HAZARDOUS MATERIALS

EMERGENCY RESPONSE PLAN

FOR THE

BARKHAMSTED FIRE DISTRICT

Including

Barkhamsted East Fire Department
&
Pleasant Valley Fire Department
&
Riverton Fire Department

October 1, 2002

In accordance with OSHA Hazardous Materials standard, 29 CFR 1910.120

Policy
The following plan has been developed to minimize the severity of damage to human health and the environment in the event of an unexpected hazardous materials release.
Site specific plans shall be provided by any facility holding Hazardous Materials.

These plans shall contain...

(1) Pre-emergency planning and coordination with outside agencies;

(2) Personnel roles, lines of authority, training and communication;

(3) Emergency recognition and prevention;

(4) Safe distances and places of refuge;

(5) Site Security and control;

(6) Evacuation routes and procedures;

(7) Decontamination procedures;

(8) Emergency medical treatment and first aid;

(9) Emergency alerting and response procedures;

(10) Critique of response and follow-up;

(11) PPE and Emergency equipment;

(12) Access and Egress routes;

(13) Contacts;

(14) Facility layout, their emergency plan, response personnel appraisal and available equipment.

-The LEPC and The SERC

Scope

The Emergency Response Plan for Hazardous Materials pertains to any hazardous chemical release, confirmed fire, serious injury or death resulting from the release of a hazardous chemical.

Authority and Responsibility

The implementation of the Emergency Response Plan for Hazardous Materials program is the responsibility of each department in the Barkhamsted Fire District.

The *Fire Departments* shall be responsible for:

1. Responding in the event of a hazardous chemical spill, confirmed fire or an incident involving death or serious injury.
2. Initiating an evacuation of an area or building by orders of the On-Scene Incident Commander; and
3. Notifying additional resources to request assistance as determined by the On-Scene Incident Commander.
4. Responding with appropriate action to control and remedy the incident;
5. Responding to a reported incident in a timely manner;
6. Maintaining liaison with the Police authority
7. Notifying the selectman of an incident and providing periodic status reports; and
8. Reviewing and amending the Emergency Response Plan for Hazardous Materials.

Pre-Emergency Planning and Coordination

Community contacts include:

- 860-379-8782-Resident Trooper Connecticut State Police Department Troop B -860-824-2500
- 860-379-8285 –Selectman's Office
- 860-424-3338 -Department of Environmental Protection Haz-Mat Team
- 800-909-3843-Farmington Valley Health Department
- 860-379-1888 -Highway Garage
- 860-738-4016 Superintendent of Schools
- Torrington Fire Department- use LCD to contact

Copies of the Emergency Response Plan for Hazardous Materials shall be maintained at the town hall as well as within each Fire Department.

Copies of the Emergency Response Plan for Hazardous Materials shall be reviewed and amended by on an annual basis and when any of the following situations occur:

1. Applicable regulations are revised;
2. Plan fails during an emergency;
3. List of emergency coordinators changes;
4. List of emergency equipment changes; or
5. Any facility change that would affect the plan.

Incident Notification

The Barkhamsted Districts Fire Departments shall be notified immediately upon discovery of an emergency incident through Litchfield County Dispatch.

Chemical Spill

If an incident occurs within the district, which involves a chemical spill, LCD shall immediately notify the Fire Departments.

The Fire Departments upon receiving the page, shall gather information pertaining to the incident. Upon responding to a Hazardous Materials Incident the Emergency Response Plan for Hazardous Materials will be activated.

Notification to Outside Agencies

When a reportable quantity of a hazardous material is released into the environment, it is necessary that certain regulatory agencies be contacted. The On-Scene Incident Commander shall determine the need to report a release and consult with the Department of Environmental Protection Hazardous Materials Response Team. The regulatory agency shall be provided with the following:

1. The location of the incident;
2. The name and telephone number of contact at the incident;
3. The type and amount of hazardous material released; and
4. The size of the area involved in the incident.

