potential hazards. As you conduct your hazards analysis, identify potential targets and review their vulnerability to attack. Consider the population, accessibility, and impact on daily life, economic impact, and symbolic value of areas at risk. Terrorists and criminals who want to attack a particular group based on a conflict with their personal beliefs might target Federal, State, or local government offices and facilities, health clinics, or religious structures. Those who want to cause maximum casualties might target public gathering places (such as sports and entertainment complexes or tourist attractions), modes of transportation (such as buses and trains – including subways), routes of transportation (including bridges), or transportation facilities (such as airport terminals). In order to damage infrastructure and interrupt day-to-day functions, a terrorist might target utilities or water and wastewater treatment plants. LEPCs should also consider emergency procedures in the event of multiple, or simultaneous, terrorist attacks. Terrorists might target first responders (e.g., fire houses, police department offices, response vehicles, and individuals) to hinder them from responding to another terrorist incident. A terrorist may seek to transform a target into a weapon by focusing on facilities that handle explosive, toxic, or volatile chemicals.

Because most public buildings and public areas must be accessible to everyone, they are highly vulnerable to attack. Other facilities, such as water treatment plants and industrial facilities, especially those with chemical or explosives storage, should have site security measures in place. You may want to discuss site security measures with these facilities to ensure that they are adequately protected. You may want to ask the facility the following questions:

- Is the facility or critical equipment and chemicals protected by fences or buildings?
- Are there systems to detect intruders (e.g., patrols, video surveillance)?
- Are there alarm systems?
- Is access to the critical areas controlled?

Do not, however, include details of the security systems in your emergency plan, because it is available to the general public.

Public works facilities and workers will assume a support role, if so requested by State and local agencies. This support role might include damage assessment, debris clearance, search and rescue, traffic control, restoration of lifeline systems, building inspection, provision of potable water and sanitation services, and flood control.

For more information on site security, read CEPPPO's Chemical Safety Alerts *Chemical Accident Prevention: Site Security* (EPA K-550-F00-002) and *Anhydrous Ammonia Theft* (EPA-F-00-005), available at www.epa.gov/ceppo/p-small.htm#alerts.

Mitigation Procedures and Ongoing Assessment

Mitigation procedures and ongoing assessment involve consequence management activities to assess and protect the public from further exposure to hazards presented by terrorist activities. Public health officials, Hazmat teams, coroners and/or medical examiners, and criminal investigators should work together to mitigate residual hazards as well as identify potentially large numbers of fatalities. Federal assistance should be available to support this task. Ongoing assessment activities may include environmental sampling of air, water, and soil, and insect and animal screening for chemical, biological, or radiological agents.

The criminal investigation of a terrorist attack will be a joint effort that includes many agencies. In the event of a biological attack, an epidemiological investigation may also be performed to assess the distribution of cases and sources of outbreak. The emergency plan could include a checklist of basic questions to ask when conducting interviews with victims in hospitals, sick officers, and other individuals in affected population groups. (It may be necessary to train people in how to ask such questions appropriately in stressful circumstances.)

Equipment

Your emergency response plan should include standard operating procedures on when to use specialized WMD response equipment. Local responders should be trained to use, maintain, and calibrate this specialized equipment. The Department of Justice's Office for State and Local Domestic Preparedness Support (OSLDPS) provides equipment grants and technical assistance to eligible communities. Visit their website at <http://www.ojp.usdoj.gov/terrorism/funding.htm> for more information and grant application kits.

Training

The 1996 Nunn-Lugar-Domenici (NLD) legislation authorized funding to form a Domestic Preparedness (DP) training initiative. This initiative was recently transferred from DOD to the Department of Justice (DOJ), and includes a range of specialized courses, from basic awareness to discipline-specific advanced level training and exercises. Training is available for identified cities and is directed at a broad spectrum of emergency responders from a variety of response disciplines, including fire, hazardous materials, law enforcement, emergency medical services, public health, emergency management, and public works. Additional advanced level courses involving the use of real-time experiences, live agents, and explosives are taught at cutting edge training facilities. The NLD DP Program also includes three exercises: a chemical weapons tabletop, a biological weapons tabletop, and a chemical weapons full-scale exercise. Both types of exercises allow participants to test their knowledge and training, as well as increase the overall preparedness of responders across the jurisdiction.

FEMA independently offers the following:

- Course materials on WMD and preparedness and response for terrorist incidents that can be downloaded from www.fema.gov/emi/termng.htm.
- A terrorism consequence management course at their Mount Weather Emergency Assistance Center.

Contact the training officer in your State Training Office of Emergency Services for information on course schedules and application procedures. A list of offices and contact information is located at www.fema.gov/emi/sttrgo.htm.

- Information on the Incident Command System (ICS) training conducted by each State Training Office of Emergency Services. Visit www.fema.gov/emi/nrcrs.htm for more details.
- In conjunction with the National Fire Academy, an independent study course in emergency response to terrorism, located at www.fema.gov/emi/crslist.htm.

RESOURCES

LEPCs seeking assistance in terrorism-related emergency planning should begin with their SERCs. The SERC can direct LEPCs to appropriate assistance at the national and State level, and may be able to facilitate LEPCs in a given region working together to address possible terrorist activities. There are currently many Federal agencies involved in some aspect of counter-terrorism. Many of these agencies support websites. Because of the continual changes in the world of CT, however, many websites become outdated or are even discontinued without warning. Therefore, we recommend that LEPCs consult EPA's Chemical Emergency Preparedness and Prevention Office (CEPPO) website at www.epa.gov/ceppo/cntr-ter.html. This address is updated every two months and includes the latest links to the following types of information: Federal departments and agencies, health and medical, technical information and resources, and international sources.

For More Information:

Contact the EPCRA Hotline at:

(800) 424-9346 or (703) 412-9810

TDD (800) 553-7672

Monday - Friday, 9 AM to 6 PM, EST

Visit the CEPPO Home Page at: www.epa.gov/ceppo/

Table 1: Weapons of Mass Destruction (WMD) Definitions, Consequences, and Response Difficulties

Type of WMD	Definition (according to Title 18, USC 2332a)	Consequences	Response Difficulties
Explosives	Any explosive, incendiary, or poison gas bomb, grenade, rocket ... missile ... mine or device similar to the above	Deaths, injuries, damaged structures	Similar to that of other explosions and large fires
Chemical	Poison gas, blister gas	Deaths, injuries, possible contamination, possible long term effects	Similar to accidents planned for in current LEPC emergency response plan, but could be more extensive in effect (e.g., VX release in a crowded convention center or school)
Biological	Any weapon involving a disease organism	Deaths, injuries, possible contamination, long-term, far-reaching geographic effects	Agents may be unknown; Locations may vary and multiply as people travel
Nuclear	Any weapon that is designed to release radiation or radioactivity at a level dangerous to human life	Deaths, injuries, contamination, possible long- term, far-reaching effects	Similar to that of other explosions and large fires plus radiation; could have long-term far-reaching effects

11. TRAINING

TRAINING STANDARDS

Training standards for private sector employees such as private contract Emergency Medical Service (EMS) provider, spill clean-up contractors and industrial hazardous material response teams are found under the Occupational Health and Safety Act (OSHA) Standard 29CFR1910-120(q). These training standards are based on US EPA Regulations, as Massachusetts is not an OSHA State for public employees. The EPA standard is identical to the OSHA Training Standard.

TRAINING:

Training shall be based on the duties and function to be performed by each responder of an emergency response organization. The skill and knowledge levels required for all new responders, those hired after the effective date of this standard, shall be conveyed to them through training before they are permitted to take part in actual emergency operations on an incident. Employees who participate, or are expected to participate, in emergency response, shall be given training in accordance with the following paragraphs:

FIRST RESPONDER AWARENESS LEVEL:

First responders at the awareness level are individuals who are likely to witness or discover a hazardous substance release and who have been trained to initiate an emergency response sequence by notifying the authorities of the release. First responders at the awareness level shall have sufficient training or have had sufficient experience to objectively demonstrate competency in the following areas:

- An understanding of what hazardous substances are, and the risks associated with them in an incident.
- An understanding of the potential outcomes associated with an emergency created when hazardous substances are present.
- The ability to recognize the presence of hazardous substances in an emergency.
- The ability to identify the hazardous substances, if possible.
- An understanding of the role of the first responder awareness level individual in the employer's emergency response plan including site security and control and the U.S. Department of Transportation's Emergency Response Guidebook.
- The ability to realize the need for additional resources, and to make appropriate notifications to the communication center.

FIRST RESPONDER OPERATIONS LEVEL:

First responders at the operations level are individuals who respond to releases or potential releases of hazardous substances as part of the initial response to the site for the purpose of protecting nearby persons, property, or the environment from the effects of the release. They are trained to respond in a defensive fashion without actually trying to stop the release. Their function is to contain the release from a safe distance, keep it from spreading, and prevent exposures. First responders at the operational level shall have received at least eight hours of training or have had sufficient experience to objectively demonstrate competency in the

following areas in addition to those listed for the awareness level and the employer shall so certify:

- Knowledge of the basic hazard and risk assessment techniques.
- Know how to select and use proper personal protective equipment provided to the first responder operational level.
- An understanding of basic hazardous materials terms.
- Know how to perform basic control, containment and/or confinement operations within the capabilities of the resources and personal protective equipment available with their unit.
- Know how to implement basic decontamination procedures.
- An understanding of the relevant standard operating procedures and termination procedures.

HAZARDOUS MATERIALS TECHNICIAN:

Hazardous materials technicians are individuals who respond to releases or potential releases for the purpose of stopping the release. They assume a more aggressive role than a first responder at the operations level in that they will approach the point of release in order to plug, patch or otherwise stop the release of a hazardous substance. Hazardous materials technicians shall have received at least 24 hours of training equal to the first responder operations level and in addition have competency in the following areas and the employer shall so certify:

- Know how to implement the employer's emergency response plan.
- Know the classification, identification and verification of known and unknown materials by using field survey instruments and equipment.
- Be able to function within an assigned role in the Incident Command System.
- Know how to select and use proper specialized chemical personal protective equipment provided to the hazardous materials technician.
- Understand hazard and risk assessment techniques.
- Be able to perform advance control, containment, and/or confinement operations within the capabilities of the resources and personal protective equipment available with the unit.
- Understand and implement decontamination procedures.
- Understand termination procedures.
- Understand basic chemical and toxicological terminology and behavior.

The Massachusetts Department of Fire Services requires its District Hazmat Teams members to complete its 160-hour technician program.

HAZARDOUS MATERIALS SPECIALIST:

Hazardous materials specialists are individuals who respond with and provide support to hazardous materials technicians. Their duties parallel those of the hazardous materials technician, however, those duties require a more directed or specific knowledge of the various substances they may be called upon to contain. The hazardous materials specialist would also act as the site liaison with Federal, state, local and other government authorities in regards to site activities. Hazardous materials specialists shall have competency in the following areas and the employer shall so certify:

- Know how to implement the local emergency response plan.
- Understand classification, identification and verification of known and unknown materials by using advanced survey instruments and equipment.

- Know the state emergency response plan.
- Be able to select and use proper specialized chemical personal protective equipment provided to the hazardous materials specialist.
- Understand in-depth hazard and risk techniques.
- Be able to perform specialized control, containment, and/or confinement operations within the capabilities of the resources and personal protective equipment available.
- Be able to determine and implement decontamination procedures.
- Have the ability to develop a site safety and control plan.
- Understand chemical, radiological and toxicological terminology and behavior.