The outside agencies include the following:

- CHEMTREC- 800-424-9300
- CHLOREP- Chlorine Institute 202-775-2790
- American Petroleum Institute- 202-682-8135 (24 hours)
- National Pesticide Network- 800-858-7378
- EPA HAZ Waste Hotline- 800-621-8431
- Department of Energy- RAM incidents (radiation) 516-282-2200
- Coast Guard Emergency Service 800-321-4400
- National Response Center
  Washington, D.C.
  (800) 424-8802 (24hours)
- Centers for Disease Control (CDC) - 404-639-3535

Emergency Response

On-Scene Incident Commander

The first arriving officer or responder should assume command. The person assuming command should be the highest ranking or most experienced person. Command should be confirmed and a Command Post should be established and acknowleged by radio notification. In the event of a decision to change the position of On-Scene Incident Commander, command may be transferred, it is recommended that this be done face to face. The On-Scene Incident Commander who transfers his/her duties shall provide a report to the on coming IC of activities completed. Duties may include:

1. Activating the Emergency Response Plan for Hazardous Materials and Hazardous Materials Response Team;

2. Identifying hazards and risks involved in an emergency response situation;
3. Activating communication systems to notify all applicable personnel;
4. Notifying, if needed, State Police Department, Fire Department Police, and any applicable State and Federal organizations;
5. Assuming overall authority for managing the emergency unless higher command arrives (e.g., Fire Department Chief);
6. Performing emergency response termination procedures; and
7. Conducting emergency response critique and arranging follow-up procedures.

RESPONSE TRAINING LEVELS:

There are five recognized training levels.

Training must be provided to personnel within 90 days of membership in the fire department and prior to deployment in any active emergency response operations.

- **First Responder Awareness Level-** details from 29 CFR 1910.120

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 proper authorities of the release. They will take no further action beyond 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...

(A) An understanding of what hazardous materials are, and the risks associated with them in an incident;

(B) An understanding of the potential outcomes associated with and emergency created when hazardous materials are present;

(C) The ability to recognize the presence of hazardous materials in an emergency;

(D) The ability to identify hazardous materials, if possible;

(E) An understanding of the role of the first responder awareness individual in the employers emergency response plan including site security and control and the U.S. Department of Transportation's Emergency Response guidebook; and

(F) The ability to realize the need for additional resources, and to make appropriate notifications to the communication center.

- **First Responder Operations level** - details from 29 CFR 1910.120

First Responders at 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 hazardous substance 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. All personnel involved in front-line response to emergencies of any kind are to be trained to the First Responder Operations level. First responders at the operational level shall have received at least sixteen (16) hours of training, and shall be able to objectively demonstrate competence. Fire Departments shall certify each employee as competent, annually, all levels shall be inclusive of the skill in the levels below them. Operations levels skills will include...

(A) Knowledge of the basic hazard and risk assessment techniques;

(B) Know how to select and use proper personal protective equipment provided to the first responders operational level;

(C) An understanding of the basic hazardous materials terms;

(D) Know how to perform basic control, containment and confinement operations within the capabilities of the resources and personal protective equipment available within their unit;

(E) Know how to implement basic decontamination procedures;

(F) An understanding of the relevant standard operating procedures and termination procedures.

Employees shall receive initial training prior to their deployment as active emergency responders, as required by law. Annually they shall then receive recertification by the department through formal training by certified HAZMAT trainers.

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Hazardous Materials Technician- details from 29 CFR 1910.120
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 hazardous subsistence. Hazardous materials technicians shall have at least 24 hours of training equal to the first responder operations level; and, in addition, the respective Fire Department shall certify that the technician is competently trained in the following areas:

(A) Know how to implement the employers emergency response plan;

(B) Know the classification, identification and verification of known and unknown materials by using field survey instruments and equipment;

(C) Be able to function within an assigned role in the Incident Command System;

(D) Know how to select and use proper specialized chemical personal protective equipment provided to the hazardous materials technician;

(E) Understand hazard and risk assessment techniques;

(F) Be able to perform advanced control, containment and confinement operations within the capabilities of the resources and personal protective equipment available to the unit;

(G) Understand and implement decontamination procedures;

(H) Understand termination procedures;

(I) Understand basic chemical and toxicological terminology and behavior.