ON SCENE INCIDENT COMMANDER:

Incident commanders, who will assume control of the incident scene beyond the first responder awareness level, shall receive at least 24 hours of training equal to the first responder operations level and in addition, shall have competency in the following areas and the employer shall so certify:

- Know and be able to implement the employer's incident command system.
- Know how to implement the employer's emergency response plan.
- Know and understand the hazards and risks associated with employees working in chemical protective clothing.
- Know how to implement the local emergency response plan.
- Knowledge of the state emergency response plan and of the Federal Regional Response Team.
- Know and understand the importance of decontamination procedures.

TRAINERS:

Trainers who teach any of the above training subjects shall have satisfactorily completed a training course for teaching the subjects they are expected to teach, such as the courses offered by the U.S. National Fire Academy, or they shall have the training and/or academic credentials and instructional experience necessary to demonstrate competent instructional skills and a good command of the subject matter of the courses they are to teach.

Those employees who are trained in accordance with paragraph OSHA Regulations section 1910.120 paragraph (q)(6) shall receive annual refresher training of sufficient content and duration to maintain their competencies, or shall demonstrate competency in those areas at least yearly.

A statement shall be made of the training or competency, and if a statement of competency is made, the employer shall keep a record of the methodology used to demonstrate competency.

Hospital/EMS Training

Hospital personnel must be trained to the level of their response. The level required for EMD physicians and nurses, for example, is the Hospital advance level equaling the OSHA technician level. Security and ancillary personnel should be trained to at least the EMS Operational Level which is equal to the OSHA operations level. This training is available through MEMA on request.

Emergency Medical Technicians (EMS) and Paramedics should be trained to at least the EMS operations level. All Supervisors should receive Incident Commander level training.

FIRE DEPARTMENT TRAINING

Under Massachusetts Law the Fire Department is the lead agency in a hazardous materials incident. Their role within the community has expanded from strictly fighting fires to all types of emergency situations where life and property is in danger. Hazardous material incidents are one type of emergency where the traditional firefighting training is not enough.

In many cases the fire department is dispatched to a motor vehicle accident or reported fire that turns out to be a hazardous material incident. Because of building materials and hazardous materials stored in many business occupancies, most fires do involve some hazardous materials. Fire departments must therefore provide training to all firefighters in hazardous materials response. Even communities with their own hazardous materials teams need to provide hazardous material training to every firefighter.

As firefighters are expected to be actively involved in hazardous materials incidents, awareness level training is not enough. At a minimum, firefighters should be trained to the Hazardous Materials Operations Level. This training should include decontamination and other incident support functions. They should also be trained in the Incident Command System. Fire Department Officers should all receive Incident Commander Level training. Where applicable, Fire Officers should also be trained as Hazardous Material Specialists. New firefighters going through the Massachusetts Firefighting Academy will receive Operations Level training as part of their recruit training program.

Fire Departments having Hazardous Material Response Teams, or with firefighters on regional response teams, will need to train all team members to the Hazardous Material Technician Level. This training is provided by the Massachusetts Firefighting Academy through an intense 160-hour course with ongoing refresher training required.

Hazardous materials incidents often involve pressurized gasses, confined spaces, explosives, and other materials and locations requiring additional training beyond the Operations Level. Fire departments will need to consider factors within the community in their training program.

Departments that operate ambulances should also provide this training to all EMTs and paramedics, as they likely would be required to work in these hazardous conditions. Support personnel, such as dispatchers, should be trained at least to the Awareness Level, with Incident Command training so they have a clear understanding of the terms and operations at a hazardous material incident.

In addition to Hazardous Material training, firefighters should receive terrorism training. Although terrorism incidents are likely to involve deliberate releases of hazardous materials, for which this training is applicable, biological and nuclear incidents are possible and require specialized training.

In all cases training is the responsibility of the employer. Even with academy training programs, each fire department is responsible to provide hazardous material training to its members. It is especially important that ongoing refresher training is provided for firefighters who infrequently use these skills. At a minimum, annual Hazardous Material refresher classes should be provided to all firefighters as well as hands on drills.

Police Department Training

Police officers are expected to respond to all types of emergencies and are frequently the first on the scene of hazardous materials emergencies. Because police officers uniforms do not offer protection from contaminated atmospheres, police officers are frequently become the victims of Hazmat incidents. In the past, police may not have received hazardous material training, training may have also resulted in injuries to officers.

Police officers in their daily duties may come upon hazardous materials incidents and need to be able to immediately recognize the hazard and react appropriately. Hazardous Material Awareness Level training should be provided to all police officers as part of their academy training and annual refresher training should be provided as part of the in service continuing education program.

Police officers expected to respond to motor vehicle accidents of vehicles carrying hazardous materials and officers enforcing DOT or state hazardous material transportation laws and regulations should be trained to the Operations Level. Because of the potential for them to be exposed to hazardous substances and the requirement to fully understand and apply the appropriate statutes training above the Awareness Level may be appropriate.

Police officers will be called on provide traffic control, perimeter security and often emergency medical response for all types of hazardous materials emergencies. Awareness Level training, at a minimum is required for this support role.

Senior police officials will likely be part of the Incident Command team and should receive Incident Commander training in order to fulfill this role. In certain types of incidents, a Unified Command may be present with police and fire officials sharing the Incident Commander role. Terrorism incidents are crime scenes and, in a terrorism incident, the Incident Commander will be a police official. School violence, major crime scenes and mass casualty incidents may also call for a police officer to be the Incident Commander. Incident Command training should be provided as part of the program for all command officers.

Specialized Terrorism (Weapons of Mass Destruction (WMD), or Nuclear Biological Chemical (NBC)) training above the Hazardous Material Levels may also be appropriate for police officers. As terrorism incidents are likely to involve deliberate releases of hazardous materials, Operations, Technician or Specialist Level Hazmat training provides officers with a good background in this area as well.

When a hazardous material incident may be a potential criminal act, the police will lead any investigation. Officers who may be called on to work in the warm or hot zone in conducting the investigation will need to be trained to the Operations or Technician Level.

Police offers, because of specialized training or expertise will often be a resource to the Incident Commander and Hazmat Team, these officers should be trained as a Hazardous Material Specialist.

In summary, all police officers should be trained to the Awareness Level, with superior officers trained to the Incident Commander Level. Certain officers because of their duties or expertise should be trained to the Specialist Level and in some cases to the Operations or Technician Levels.

EMERGENCY MANAGEMENT

The role of the Emergency Management in a hazardous material emergency, as well as other types of man made and natural emergencies is the coordination of resources. Dependant on the community, the role of the Emergency Management Director and staff may be part of the fire or police departments or may be an independent public safety department.

The Level of hazardous material training for emergency management personnel will depend on the structure of the department within the community. Where a fire chief or fire officer is in the role of the emergency management director, the training requirement would be the same as for the fire department. Where a police chief or ranking police officer is serving in this role, training above the level normally provided for police, awareness, may be appropriate. Auxiliary fire departments must be trained to the Operations level.

Independent Emergency Management Departments often oversee auxiliary fire, police and emergency medical services departments. Auxiliary fire departments that may be called on to respond to hazardous material incidents should be trained to at least the awareness and ideally to the operations level. Auxiliary police and EMS, who are supporting a hazardous material incident should be trained to the awareness level.

In some communities, the role of decon is assigned to the auxiliary fire department. Auxiliary firefighters who are expected to operate in the warm zone, where decontamination takes place are to be trained to the operations level.

Often the Emergency Management Director or assistant may be the Local Emergency Planning Committee Chair, or will at least be a committee member. In that role the director may be called on to support the incident as a Hazardous Material Specialist or Incident Commander. In order to fulfill these roles, that individual should be trained to the appropriate levels.

Emergency Management Directors, their assistants and senior auxiliary fire and police officers, who may take leadership roles in a Hazmat incident should be trained to the Incident Commander Level.

As Emergency Management Departments vary by community, their role in an emergency incident will dictate the appropriate level of training. It is recommended that a minimum of Awareness Level training be provided with the Incident Commander Level in addition for the director and his/her assistant.

PUBLIC WORKS TRAINING

Employees of public works should be trained to the level of their response. Those employees not in the response plan of an LEPC may only need Hazmat Awareness training. Those directly involved in response would need to be trained to the Hazmat operational level. All supervisors should be trained in Incident Command.

TRAINING OPPORTUNITIES FOR LEPC MEMBERS

Overview of the MEMA Training Department

- Present training seminars, workshops, and conferences to State and local public safety personnel such as police, fire, EMS, public works and others.
- Provide technical assistance to local communities for exercising emergency plans
- Facilitate independent study course programs.
- Educate the public in emergency preparedness.
- Award special training grants.
- Develop and implements new curriculum in emergency management.
- Develop and maintain partnerships with public and private institutions.
- Provide professional development for MEMA staff

Breakdown of Training Department Programs includes, but is not limited to:

- Domestic Preparedness: First Responder Awareness Course
- Domestic Preparedness: ICS Course
- Domestic preparedness training programs as they relate to terrorism
- Develop grant applications for new funding sources for training:
- Terrorism – Coordinate all terrorism training initiated from the National Guard, Federal, State and Local levels of government.
- Multi-Hazard Safety School Program – Provided information, tools and technical assistance necessary for schools to develop the capacity to respond to a broad range of emergencies.
- Support development of terrorism annex to the state emergency plan.
- Introduce an interactive training calendar available on the MEMA Web site.
- Emergency Management Operations Course (EMOC) – purpose is to improve the ability of the participating locality to manage emergencies through preparedness, response, recovery and mitigation.
- Response to Criminal/Terrorist Incidents for First Responders
- The Training Department addresses the issues and concerns to include a legislative edict or memorandum of understanding that would require mandated training in unified incident command system.
- MEMA will continue to develop and deliver, to all disciplines, a comprehensive training program from the awareness level to the recovery stage of a terrorist incident, which will enhance the State's ability to prepare for, respond to and recover from acts of terrorism involved in Weapons of Mass Destruction (WMD).
- Liaison for State and local training at Emergency Management Institute

Massachusetts Emergency Management Agency

The MEMA training office should be contacted for the programs listed above. It can be contacted either directly or through the Regional MEMA offices. A list of the offices can be found in the telephone resource lists.

Emergency Management Institute (EMI)

The National Emergency Management Center (NETC) in Emmitsburg, Maryland offers the finest in educational resources. The 107-acre campus is shared by EMI, the National Fire Academy (NFA) and the United States Fire Administration (USFA).

Through its courses and programs, EMI serves as the national focal point for the development and delivery of emergency management training. EMI curricula are structured to meet the needs of a diverse audience with an emphasis on how the various disciplines work together in emergencies to save lives and protect property.

12. CLEAN UP AND COST RECOVERY GUIDANCE

Cost Recovery

Chemical releases can heavily tax a community's structure. Federal Law and State Laws provide reimbursement to communities that incur costs as a result of chemical emergency.

FEDERAL

Legal Citation 49 CFR 310

This law provides the opportunity for any general-purpose unit of local government to apply for reimbursement for costs arising from response to a release or threatened release of hazardous materials. The incident must be properly reported and an official request for reimbursement submitted within six months after conclusion of the response. Up to \$25,000 may be reimbursed for a single response and the EPA prioritizes requests based on "financial Burden." Additional information can be obtained by contacting the EPA'S RCRA/Superfund Office at (800-424-9346

STATE

Legal Citation MGL Chapter 21E: Section 5

All persons who, pursuant to this section, are liable for a release or threat of release from which the Commonwealth incurs costs for assessment, containment and removal shall be liable, jointly and severally, to the Commonwealth for their liability as set forth in this section.

In cases where the department has issued an order pursuant to sections nine and ten to a person liable pursuant to this chapter and such person has unreasonably or in bad faith failed or refused to comply with such order, the court shall award the commonwealth not less than two times nor more than three times the full amount of its response costs, plus litigation costs and reasonable attorneys' fees, against such liable persons.

In all cases not provided for in the preceding paragraph, the court may award the commonwealth up to three times the full amount of its response costs and reasonable attorney's fees against a person liable pursuant to this chapter.

LOCAL

Some communities have arrangements with clean up contractors to replace, materials used by local responders such as absorbents, pads, booms, etc. from contractor supplies. The contractor then adds the costs of these items to the responsible party's bill. This allows local responders to replenish their supplies before leaving the scene.

Complete documentation of Incident costs is critical to cost recovery. The Incident Commander should either staff the finance section or make sure at the very least that a detailed list of all costs or equipment, material and personnel are recorded.

13. USEFUL GUIDANCE RESOURCE MATERIALS

2000 Emergency Response Guidebook The Emergency Response Guidebook (ERG2000) was developed jointly by the US Department of Transportation, Transport Canada, and the Secretariat of Communications and Transportation of Mexico (SCT). It is intended for use by firefighters, police, and other emergency services personnel who may be the first to arrive at the scene of a transportation incident involving a hazardous material. It is primarily a guide to aid first responders in (1) quickly identifying the specific or generic classification of the material(s) involved in the incident, and (2) protecting themselves and the general public during this initial response phase of the incident. The ERG is updated every three years to accommodate new products and technology. The Emergency Response Guidebook is also available online.
<http://Hazmat.dot.gov/gydebook.htm>

CHRIS Manual The US Coast Guard Chemical Hazards Response Information System (CHRIS) is designed to provide information needed for decision-making by responsible Coast Guard personnel during emergencies that occur during the water transport of hazardous chemicals. CHRIS also provides much information that can be used by the Coast Guard in its efforts to achieve better safety procedures and so prevent accidents. CHRIS consists of a handbook or manual, a hazard assessment computer system (HACS), and technical support personnel located at Coast Guard headquarters.

Computer Software

AHOHA, see under Cameo

BOLDER (Basic On Line Disaster Emergency Response) **Planning Tool** This is emergency response software designed and distributed by the BOULDER Project, an EPA sponsored organization. It is available on CD ROM or on line at: <http://www.chemicalspill.org/>

CAMEO - Computer Aided Management of Emergency Operations CAMEO, contains a chemical database of over 6,000 hazardous chemicals, 80,000 synonyms, and product trade names. CAMEO provides a powerful search engine that allows users to find chemicals instantly. Each one is linked to chemical-specific information on fire and explosive hazards, health hazards, firefighting techniques, cleanup procedures, and protective clothing. CAMEO also contains basic information on facilities that store chemicals, on the inventory of chemicals at the facility (Tier II) and on emergency planning resources. Additionally, there are templates where users can store EPCRA information. CAMEO connects the planner or emergency responder with critical information to identify unknown substances during an incident

MARPLOT is the mapping application. It allows users to "see" their data (e.g., roads, facilities, schools, response assets), display this information on computer maps, and print the information on area maps. The areas contaminated by potential or actual chemical release scenarios also can be overlaid on the maps to determine potential impacts. The maps are created from the U.S. Bureau of Census

TIGER/Line files and can be manipulated quickly to show possible hazard areas.

ALOHA is an atmospheric dispersion model used for evaluating releases of hazardous chemical vapors. ALOHA allows the user to estimate the downwind dispersion of a chemical cloud based on the toxicological/physical characteristics of the released chemical, atmospheric conditions, and specific circumstances of the release. Graphical outputs include a "cloud footprint" that can be plotted on maps with MARPLOT to display the location of other facilities storing hazardous materials and vulnerable locations, such as hospitals and schools. Specific information about these locations can be extracted from CAMEO information modules to help make decisions about the degree of hazard posed

The Chemical Reactivity Worksheet: a free program you can use to find out about the reactivity of substances or mixtures of substances (reactivity is the tendency of substances to undergo chemical change).

Envirofacts - A national information system that provides a single point of access to data extracted from seven major EPA databases. The Environmental Protection Agency (EPA) created the Envirofacts Warehouse to provide the public with direct access to the wealth of information contained in its databases.

HATS is intended to be a complete guide to hazards analysis in community planning for hazardous materials for Local Emergency Planning Committees (LEPCs). With HATS and either the data available in "Technical Guidance for Hazards Analysis" (1987, EPA, FEMA, and DOT) or that written into the Screening and Scenarios module in CAMEO, an LEPC can complete its planning requirements.

LandView ® to display EPA environmental databases and demographic/economic information to support analysis of environmental justice issues.

List of Lists This consolidated chemical list includes chemicals subject to reporting requirements under the Emergency Planning and Community Right-to-Know Act (EPCRA), also known as Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA) 1, and chemicals listed under section 112(r) of the Clean Air Act (CAA). This consolidated list has been prepared to help firms handling chemicals determine whether they need to submit reports under sections 302, 304, or 313 of EPCRA and, for a specific chemical, what reports may need to be submitted. It will also help firms determine whether they will be subject to accident prevention regulations under CAA section 112(r). Separate lists are also provided of Resource Conservation and Recovery Act (RCRA) waste streams and unlisted hazardous wastes, and of radionuclides reportable under the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA). These lists should be used as a reference tool, not as a definitive source of compliance information. Compliance information for EPCRA is published in the Code of Federal Regulations (CFR), 40 CFR Parts 302, 355, and 372. Compliance information for CAA section 112(r) is published in 40 CFR Part 68.

MARPLOT, see under CAMEO

National Fire Protection Association (NFPA) is a worldwide leader in providing fire, electrical and life safety to the public. The mission of the international, nonprofit, member organization is to reduce the worldwide burden of fire and other hazards on the quality of life by developing and advocating scientifically based consensus codes and standards, research, training, and education. NFPA is currently developing the first consensus-based building code. Membership in NFPA totals more than 75,000 individuals from around the world and more than 80 national trade and professional organizations

National Institute for Occupational Safety and Health (NIOSH) is the Federal agency responsible for conducting research and making recommendations for the prevention of work-related disease and injury. The Institute is part of the Centers for Disease Control and Prevention (CDC).

NRT 1 The National Response Team's Hazardous Material Emergency Planning Guide

The NRT provides the criteria for local hazardous materials emergency response plans as required by the Emergency Planning and Community Right to Know Act of 1986 (EPCRA).

NRT 1A This handbook was prepared as guidance by the National Response Team to provide State and local governments with practical advice for developing a comprehensive hazardous materials exercise program. It is not intended to become the basis for a Federal requirement to establish a Hazmat exercise program.

RMP*Comp helps you complete offsite consequence analysis that is required under the Risk Management Program. When you use RMP*Comp, (a) you don't need to make any calculations by hand (you just enter necessary information, such as the amount of a chemical stored in a vessel), and (b) the program guides you through the process of making an analysis.

Tier II Submit: The free personal computer software also developed by EPA and NOAA that is the successor to Tier2Win. This software should become available in 2001. When it becomes available, it will replace Tier2Win.

Tier2Win: the free personal computer software developed by EPA and NOAA for use by facilities in submitting Tier II reports required under the Emergency Planning and Community Right to Know Act.

Internet Resources

The Internet has become a significant resource of information to emergency planners and response agencies. Federal, state and local governmental agencies, colleges and universities, businesses and industry, trade associations and non-profit groups have established websites providing a wealth of information that is available at the click of a computer mouse.

The U. S. Environmental Protection Agency (EPA) is the prominent provider of information for Local Emergency Planning Committees. The Federal Emergency Management Agency (FEMA) provides more generalized emergency management information. The Department of Transportation (DOT) is a major resource for hazardous material transportation information. One of the primary sources of information for emergency responders at a hazardous material incident is the Material Safety Data Sheet (MSDS). Although a MSDS for each chemical used in a facility is required by law to be on file and available to emergency responders, in reality these documents are not readily available at an incident.

Website Listing

<u>Website</u>	<u>Address</u>
<u>Material Safety Data Sheets (MSDS) Databases</u>	
Enviro-Net MSDS Index	http://www.enviro-net.com/technical/msds
MSDS Search	http://research.nwfsc.noaa.gov/msds.html
MSDS's on the Internet (U. KY)	http://www.chem.uky.edu/resources/msds.html
EMCI Chemical Reference Index	http://www.epa.gov/enviro/html/emci/chemref/index.html
Hazardous Materials Information Exchange	http://www.hmix.dis.anl.gov/
MSDS - 1	http://atsdr1.atsdr.cdc.gov:8080/toxfaq.html
Stanford University MSDS - 2	http://www-portfolio.stanford.edu/100369
MSDS - 3	http://hazard.com/msds/
University of Vermont	http://siri.org/msds/
LSU Chemical Index	http://www.camd.lsu.edu/msds/Chemical-index.html
Cornell University MSDS Archive:	http://msds.pdc.cornell.edu/ISSEARCH/MSDSsrch.HTM
University of Kentucky MSDS Locator	http://www.chem.uky.edu/resources/msds.html
EPA Toxic Substances Data Sheets from Open Data Solutions	http://mail.odsnet.com/TRIFacts/
S at Arkansas State University	http://www.astate.edu/docs/admin/es/indexmaterialsaf.html
MSDS at Oxford University	http://physchem.ox.ac.uk/MSDS
<u>Other References</u>	
NFPA Label Information	http://www.otrain.com/nfpa/nfpainfo.html
CHEMTREC	http://www.cmahq.com/cmaprograms/chemtrec/contact

	/content_chemtrec_contact.html
DOT North America Emergency Response Guidebook:	http://hazmat.dot.gov/gydebook.htm
<u>Federal and State Agencies Websites</u>	
US EPA	http://www.epa.gov/epahome/text.htm
US EPA Chemical Emergency Preparedness and Prevention Office (CEPPO)	http://www.epa.gov/ceppo
US EPA Region 1	http://www.epa.gov/region01/
US EPA Region 1 EPCRA Team	http://www.epa.gov/region01/steward/emmerplan/
Chemical Safety and Hazard Investigation Board	http://www.csb.gov/
National Response Center: Home Page	http://www.nrc.uscg.mil/
National Response Team	www.nrt.org
DOT Hazmat Safety Homepage	http://hazmat.dot.gov/
Federal Emergency Management Agency	http://www.fema.gov
US Fire Academy	http://www.usfa/fema.gov
US Army Counterterrorism	www.cbdc.com.apgea.army.mil
Emergency Response Notification System	http://www.epa.gov/ERNS/
MEMA Home Page	http://www.state.ma.us/mema
Massachusetts Department of Environmental Protection	http://www.state.ma.us/dep http://www.magnet.state.ma.us/dep/dep/home.htm
HazMat District 2	http://www.magnet.state.ma.us/hazmat/dist2.htm
<u>Other Organizations</u>	
Chemical Spill. Org	">http://www.chemicalspill.org//td>
LEPC Information Exchange	http://www.lepcinfoexchange.com/
Right to Know Net	http://rtk.net/www/lepc/webpage/lepc.html
CAMEO - Home Page	http://www.nsc.org/ehc/cameo.htm
National Response Commission	http://www.nrc.gov/NRC

14. ENFORCEMENT CONSIDERATIONS

The Emergency Planning and Community Right to Know Act of 1986 (EPCRA), established State Emergency Response Commissions and Local Emergency Planning Committees. Section 301-303 addresses the make-up, tasks, and planning function of the Local Emergency Planning Committee. The planning function includes the receipt of chemical inventory data from facilities within the community. Section 304 deals with Emergency Notification by facilities of chemical releases to the LEPC. Section 311-312 deals with Community Right to Know. These sections carefully lay out the intent that LEPCs are to fulfill an administrative and more specific planning function and they are not intended to be an enforcement agency under this law.

The law requires facilities to provide inventory and contact info (Tier 2) annually on March 1st to the LEPC, local Fire department, and the SERC. In addition to annual tier 2 reports, any release over the threshold reporting quantity trips a requirement to report concerning the release to the LEPC and the SERC.

Failure to file Tier II Reports with the Local Emergency Planning Committee, local fire department or State Emergency Response Commission, or to report the release of the specified hazardous substances to these agencies is a direct violation of EPCRA. LEPC should contact the facility it believes should be filing and explain why it believes the facility should be reporting. If the facility ignores the requests or refuses to provide the information, the Community Emergency Response Coordinator should send via registered return receipt letter requesting the information. The letter should reference the Section 304, 311-312. The letter should also provide a date by which to respond, indicating after said date that the case will be referred to United States Environmental Protection Agency for investigation and enforcement. Most facilities generally respond to the initial telephone call, almost all typically respond to a registered letter.

The LEPC should keep a file with all the documentation relative to the case, why one suspects the facility should be reporting, who and when was contacted at the facility. A copy of the letter(s) and return receipt for the registers letter. EPA will need this information when it conducts its investigation to the facility.

WHEN ALL ELSE FAILS: Enforcement of the Emergency Planning and Community Right-To-Know Act

Does your emergency plan address the key preparedness problems in your area? Do your first responders know what chemical hazards they face when arriving at the scene of an emergency? Has missing information limited your emergency preparedness? Have all affected facilities reported? What steps are you planning to improve emergency preparedness? What can you do to ensure that facilities are complying with the law?

During the next few years, many Local Emergency Planning Committees (LEPCs) will look to improve the quality of their communities' chemical emergency response plans and to reduce chemical risks. One of the most significant ways to improve overall planning is to ensure that all the facilities have reported and, where appropriate, are participating in the emergency planning process. Only then can the local community completely understand and prepare for potential chemical accidents.

The Emergency Planning and Community Right-to-know Act (EPCRA) grants specific state and local authority to request information from facilities and to take enforcement actions in those situations where voluntary compliance has not occurred. This pamphlet contains information on these authorities and provides tips to help LEPCs ensure that facilities covered by EPCRA are complying with the law. The material presented outlines the enforcement authorities granted to citizens, local governments, States, and EPA.

Under this law, facilities that store extremely hazardous substances are required to report the presence of those substances and participate in the planning process. Your experience may indicate that there are facilities in your community that have not yet come forward with the required information. As an LEPC, you have many options for promoting voluntary compliance or compelling compliance.

What is the role of the LEPC in obtaining compliance? This question can only be answered by the LEPC itself. The Act offers many opportunities and obligations. It also provides enforcement mechanisms. In addition, citizens may compel you to obtain information for them. How actively you choose to pursue these opportunities will depend on your situation. As you work to implement the program, you will find that some facilities have not complied with the law. There will be two main reasons. Either the facility was unaware that it was subject to the law, or the facility simply did not report based on the assumption it would not be found and penalized. As LEPCs, you may find the lack of cooperation from some facilities frustrating. You can do something about it – you have options. You may want to take an enforcement action or work with the State and EPA to enforce the provisions of the Act.

What is the role of the SERC? Under EPCRA, the State Emergency Response Commission (SERC) is the focal point for emergency planning at the State Level. You should look upon your SERC as a resource that can provide support. The law requires SERCs to provide oversight and coordination of LEPCs. They will be able to serve as your link to State law enforcement and emergency management offices. They should also be your link to the federal government (i.e. EPA) for enforcement requests.

Why does facility noncompliance matter? Facility compliance with reporting requirements is central to what the Act is all about emergency preparedness and right-to-know. Since the enactment of EPCRA in 1986, LEPCs across the country have spent considerable time and

energy addressing the chemical hazards in their communities. To a great degree, this planning has enhanced the safety of the emergency responders and citizens of the community. Yet, many facilities still present unnecessary risks to those who arrive first on the scene of a chemical accident and to the community by not providing the required information on chemical use and storage. The quality of your plan may be compromised by the missing information. The safety of your local fire fighters may be in jeopardy because a facility has not complied. Additionally, a facility that refuses to cooperate or that fails to report denies you and citizens in your community your legal right to have that information.

How can compliance be achieved? In the context of EPCRA and the local emergency planning committees, encouraging compliance can include many types of activities – from outreach to enforcement. LEPCs can work with local organizations such as Chambers of Commerce to get the message out to small businesses, as well as large companies, to encourage their compliance. Site visits and community meetings may be helpful. LEPCs, SERCs, State and local governments, and citizen groups can use informal mechanisms such as warning letters and are given authority to file civil enforcement actions in the U.S. District Courts. The Act provides, and State and local laws may further provide, other mechanisms to be used by State and local committees to compel facility compliance with the law. Knowledge of your authorities under the law will help you in your efforts to gain the cooperation you need.

Where to Start – Education and Outreach

The process of improving facility compliance may involve four steps: outreach to inform facilities of requirements; identification of facilities required to report; communication, education, and persuasion; and enforcement actions where necessary.

Everyone prefers that facilities comply voluntarily. Voluntary compliance depends, in part, on efforts made to educate local facility owners about the Act, its reporting requirements, and how the information collected can benefit the community. Enlisting the local news media, cable television stations, fire departments, local Rotary clubs and any other business organizations is a good starting point. Speaking to meetings of these groups and using their newsletters can help get their message out effectively and inexpensively. Some LEPCs have conducted extensive letter-writing campaigns. Others have visited facilities and spoken directly to the owners about their reporting obligations. Once owners learn of their reporting obligations, most will provide the needed information quickly and accurately.

What Next – Identifying and Persuading Noncompliers

To reach facilities that are not complying, you can use general outreach or target your efforts to facilities that may be covered. Unfortunately, no comprehensive set of data exists that will identify every facility that is required to comply. However, sources of information, such as water permits, air permits, EPCRA §313 toxic release inventory reports, and other data housed by your State or local authorities (e.g. hazardous materials permits) may help to identify facilities potentially required to report. Working in coordination with local fire departments will also help identify facilities that store large quantities of chemicals.

In addition, EPA has developed a cross listing of Standard Industrial Classification (SIC) codes and EPCRA §302 extremely hazardous substances (EHS). This list, together with county or city specific information on businesses, should aid in identifying facilities that may be required to report under the planning provisions. Contact your SERC for copies of the SIC code/EHS cross-listing.

When you identify a facility that is out of compliance, what are your options? Direct contact with the owner or operator may be the easiest and most effective way to persuade the facility to comply. If the facility comes into compliance and the LEPC has received all the information it needs, no further action may be necessary. However, if the LEPC is unsatisfied with the results of its efforts or the facility refuses to comply, the LEPC may want to take further action.

What tools does the law provide to help the LEPC obtain information from a facility? Two provisions in EPCRA authorize the LEPC to obtain information from facilities. If the LEPC needs additional information from a facility to assist the LEPC in its planning, the authority of EPCRA §303(d)(3) can be used. Section 303(d)(3) requires facilities to promptly provide information the LEPC deems necessary for developing and implementing its emergency response plan. This authority is broad in the sense that it may be used to obtain a variety of information related to the identity and location of extremely hazardous substances, existence of facility emergency plans, and additional information needed to develop the LEPC plan.

Section 303(d)(3) is an enforceable provision. Failure to comply with the LEPC request could result in a penalty of up to \$27,500 per day. An LEPC should document the information request in a letter to the company. The request letter should be sent to the owner or operator; cite the authority the LEPC has to request information (§303(d)(3)); be as specific as possible regarding the information requested; allow the facility a reasonable amount of time in which to reply (e.g. 30 days); and inform the facility owner or operator that failure to comply with the request is a violation of the law which could result in a \$27,500 per day penalty. LEPCs should consider the use of certified mail (return receipt requested) for these requests.

Many facilities required to report under the planning provisions are also covered by EPCRA §312. Under §312, covered facilities must report to the SERC, LEPC, and fire department annually (every March 1) their inventories of hazardous chemicals. Section 312 also authorizes the SERC, LEPC, or fire department to request information from a facility. Specifically, §312(e) authorizes these groups to request chemical specific forms on hazardous chemicals present at the facility above (§312(e)(3)(B)) or below (§312(e)(3)(C)) the 10,000-pound threshold.

Section 312(e) can be a powerful tool to get information from facilities that have not been cooperating with the LEPC. Like §303(d)(3), this, too, is an enforceable provision. If the owner or operator fails to provide the information, he or she may be liable for a penalty of up to \$27,500 per violation per day.

As with other requests made of a facility, the LEPC, SERC, or fire department should formally request the information in a letter, cite the proper authorities, give ample time for the facility to reply (e.g. 30 days), and cite the potential penalty for failure to comply. Use of certified mail may again be appropriate.

If a company has filed a report under §312, EPCRA authorizes local fire departments to inspect the facility to determine the specific location of hazardous chemicals. LEPC members may want to accompany the fire department to promote a better understanding of the EPCRA reporting requirements and to obtain information for planning purposes. In planning inspections, try to give the owner or operator advance notice. Should you encounter problems gaining access to the facility, contact your SERC and the Regional EPA office that has jurisdiction in your area.

These "enforcement" tools may never be needed if a facility is cooperating in the planning process. However, they are available to SERCs, LEPCs, and fire departments should a specific facility be unwilling to provide the necessary information.

If a facility fails to respond to your information request, what are the next steps? If your attempts to obtain information are disregarded or the information is not submitted in a timely manner, you have several options. First, you can work with your SERC to try and get the facility to cooperate. Second, you can notify the facility of your intention to:

- File a civil action in the U.S. District Court for violations of EPCRA; or
- Assist the SERC and EPA in the enforcement of the provision(s) violated.

If an LEPC decides to cooperate with the SERC and EPA in an enforcement action, it is important that its efforts to bring the facility into compliance be documented. Establishing a record of efforts will aid the State and EPA in taking an enforcement action. LEPCs should maintain records of phone contacts, direct contacts, any letters that were sent to the company, etc. In developing enforcement actions, EPA will need your support in providing any evidence you have that the facility is in violation. The Agency will also request affidavits from you certifying that the required reports were not filed by the appropriate deadline. Contact your SERC and the Regional EPA office for additional information.

EPA is looking forward to cooperating with SERCs and LEPCs in the effort to make the Emergency Planning and Community Right-to-know Act a success. EPA wants to establish enforcement ties with every SERC. This network of people will help to set priorities for enforcement actions within the State and provide a mechanism through which LEPCs can elevate and resolve compliance problems. It is only through our combined efforts that facilities will come to know and comply with this important law.

Enforcement Authorities

EPCRA contains provisions to ensure that citizens' rights to information are backed by the legal tools needed to obtain cooperation of facility owners and operators. Congress included stiff penalties for failure of owners and operators to comply with the law's reporting requirements.

EPCRA contains two sections dealing with enforcement: §325 Federal Enforcement and §326 Civil Actions. Actions initiated by LEPCs would likely fall under the civil category, but as described above, LEPCs could cooperate with the State and EPA.

Civil Actions (§326)

EPCRA provides States, local groups and citizens the authority to file civil actions in the U.S. District Court against owners and operators if they fail to comply with the law. The Act gives the public the right to access information and the legal remedies to make information available if an owner or operator is unwilling to cooperate in the emergency planning process or submit the required reports. These provisions emphasize that everyone has a role in ensuring that facilities comply with the Act.

Citizen Suits. Under EPCRA §326(a)(1), any person has the authority to file a civil action in the U.S. District Court against owners or operators of facilities for their failure to submit: §304(c) follow-up reports; §311 MSDSs or lists of MSDSs; §312 Tier I forms; and §313 Toxic Chemical Release forms.

For any civil action described above, the plaintiff must notify the EPA, the State in which the alleged violation occurs, and the alleged violator 60 days prior to initiating a suit. On January 26, 1989 EPA issued a Proposed Rule on Prior Notice for Citizen Suits under CERCLA and EPCRA (See the Federal Register Vol. 54 Page 3913). Consult this rule if you plan to bring a civil suit.

State and Local Suits. Section 326(a)(2) authorizes State and local suits. State and local governments have the authority to bring civil actions in the U.S. District Court for: failure to notify under §302; failure to provide information under §303; failure to submit MSDSs or a list of MSDSs as required under §311; and failure to submit Tier I information required under §312. These actions do not require notification prior to commencement.

EPCRA §329(7) defines “person” as any individual, trust, firm, joint stock company, corporation (including a government corporation), partnership, association, *State, municipality, commission, political subdivision of a State, or interstate body* [emphasis added]. Because §326 authorizes any “person” to bring a civil action against owners and operators for their failure to submit reports specified under §326(a)(1), this definition suggests that State and local governments, SERCs, and LEPCs could take action under the citizen suit provisions in addition to the suits authorized under §326(a)(2).

FEDERAL ENFORCEMENT

Under EPCRA §325, the Federal government has the authority to bring administrative, and civil or criminal judicial actions against violators. EPA’s ability to handle EPCRA cases administratively means that the delays and expenses associated with judicial cases can be avoided. The enforcement authorities available to EPA and the maximum penalties vary by each reporting requirement.

Section 325(a) authorizes the EPA Administrator to order owners or operators of facilities to comply with §§302 and 303. The local U.S. District Court has jurisdiction to enforce the order and assess a civil penalty of up to \$27,500 per violation for each day the violation continues. EPA cannot assess these penalties administratively.

Violation of the §304 reporting requirements can be addressed through administrative or judicial enforcement. EPCRA also establishes criminal penalties for knowingly and willfully failing to provide notice or providing false or misleading information. Section 304 violations can carry a Class I civil penalty of not more than \$27,500 per violation or a Class II civil penalty of not more than \$27,500 per violation per day. In the case of subsequent violations, Class II penalties of up to \$75,000 for each day a violation continues may be assessed. Any person who knowingly and willfully fails to provide notice in accordance with EPCRA §304 could receive a fine of up to \$27,500 or be imprisoned for not more than two years, or both. For second or subsequent convictions, the violator will be subject to a fine of not more than \$50,000 or imprisoned for not more than five years, or both.

For violations of EPCRA §§311, 312, and 313, EPA can assess civil penalties by issuing administrative orders or by filing actions in the U.S. District Court to enforce compliance and assess penalties. Violation of §311 subjects the violator to a civil penalty of up to \$11,000 for each violation. Sections 312 and 313 violations subject the violator to civil penalties of not more than \$27,500 for each violation. The statute establishes that every day a violation continues is considered a separate violation.

Under §325(d), EPA may assess a penalty of \$27,500 for each trade secret claim that is found to be frivolous. The statute also provides criminal penalties for disclosure of trade secret information. Any person who knowingly and willfully divulges trade secret information will be subject, upon conviction, to a fine of not more than \$20,000 or to imprisonment of not more than one year, or both.

EPCRA provides a special enforcement authority for health professionals. Whenever an owner or operator of a facility fails to provide information to the health professional as requested under §323 of the Act, the professional may bring action in the U.S. District Court to require the owner or operator to comply. The U.S. District Court has the jurisdiction to issue orders and take other actions as may be necessary to enforce §323.

Conclusion

The Emergency Planning and Community Right-to-Know Act is unique among Federal environmental statutes in providing numerous opportunities for active participation at the local level. It is designed to enhance local emergency preparedness and awareness of chemical hazards at the community level. The benefits of a successful program can be many, ranging from reducing the potential for injuries or deaths relating to chemical accidents to designing effective city planning standards for air, water, and waste management.

The LEPC is the focus of this effort for a community to better understand and prevent chemical accidents. Understanding the authorities that EPCRA provides will make you better able to carry out an effective chemical awareness and emergency planning program. Your efforts to implement the program need not be hindered by facilities that are unwilling to cooperate. EPCRA provides the information gathering and enforcement tools you need to ensure that you can obtain the information that you and your community have a right to know.

Who can I contact for more information or enforcement assistance? For more information or assistance with a specific enforcement-related problem, contact the State Emergency Response Commission of your state and/or your U.S. EPA regional office.

EPA Region 1

Preparedness Coordinator
617-918-1835

Massachusetts State Emergency Response Commission

508-820-2000

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EPCRA ENFORCEMENT AUTHORITIES

Requirement	Federal	State and Local	Citizen
§302(c) o/o with EHS > TPQ notify SERC by 5/17/87 (6 months after EHS > TPQ becomes present) that facility is subject to act.	§325(a) EPA may order o/o to comply. USDC has authority to enforce and assess a penalty of up to \$25k a day.	§326 (a)(2)(A)(i) State & Local Governments can file civil action in USDC for failure of o/o to notify SERC.	No authority under §326(a)(1)
§303(d) o/o must appoint facility representative to participate in planning by 9/17/87 & provide info. for planning when requested.	§325(a) EPA may order o/o to comply. USDC has authority to enforce and assess a penalty of up to \$27.5k a day.	§326(a)(2)(B) SERC or LEPC can file civil action in USDC against o/o for failure to provide information.	No authority under §326(a)(1)
§304(b) o/o must notify SERC and LEPC immediately after release of EHS or CERCLA HS RQ. §304(c) o/o must provide follow-up report as soon as practicable.	§325(b)(1) & (b)(2) Class I & Class II penalties of up to \$25k/day (up to \$75k/day for second or after) by Administrative order or in USDC. Criminal penalty: up to \$25k per day and/or 2 years.	No Authority under §326(a)(2). See §326(a)(1)	§326(a)(1)(A)(i) any person can file civil action in USDC against o/o for failure to submit follow-up report.
§311 o/o who must prepare MSDS for OSHA must submit MSDS/list to SERC, LEPC and fire department by 10/17/87 or 3 months after newly subject to OSHA.	§325(c)(2), (4) EPA can assess penalty of up to 10k per violation, per day by Administrative Order or in USDC.	§326(a)(2)(A)(ii) & (iii) State & Local Governments can file civil action in USDC against o/o for failure to submit MSDS or list or make available information requested under §311(c).	§326(a)(1)(A)(ii) any person can file civil action in USDC against o/o for failure to submit MSDS or list.

Requirement	Federal	State and Local	Citizen
§312(a) o/o who must prepare MSDS under OSHA must also submit Tier 1 forms on 3/1/88, then annually. For newly covered facilities, first forms due 3/1/90.	§325(c)(1), (4) EPA can assess penalty of up to 25k per violation, per day by Administrative Order or in USDC.	§326(a)(2)(A)(iv) State & Local Governments can file civil action in USDC against o/o for failure to submit Tier 1 form.	§326(a)(1)(A)(iii) any person can file civil action in USDC against o/o for failure to submit Tier 1 information.
§313 o/o of facility that manufactured, processed, or used a toxic chemical in previous year must submit TRI form annually starting 7/1/8.	§325(c)(1), (4) EPA can assess penalty of up to 25k per violation, per day by Administrative Order or in USDC.	No Authority under §326(a)(2). See §326(a)(1)	§326(a)(1)(A)(iv) any person can file civil action in USDC against o/o for failure to submit a TCR form under §313.
§322(a)(2) o/o must submit information to support a trade secret claim.	§325(c)(2) EPA can assess a penalty of up to \$10k per day by Administrative Order or in USDC.	No Authority	No Authority
§325(d) claim must not be frivolous.	§325(d)(1) EPA can assess a penalty of \$25k per claim for claim that is unsubstantiated or not a trade secret and frivolous by Administrative Order or in USDC.	No Authority	No Authority
§323(b) o/o must submit a MSDS, inventory form, and a TCR form to physician who requests information in an emergency situation.	§325(c)(2) EPA can assess a penalty of up to \$10k per violation by administrative order of the USDC.	No Authority	§325(e) Health professional can file action in USDC to compel o/o to comply. USDC may issue order and enforce.

15. TELEPHONE LIST

Agency for Toxic Substances and Disease Control	404-639-0615
Agency for Toxic Substances and Disease Registry (ATSDR)	404-639-0615 888-422-8737
American Association of Railroads	202-639-2222
American Red Cross (Boston)	800-564-1234
	Fax 617-375-0726
Boston Med Flight	800-233-4554
Bureau of Alcohol Tobacco and Firearms	617-565-7040
Center for Disease Control (Atlanta)	404-633-5313
CHEMTREC	800-424-9300
Defense Logistics Agency (Washington)	800-851-8061
Department of Energy (US) (Washington)	202-586-5000
Department of Environmental Protection (MA)	888-304-1133
1 Winter St., Boston, MA 02108	617-566-1133 617-292-5500
Bureau of Resource Protection	617-292-5500
One Winter Street, Boston, MA 02108	fax 617-556-1049
Metro Boston / Northeast MA Office	978-661-7600
205 Lowell St., Wilmington, MA 01887	Fax 978-661-7615
Southeast MA Office	508-946-2850
20 Riverside Dr., Lakeville, MA 02347	
Central MA Office	508-792-7653
75 Grove St., Worcester, MA 01605	
Western MA Office	413-783-1100
436 Dwight St., Springfield, MA 01103	
Secretary of State's Office Business and Citizen Services	617-292-5900
Public Information	617-574-6804
Department of Fire Services (State Fire Marshal)	978-567-3340
Emergency	508-820-2121
Hazardous Materials Response	978-567-3150
	Fax 978-567-3499
Department of Food and Agriculture (MA)	617-727-3000
Department of Industrial Accidents (MA)	617-724-4900
Department of Public Health (MA)	617-522-3700
150 Tremont St., Boston, MA 02111	

Department of Transportation (US) (Washington)	202-366-4000
Environmental Protection Agency (US)	888-372-7341 617-918-1111
Federal Aviation Administration	617-567-6622 781-273-7001
Federal Bureau of Investigation	617-742-5533 617-223-6000
Federal Emergency Management Agency	617-223-9540
Federal Highway Administration (Motor Carrier Safety)	617-494-2770
Massachusetts Bay Transportation Authority	617-222-5000
Massachusetts Emergency Management Agency State Headquarters	800-982-6846 508-820-2000
400 Worcester Rd. Framingham, MA 01702-5399	Fax 508-820-2030
Region 1 Headquarters	978-328-1500
PO Box 116, Tewksbury, MA 01876-0116	Fax 978-851-8218
Region 2 Headquarters	508-697-3600
P.O. Box 54, Bridgewater, MA 02324-0054	Fax 508-697-8869
Region 3 Headquarters	413-323-6306
Belchertown State School, Belchertown, MA 01007	
Region 4 Headquarters	508-366-2139
Massachusetts Highway Department	617-973-9500
Massachusetts National Guard	617-782-7842
Massachusetts State Emergency Response Commission (SERC) 400 Worcester Rd., Framingham, MA 01702-5399	800-982-6846
Massachusetts State Police	508-820-2121
Troop A Headquarters 485 Maple St., Danvers, MA 01923	978-538-6000
Troop B Headquarters 555 North King St., Northampton, MA 01060	413-587-5500
Troop C Headquarters 612 Main St, Holden, MA 01520	508-829-8300
Troop D Headquarters 326 West Grove St., Middleboro, MA 02346	508-923-4000
Troop E Headquarters 668 South Ave., Weston, MA 02493	781-431-5068
Troop F Headquarters Logan Int'l Airport, Terminal "D", East Boston, MA 02128	617-567-2233

Troop H Headquarters 125 William Day Blvd., South Boston, MA 02125	617-740-7500
Massachusetts Water Resources Authority	617-391-5325
Metropolitan District Commission	617-272-5215
National Agricultural Chemical Association	513-961-4300
National Response Center (Washington)	800-424-8802
National Weather Service (Taunton)	508-823-2228
New England Life Flight	800-322-4354
Nuclear Incident Advisory Team (MA)	617-727-9710
Occupational Safety and Health Administration (OSHA) (US)	617-565-1161
Poison Information Center	800-682-9211
Regional Response Team	617-565-3424
US Army Corps of Engineers	978-318-8111
US Army Operations Center (Washington)	703-697-0218
US Bureau of Explosives	202-835-9500
US Chemical Safety Investigation Board	202-261-7600
US Coast Guard	617-223-3000
US Marshals Service	617-223-9721
US Nuclear Regulatory Commission (Region 1 office) Headquarters Public Documents Room Gelman Building, Lower Level, 2120 L St. NW, Washington DC 20037	610-337-5000
US Secret Service	202-634-3273
	617-565-5640

16. DEFINITIONS

Aerosol Container: Is a metal can, up to a maximum size of 4 fluid ounces, that is designed to dispense a aerosol product.

Aerosol Warehouse: Is a building used for warehousing aerosol products.

Alpha Radiation: The least penetrating type of nuclear radiation; not considered dangerous unless alpha-contaminated particles enter the body. (FEMA-SS)

Background Radiation: Nuclear (or ionizing) radiation arising from within the body and from the surroundings to which individuals are always exposed. (JP 1-02)

Bacteria: Single-celled organisms that multiply by cell division and can cause disease in humans, plants or animals. Examples include anthrax, cholera, plaque, tularemia and Q fever. (DPC)

Biological Agent: Living organisms, or the material derived from them, that cause disease in, or harm, humans, animals, or plants, or cause deterioration of material. Biological agents may be found as liquid droplets, aerosols, or dry powders. A biological agent can be adapted and used as a terrorist weapon, such as anthrax, tularemia, cholera, encephalitis, plaque, and botulism. There are three different types of biological agents: bacteria, viruses and toxins. (FEMA-SS)

Biological Weapons: are regarded as infectious agents or toxins, which are pathogenic to man. These may include numerous naturally occurring viruses, bacteria or fungi previously known to science as well as genetically engineered organisms previously unknown to man. These substances possess the common ability to kill or incapacitate large numbers of people. Biological weapons are defined as any microorganism, virus, infectious substance or toxin, capable of causing death, disease or other biological malfunction in a human, animal, plant or other living organism. Toxins are poisonous substances produced by a living organism, but in some cases can also be man-made. The danger of biological weapons is amplified by the fact that exposure to the agents would probably not be diagnosed until symptoms appeared. Comprehensive quick field detection and identification methods do not currently exist for these agents. Not only may an accurate diagnosis be difficult to quickly accomplish, but the value of medical treatment for some agents may be diminished once symptoms have developed. Personal protection generally consists of immunization or the application of some other post-incident medical treatment, such as the use of antibiotics. A chemical protective mask also protects personnel from biological agents. (FBI CBCP)

Blasting Agent: Any material or mixture consisting of a fuel and oxidizer intended for blasting or otherwise classified as an explosive, in which none of the ingredients are classified as explosives, provided that the finished product as mixed and packaged for use or shipment cannot be detonated by means of a #8 test blasting cap when unconfined. Materials or mixtures Transportation regulations shall be included in this definition.

Blister Agent: A chemical agent, also called a vesicant, which causes severe blistering and burns to the eyes, skin and tissues of the respiratory tract. Exposure is through liquid or vapor contact. Also referred to as mustard agents; examples include mustard and lewisite. (FEMA-SS)

Blood Agent: A Chemical agent that interferes with the ability of blood to transport oxygen and causes asphyxiation. These substances injure a person by interfering with cellular respiration (the exchange of oxygen and carbon dioxide between blood and tissues). Common examples are hydrogen cyanide and cyanogen chloride. (FEMA-SS)

Breaking Devices: Those mechanical weapons, which encapsulate the agent and release when broken. They are optimally constructed from common items such as light bulbs, balloons or the most bottles and by inserting the agent and sealing the device. The “loading process” is dangerous, and as risky to the terrorist as to the target. (RAC)

Bursting/Exploding Devices: Mechanical devices, which employ an explosive to break the agent container and disseminate the agent. These devices are usually configured with the explosive at one end of a tube, with the explosion forcing the agent out the other end, or the explosive surrounded by the agent. Bursting devices always have an agent reservoir, a chamber for the explosive, and usually employ either a timer or a command detonation switch. These devices pose a wider area hazard than either the surgical strike or breaking devices, and may produce a larger downwind hazard area due to the increased amount of agent involved and the explosive nature of the dissemination, if the blast and heat do not consume the agent. (RAC)

Carcinogens/Suspect Carcinogens: Substances, which produce or are suspected of producing or inciting cancer.

Chemical Agent: A chemical substance, which is intended for use in military operations to kill, seriously injure, or incapacitate personnel through its physiological effects. Excluded from consideration are riot control agents, herbicides, smoke and flame. (JP 1-02)

Chemical Weapon: The term means any weapon that is designed or intended to cause widespread death or serious bodily injury through the release, dissemination, or impact of toxic or poisonous chemicals or precursors of toxic or poisonous chemicals. (18 USC SEC 2332c)

Choking agents: cause damage to the tissues of the respiratory system and the eyes. In sufficient amounts, secondary infections can take place and in higher concentrations death occurs. A protective mask is sufficient to provide protection, provided that the atmosphere contains sufficient oxygen to support life. (FBI CBCP)

Chronic Radiation Dose: A dose of ionizing radiation received either continuously or intermittently over a prolonged period of time. A chronic radiation dose may be high enough to cause radiation sickness and death but if received at a low dose rate a significant portion of the acute cellular damage will be repaired. (JP 1-02)

Combustible Liquids: Any liquid having a flash point at or above 100 degrees F. subdivided as

follows:

Class II: liquids shall include those having flash points at or above 100 degrees F. and below 140 degrees F.

Class III-A liquids shall include those having flash points a (or above 140 degrees F. and below 200 F.

Class III-B liquids shall include those liquids having flash points at or above 200 degrees.

COMPRESSED GAS:

(a). A gas or mixture of gases having, in a container, an absolute pressure exceeding 40 psi at 70 Degrees F. or,

(b). A gas or mixture of gases having, in a container, an absolute pressure exceeding 104 psi at 130 degrees F. regardless of the pressure at 100 degree F. or,

(c). A liquid having a vapor pressure exceeding 40 psi at 100 Degrees F. as determined by U.F.C. Standard

Contamination: The deposit and/or absorption of radioactive material or biological or chemical agents on and by structures, areas, personnel, or objects; food and/or water made unfit for human or animal consumption by the presence of environmental chemicals, radioactive elements, bacteria or organisms in decomposing material (including the food substance itself), or waste, in food or water. (FM3-4)

Contamination Control: Procedure to avoid, reduce, remove or render harmless, temporarily or permanently, NBC contamination for the purpose of maintaining or enhancing the efficient conduct of military operations. (FM3-4)

Corrosive Material: Any chemical that causes visible destruction of, or irreversible alterations in living issue by chemical action at the site of contact.

Counterterrorism: The full range of activities directed against terrorism, including preventative and crisis management efforts. (GAO/NSIAD) **FBI's definition**

Crisis Management: As described in PPD-39, crisis management is the law enforcement response, and focuses on the criminal aspects of the incident. The Federal Bureau of investigation (FBI) has the lead in crisis management. (FEMA-SS)

Cryogenic Fluids: Those fluids that have a normal boiling point below -150 degrees F.

Decontaminate: To break down, neutralize or remove a chemical, biological or radioactive material posing a threat to equipment or personnel. (FM3-4)

Decontamination is the process of removing or neutralizing hazardous materials on people or equipment. The removal of chemicals from the skin is most important for a number of reasons: to prevent further injury and to prevent the responder or equipment from being contaminated. Procedures for decontamination usually require the removal of clothing; this alone will remove 80-90% of contaminants. Most decontamination can be accomplished by simple dilution with water unless the contaminant is water reactive such as the alkali metals, sodium potassium etc. In such cases removal of the metal should be

accomplished by removal with forceps and placed in mineral oil. When providing decontamination all water runoff should be collected and not be allowed to spill into ecologically sensitive areas such as storm drains. Hospitals and pre-hospitals must be prepared to care for contaminated patients to protect the patient and their employees. In many cases a patient may be brought to the hospital by a private vehicle or untrained ambulance personnel may respond to a facility where a contaminated patient is presented to them. EMS is required to participate in disaster response and is also required by OSHA regulations and JCAHO to protect their employees from hazardous material exposure. To meet these requirements and to protect the medical responder hospitals and pre-hospital must be involved in the Local Emergency Planning Committees' community planning.

Direct Deposit Devices: Mechanical devices that are employed to execute an attack on a specific target with minimal collateral damage. These devices are normally constructed to inject the agent directly into the target and can be built into items as common as canes, pens or an umbrella. (RAC)

Domestic Terrorism: Involves groups or individuals whose terrorist activities are directed at elements of our government or population without foreign direction.

Emergency: As defined at Title V of P.L. 93-288, Section 102(1), an emergency is any occasion or instance for which, in the determination of the President, Federal assistance is needed to supplement state and local efforts and capabilities to save lives and to protect property and public health and safety. Title V includes authority of the President to direct Federal agencies to provide emergency assistance to save lives and protects property and public health and safety for emergencies other than natural disaster. Under Title V, the President may direct the provision of emergency assistance either at the request of a Governor [Section 501(a)] or upon determination by the President that an emergency exists for which the primary responsibility for response resets with the United States [501(b)]. (FEMA 229)

Emergency Operations Center (EOC): A site from which civil government officials (municipal, county, State and Federal) exercise direction and control in an emergency or disaster. (FEMA 229)

Emergency Response: A response effort by employees outside the immediate release area or by other designated responders (i.e., mutual aid groups, local fire departments, etc.) to an occurrence which results, or is likely to result, in an uncontrolled release of hazardous substance. Response to incidental releases of hazardous substances where the substance can be absorbed, neutralized or otherwise controlled at the time of release by employees in the immediate release area, or by maintenance personnel are not considered to be emergency responses. Responses to releases of hazardous substances where there is no potential safety or health hazard (i.e., fire, explosion or chemical exposure) are not considered to be emergency responses. (OSHA)

Explosive:

- (a). A chemical that causes a sudden, almost instantaneous release of pressure, gas, and heat when subjected to sudden shock, pressure, or high temperatures.

(b). A material or a blasting agent that is commonly used or intended to be used for the purpose of producing an explosive effect and is regulated BY Article 77 Uniform Fire Code 1988.

Federal Response Plan (FRP): Developed to expedite Federal support to disasters. Generally, the FRP is activated when the State's resources are not sufficient to cope with a disaster, and the governor has requested Federal assistance. (FEMA-SS)

Flammable Gas: Any gas, which is flammable in mixture of 13% or less flammable range with air, is wider than 12%, regardless of the lower limit.

Flammable Liquid: Any liquid having a flash point below 100 degrees F. and having a vapor pressure not exceeding 40 pounds per square inch (absolute) at 100 degrees F. Class I liquids shall include those having flash points below 100 degrees F. and may be subdivided as follows:

Class I-A shall include those having flash points below 73 degrees F. and having boiling points below 100 degrees F.

Class I-B shall include those having flash points below 73 degrees F. and having a boiling point at or above 100 degrees F.

Class I-B shall include those having flash points at or above 73 degrees F. and below 100 degrees F.

Flammable Material: Any material that will readily ignite from common sources of heat. Any material that will ignite at a temperature of 600 F or less.

Flammable Solid: A solid substance, other than one, which is defined in this article as a blasting agent, or explosive, that is liable to cause fire through friction or as a result of retained heat from manufacture, or which has an ignition temperature below 212 degrees F. or which burns so vigorously or persistently when ignited so as to create a serious hazard. Finely divided solid materials, which when dispersed in air as a cloud, may be ignited and cause an explosion is flammable solids.

Gamma Radiation: Gamma rays are high-energy, ionizing radiation that travels at the speed of light and have great penetrating power. They can cause skin burns, severely injure internal organs and have long-term, physiological effects. (FEMA-SS)

Hazardous chemical/substance: Any chemical or substance which is a physical or a health hazard. Physical hazard means a chemical for which there is scientific valid evidence that it is a combustible liquid, a compressed gas, explosive, flammable, an organic peroxide, an oxidizer, pyrophoric, unstable (reactive) or water reactive. Health hazard means a chemical for which there is statistically significant evidence based on at least one study conducted with established scientific principals that acute or chronic effects may occur to exposed individuals. The term health hazard in chemicals which are carcinogens, toxic or highly toxic agents, reproductive toxins, irritants, corrosives, sensitizers, hepatotoxins, nephrotoxins, neurotoxins, agents which act on hematopoietic systems, and agents which cause damage to skin, eyes, or mucous membranes. It should be noted that all chemicals can be hazardous or toxic under certain circumstances or

dosages. For example, drinking one and half quarts of water is normal and healthy, however drinking fifteen quarts could be lethal.

Hazardous Substance: Any substance designated or listed under (A) through (D) of this definition, exposure at which results or may result in adverse effects on the health or safety of employees:

- A. Any substance defined under section 101(14) of CERCLA;
- B. Any biologic agent and other disease causing agent which after release into the environment and upon exposure, ingestion, inhalation, or assimilation into any person, either directly from the environment or indirectly by ingestion through food chains, will or may reasonably be anticipated to cause death, disease, behavioral abnormalities, cancer, genetic mutation, physiological malfunctions (including malfunctions in reproduction) or physical deformations in such persons or their offspring.
- C. Any substance listed by the U.S. Department of Transportation as hazardous materials under 49 CFR 172.101; and
- D. Hazardous waste as herein defined:
Hazardous Waste means:
 - a. A waste or combination of wastes as defined in 40 CFR 261.3, or
 - b. Those substances defined as hazardous wastes in 49 CFR 171.8 (OSHA)

Hazmat Team: An organized group of employees, designated by the employer, who are expected to perform work to handle and control actual or potential leaks or spills of hazardous substances requiring possible close approach to the substance. The team members perform responses to releases or potential release of hazardous substances for the purpose of control or stabilization of the incident. A Hazmat team is not a fire brigade nor is a typical fire brigade a Hazmat team. A Hazmat team, however may be a separate component of a fire brigade or fire department. (OSHA)

High Explosives: Generally any explosive with a detonation rate of 2000 yards per second or greater.

Highly Toxic Material:

- (a) A material which produces a Lethal Dose or Lethal Concentration which falls within any of the following categories:
- (b) A chemical that has a median lethal dose (LD50) of 50 milligrams OK less per kilogram body weight when administered Orally to albino rats weighing between 200 and 300 grams each.

A chemical that has a median lethal dose (LD50) of 200 milligrams or less per kilogram of body weight when administered by continuous contact for 24 hours (or less if death occurs within 24 hours) with the bare skin of albino rabbits weighing between 2 and 3 kilograms each.

Improvised Nuclear Device (IND): An IND is defined as a device incorporating radioactive materials designed to result in the formation of an explosive nuclear yield. Such devices may be fabricated in a completely improvised manner or may result from the sabotage, seizure, theft, or loss of an U.S. or foreign nuclear weapon. (FBINCP)

Inert Gases: Helium, neon, argon, krypton, xenon, and radon; also known as the noble gases.

Inorganic: Any chemical or compound with a formula containing NO CARBON.

Any chemical or compound, other than a blasting agent or explosive as defined in this article, that initiates or promotes combustion in other materials, thereby causing fire either of itself or through the release of oxygen or other gases.

Class 4 An oxidizing material that can undergo an explosive reaction when catalyzed or exposed to heat, shock, or friction.

Class 3 An oxidizing material that will cause a severe increase in the burning rate combustible material with which it comes in contact.

Class 2 An oxidizing material that will moderately increase the burning rate or which may cause spontaneous ignition of combustible material with which it comes in contact with.

Class 1 An oxidizing material whose primary hazard is that it may increase the burning rate of, combustible material with which it comes in contact.

International Terrorism: Involves groups or individuals whose terrorist activities are foreign-based and/or directed by countries or groups outside the United States or whose activities transcend national boundaries.

Irritants: Substances, other than Corrosives, which cause a reversible inflammatory effect on living tissue by chemical action at the site of contact.

Joint Information Center (JIC): The primary field location for the coordination of Federal and State media relations, located in or near the DFO. (FEMA 229)

Joint Operations Center (JOC): The center established by and under the direction of the FBI at or near the site of the event that serves as the nucleus for decision making, coordination, and overall management of ongoing operations. The JOC is an expansion of the on-scene FBI command post. (FBINCP)

Low Explosives: Generally any explosive with a detonation rate less than 2000 yards per second.

Major Disaster: As defined under P>L> 93-288, any natural catastrophe, (including any hurricane, tornado, storm, flood, high water, wind-driven water, tidal wave, tsunami, earthquake, volcanic eruption, landslide, mud slide, snowstorm, or drought), or, regardless of cause, any fire, flood, or explosion, in any part of the United States, which in the determination of the President causes damage of sufficient severity and magnitude to warrant major disaster assistance under this Act to supplement the efforts and available resources of States, local governments, and disaster relief organizations in alleviating the damage, loss, hardship, or suffering caused thereby. (FEMA 229)

National Emergency Coordination Center (NECC): The FEMA facility which provides notification to Headquarters and Regional responders of implementation of the Plan. (FEMA 229)

NBC: Nuclear, biological and chemical. (FM3-4)

Nerve Agent: A substance that interferes with the central nervous system. Exposure is primarily through contact with the liquid (skin and eyes) and secondarily through inhalation of the vapor. Three distinct symptoms associated with nerve agents are pinpoint pupils, an extreme headache and severe tightness in the chest. Examples of nerve agents are sarin, Soman, tabun, and VX agent. (FEMA-SS)

Nuclear Incident: A nuclear incident is defined as any situation involving lost, stolen, missing, or the unauthorized possession of Special Nuclear Material, Controlled Nuclear Material, By-Product Material, Source Material, nuclear weapons, or components thereof. Nuclear incidents also include the use of improvised nuclear devices, radioactive dispersal devices, or the threatened use of such items, as defined by the Atomic Energy Act (AEA) of 1954, as amended. (FBINC)

Nuclear Radiation: Particulate and electromagnetic radiation emitted from atomic nuclei in various nuclear processes. The important nuclear radiations, from a weapon standpoint, are alpha, beta particles, gamma rays and neutrons. All nuclear radiation is ionizing radiation, but the reverse is not true; X-rays for example, are included among ionizing radiation, but they are not nuclear radiation since they do not originate from atomic nuclei.

Organic: Any chemical or compound with a formula containing the element Carbon.

Organic Peroxide: Flammable compounds which contain the double oxygen or peroxy (-O-O-) group and are subject to explosive decomposition. They are available as: (a). Liquids, (b). Pastes, (c). Solutions. They are subdivided as follows:

Unclassified: Peroxides, which are capable of detonation. These peroxides present an extremely high explosion hazard through rapid explosive decomposition and are regulated in accordance with the provisions of the Fire Code for Class A explosives.

Class I: peroxides are capable of deflagration, but not detonation.

Class II: peroxides burn very rapidly and present a severe reactivity hazard.

Class III: peroxides burn rapidly and present a moderate reactivity hazard.

Class IV: peroxides burn in the same manner as ordinary combustibles and present a minimum reactivity hazard.

Class V: peroxides do not burn or present a decomposition hazard.

Presidential Decision Directive 39 (PPD-39): Issued in June 1995, PPD-39, United States Policy on Counter terrorism, directed a number of measures to reduce the Nation's vulnerability to terrorism, to deter and respond to terrorist acts and to straighten

capabilities to prevent and manage the consequences of terrorist use of nuclear, biological and chemical weapons. (FEMA-SS)

Primary Agency: The Federal department or agency assigned primary responsibility to manage and coordinate a specific ESF. Primary agencies are designated on the basis of their having the most authorities, resources, capabilities, or expertise relative to accomplishment of the specific ESF support. Primary agencies are responsible for overall planning and coordination of the delivery of the ESF-related Federal assistance to their State counterparts, in conjunction with their support agencies. (FEMA 229)

Pyrophoric Materials: Materials possessing the ability to react in air.

Radiation Dose: Total amount of ionizing radiation absorbed by material or tissues, commonly expressed in centigray. The term is often used as the exposure dose expressed in roentgens, which is a measure of the total amount of ionization that the quantity of radiation could produce in air. This should be distinguished from the absorbed radiation per gram of specified body tissue. Further, the biological dose, in rems, is a measure of the biological effectiveness of radiation exposure. (FM3-4)

Radiation Dose Rate: The radiation dose (dosage) absorbed per unit of time. (DOD) A radiation dose rate can be set at some particular unit of time (e.g., H + 1 hour) and would be called H + 1 radiation dose rate. (JP1-02)

Radioactive Materials: Any material or combination of materials that spontaneously emits ionizing radiation.

Response: Activities to address the immediate and short-term effects of an emergency or disaster. Response includes immediate actions to save lives, protect property, and meet basic human needs. Based on the requirements of the situation, response assistance will be provided to an affected State under the Federal Response Plan using a partial activation of selected ESFs or the full activation of all ESFs to meet the needs of the situation. (FEMA 229)

Risk: A chemical risk involves the toxicity of a substance and the exposure to it. The toxic potential of chemicals vary, some are extremely toxic, but others are essentially non-toxic at levels typically encountered in the environment. Actual levels of exposure vary and depend upon many factors. The risk itself is a probability; it is not something guaranteed to happen. An example of a chemical risk is the probability of developing lung cancer from smoking cigarettes. Yet, even in this case, scientists are unable to say unequivocally that any specific smoker will develop lung cancer. They can say only that the smoker's risk (probability) of developing lung cancer is increased by a certain degree.

Robert T. Stafford Disaster Relief and Emergency Assistance Act, Public Law 93-288:

Authorizes the Federal government to respond to disasters and emergencies in order to help State and local governments save lives, and to protect public health, safety and property. (FEMA-SS)

Sensitizers: Substances, which cause an allergic reaction in normal tissue after, repeated exposure.

Spraying Devices: Mechanical devices that contain an agent reservoir, but rather than an explosive charge, they employed pressure to disseminate the agent. The pressure may be either supplied independently of, or applied directly to the agent reservoir. They can be employed either as point dissemination weapons, as with an aerosol can, or as line source generating weapons, as might be accomplished with a device incorporated into an automobile exhaust system. Of the mechanical employment devices, the effects of these weapons are the least controllable and pose the largest area hazard. (RAC)

Spore: An asexual, usually single celled, reproductive body of plants such as fungi, mosses or ferns; a microorganism, as a bacterium, in a resting or dormant state. (FM3-4)

State: For the purpose of this Plan and as defined under P.L. 93-288, any State of the United States, the District of Columbia, Puerto Rico, the Virgin Island, Guam, American Samoa, the Trust Territory of the Pacific Islands, the Commonwealth of the Northern Mariana Islands, the Federated States of Micronesia, or the Republic of the Marshall Islands.

Target Organ Toxins: Substances which cause damage to particular organs or systems.

Terrorism: As defined by the FBI, “the unlawful use of force against persons or property to intimidate or coerce a government, the civilian population or any segment thereof, in the furtherance of political or social objectives”. This definition includes three elements: (1) Terrorist activities are illegal and involve the use of force; (2) The actions are intended to intimidate or coerce; (3) The actions are committed in support of political or social objectives. (FEMA-SS)

Terrorism: The use of force or violence against persons or property in violation of the criminal laws of the United States for the purposes of intimidation, coercion or ransom. Terrorists often use threats to create fear among the public, to try to convince citizens that their government is powerless to prevent terrorism, and to get immediate publicity for their causes. (FEMA Definition)

Toxic Material:

Any material which produces a lethal dose or a lethal Concentration within any of the following categories:

- (a) A gas that has a median lethal dose (LD50) of more than 50 milligrams per kilogram but not more than 500 milligrams per kilogram of body/weight when administered orally to albino rats weighing between 200 and 300 grams each.
- (b) A gas that has a median lethal dose (LD50) of more than 200 milligrams per kilogram but not more than 1000 milligrams per kilogram of body weight when administered by continuous less if death occurs within 24 hours) with the bare skin of albino rats weighing between two and three kilograms each.
- (c) A gas that has a median lethal concentration (LC50) in air of more than 200 parts per million but not more than 2000 parts per million by volume of gas or vapor, of more than 2 milligrams per liter Of mist, fume, or dust, when administered by continuous inhalation one hour (or less if death occurs within one hour) to albino rats weighing between 200 and 300 grams each.

Toxicity: Toxicity is the property of a substance to cause harm when it comes in contact with a living organism (e.g. via ingestion, inhalation, or absorption through the skin). The specific type of damage can be influenced by the dose and route of exposure and the often idiosyncratic attributes of an individual's body to resist or breakdown the substance. No chemical (whether natural or synthetic) is free of toxicity. At high enough concentration all substances exhibit toxic characteristics. The health effects associated with toxic chemicals are usually categorized as either acute (symptoms appear soon after exposure, such as skin burns) or chronic (symptoms appear long after exposure, such as cancer).

Toxins: A class of biological poison resulting from the byproduct of living organisms. A toxin may be obtained naturally, that is, from secretions of various organisms or synthesized. (FM3-4)

Trade Secret: Any confidential formula, pattern, process, device, information or compilation of information that is used in an employer's business and gives the employer an opportunity to obtain an advantage over the competition who do not know or use it.

Unified Command: A single Incident Command structure with a "built in" process for effective and responsible multi-jurisdictional or multi-agency approach. This command structure is employed during incidents that involve several jurisdictions or several agencies from the same political jurisdiction, allowing all with responsibility for an incident either geographical or functional to establish a common set of incident objectives and strategies to which all can subscribe.

Unstable (Reactive) Materials:

Class 4 Materials; which in themselves are readily capable of detonation or explosive reaction at normal temperatures and pressures.

Class 3 Materials: Which in themselves are capable of detonation or of explosive reaction but which require a strong initiating source or which must be heated under confinement before initiation.

Class 2 Materials: which in themselves are normally unstable and readily undergo violent chemical change but do not detonate.

Class 1 Materials: which in they are normally stable but which can become unstable at, elevated temperatures and pressures.

Virus: The simplest type of microorganism, lacking a system for their own metabolism. They depend on living cells to multiply and cannot live long outside of a host. Types of viruses are smallpox, Ebola, Marburg and Lassa fever. (FEMA-SS)

Water Reactive Materials:

Class 3 Materials: which react explosively with water without requiring heat or confinement.

Class 2 Materials: which may form potentially explosive mixtures with water.

Class 1 Materials: which may react with water with some, release of energy but not violently.

Weapons of Mass Destruction: In arms control usage, weapons that are capable of a high order of destruction and/or of being used in such a manner as to destroy large numbers of people. Can be nuclear, chemical biological and radiological weapons, but excludes the means of transporting or propelling the weapon where such means is a separable and divisible part of the weapon. (JP1-02)

16. TELEPHONE LIST

Agency for Toxic Substances and Disease Control	404-639-0615
Agency for Toxic Substances and Disease Registry (ATSDR)	404-639-0615 888-422-8737
American Association of Railroads	202-639-2222
American Red Cross (Boston)	800-564-1234 Fax 617-375-0726
Boston Med Flight	800-233-4554
Bureau of Alcohol Tobacco and Firearms	617-565-7040
Center for Disease Control (Atlanta)	404-633-5313
CHEMTREC	800-424-9300
Defense Logistics Agency (Washington)	800-851-8061
Department of Energy (US) (Washington)	202-586-5000
Department of Environmental Protection (MA) One Winter St., Boston, MA 02108	888-304-1133 617-566-1133 617-292-5500
Bureau of Resource Protection One Winter Street, Boston, MA 02108	617-292-5500 Fax 617-556-1049
Metro Boston / Northeast MA Office 205 Lowell St., Wilmington, MA 01887	978-661-7600 Fax 978-661-7615
Southeast MA Office 20 Riverside Dr., Lakeville, MA 02347	508-946-2850
Central MA Office 75 Grove St., Worcester, MA 01605	508-792-7653
Western MA Office 436 Dwight St., Springfield, MA 01103	413-783-1100
Secretary of State's Office Business and Citizen Services Public Information	617-292-5900 617-574-6804
Department of Fire Services (State Fire Marshal) Emergency Hazardous Materials Response	978-567-3340 508-820-2121 978-567-3150 Fax 978-567-3499
Regional Response Team Hazmat District 1 (Barnstable Fire Control) Hazmat District 2 (Boston Fire Control) Hazmat District 3 (Natick Fire Control)	617-565-3424 800-564-7666 617-343-2880 508-647-9550

Hazmat District 4 (Chicopee Fire Control)	413-594-1600
Hazmat District 5 (Pittsfield Fire Control)	413-448-9770
Hazmat District 6 (Chelmsford Fire Control)	978-256-2541
Department of Food and Agriculture (MA)	617-727-3000
Department of Industrial Accidents (MA)	617-724-4900
Department of Public Health (MA) 150 Tremont St., Boston, MA 02111	617-522-3700
Department of Transportation (US) (Washington)	202-366-4000
Environmental Protection Agency (US)	888-372-7341 617-918-1111
Federal Aviation Administration	617-567-6622 781-273-7001
Federal Bureau of Investigation	617-742-5533 617-223-6000
Federal Emergency Management Agency	617-223-9540
Federal Highway Administration (Motor Carrier Safety)	617-494-2770
Massachusetts Bay Transportation Authority	617-222-5000
Massachusetts Emergency Management Agency State Headquarters	800-982-6846 508-820-2000
400 Worcester Rd. Framingham, MA 01702-5399	Fax 508-820-2030
Region 1 Headquarters	978-328-1500
PO Box 116, Tewksbury, MA 01876-0116	Fax 978-851-8218
Region 2 Headquarters	508-697-3600
P.O. Box 54, Bridgewater, MA 02324-0054	Fax 508-697-8869
Region 3 Headquarters	413-323-6306
Belchertown State School, Belchertown, MA 01007	
Region 4 Headquarters	508-366-2139
Massachusetts Highway Department	617-973-9500
Massachusetts National Guard	617-782-7842
Massachusetts State Emergency Response Commission (SERC) 400 Worcester Rd., Framingham, MA 01702-5399	800-982-6846
Massachusetts State Police	508-820-2121
Troop A Headquarters	978-538-6000
485 Maple St., Danvers, MA 01923	
Troop B Headquarters	413-587-5500
555 North King St., Northampton, MA 01060	
Troop C Headquarters	508-829-8300
612 Main St, Holden, MA 01520	
Troop D Headquarters	508-923-4000
326 West Grove St., Middleboro, MA 02346	
Troop E Headquarters	781-431-5068
668 South Ave., Weston, MA 02493	

Troop F Headquarters Logan Int'l Airport, Terminal "D", East Boston, MA 02128	617-567-2233
Troop H Headquarters 125 William Day Blvd., South Boston, MA 02125	617-740-7500
Massachusetts Water Resources Authority	617-391-5325
Metropolitan District Commission	617-272-5215
National Agricultural Chemical Association	513-961-4300
National Response Center (Washington)	800-424-8802
National Weather Service (Taunton)	508-823-2228
New England Life Flight	800-322-4354
Nuclear Incident Advisory Team (MA)	617-727-9710
Occupational Safety and Health Administration (OSHA) (US)	617-565-1161
Poison Information Center	800-682-9211
Regional Response Team	617-565-3424
Hazmat District 1 (Barnstable Fire Control)	800-564-7666
Hazmat District 2 (Boston Fire Control)	617-343-2880
Hazmat District 3 (Natick Fire Control)	508-647-9550
Hazmat District 4 (Chicopee Fire Control)	413-594-1600
Hazmat District 5 (Pittsfield Fire Control)	413-448-9770
Hazmat District 6 (Chelmsford Fire Control)	978-256-2541
US Army Corps of Engineers	978-318-8111
US Army Operations Center (Washington)	703-697-0218
US Bureau of Explosives	202-835-9500
US Chemical Safety Investigation Board	202-261-7600
US Coast Guard	617-223-3000
US Marshals Service	617-223-9721
US Nuclear Regulatory Commission (Region 1 office)	610-337-5000
Headquarters Public Documents Room Gelman Building, Lower Level, 2120 L St. NW, Washington DC 20037	202-634-3273
US Secret Service	617-565-5640

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TO BE PROVIDED LATER