Hazardous Materials Specialist- details from 29 CFR 1910.120
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 received at least 24 hours training.

On-Scene Incident Commander- details from 29 CFR 1910.120

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, the employer shall certify that the incident commander is competently trained in the following areas:

(A) Know and be able to implement the Incident Command System;

(B) Know how to implement the Hazardous Materials Emergency Response Plan;

(C) Know and understand the hazards and risks associated with working in chemical protective clothing;

(D) Know how to implement the local emergency response plan;

(E) Know of the state emergency response plan;

(F) Know and understand the importance of decontamination procedures.

Incident Safety Officer:
The Incident Safety Officer advises the On-Scene Incident Commander on all aspects of health and safety on site and recommends stopping work if any operation threatens worker or public health or safety.
Duties of the Site Safety Officer may include:

1. Enforcing the "buddy" system;
2. Conducts periodic inspections to ensure safety;
3. Monitors onsite hazards and conditions;
4. Monitors the work parties for signs of stress, such as cold exposure, heat stress and fatigue;
5. Controls entry and exit at the access control points;
6. Selects protective clothing and equipment;
7. Ensures that protective clothing and equipment are properly stored and maintained;
8. Periodically inspects protective clothing and equipment.

Emergency Medical Services:
Persons injured at the scene of the incident shall be provided with medical care. Medical care, will be provided by the New Hartford Emergency Medical Services or closest responding Emergency Medical Service by calling LCD.

- HAZMAT personnel shall be encouraged to seek out and engage in training and education with agencies and resources outside the Fire Department.

Response:

1. Under no circumstances is any fire fighter to attempt to perform duties for which documented evidence of appropriate training is not available. The minimum for front-line personnel being Operations level, and the minimum for Incident Commanders being Operations Level, plus Incident Command System Training and 24 hours of annual retraining, as described in the Barkhamsted Fire District Training Matrix.

   2- Command at HAZMAT incidents is to be performed by properly trained personnel. These individuals shall be trained in accordance with the requirements outlined in 29 CFR 1910.120.

   3. If a trained Incident Commander is not available, then initial Incident Command shall

fall to those individuals trained most adequately to perform as Incident Commanders. Given that more than one individual on the scene is trained to a given level, incident command shall pass to the individual with the highest rank, and given the same ranks, to the individual most senior in that rank. This individual shall perform defensive type operations until relieved by an appropriately trained Incident Commander.

4. The Incident Commander shall consciously limit the number of personnel involved in entry operations to as few as can safely do the job.

5. At any incident, the Incident Command System shall be utilized.

6. At all incidents, the Incident Commander shall appoint an on-site safety officer, trained and qualified to perform HAZMAT operations at the specialist level, who shall have the power to stop or modify unsafe operations.

7. Before other than defensive operations are begun, an ***Incident Action Plan*** shall be developed.

8. The Incident Commander shall appoint an incident historian, whose job will be to document the entire incident.
Incident Site safety

Incident Action Plan:

The purpose of the Incident Action Plan is to establish requirements for protecting the health and safety of responders during all activities conducted at an emergency. It contains safety information, instructions and procedures.

An Incident Action Plan will be prepared Incident Commander and reviewed by the Incident Safety Officer for each Hazardous Materials response. Before operations at an incident commence, safety requirements will be written and communicated to all responders. The safety plan will be periodically reviewed to keep it current and technically correct.

The plan will contain safety requirements for standard (but hazardous) response activities and also for unexpected scene emergencies. The major distinction between standard and unexpected incident safety planning is the ability to predict, monitor, and evaluate routine activities. An emergency scene is unpredictable and the unexpected may occur at anytime.

The Incident Action Plan will be started by the responding, on-scene incident commander as soon as possible after a HAZMAT incident is recognized. This initial draft shall then be passed on to the officer assuming Incident Command.

The Incident Site Safety Plan should be written to avoid the misinterpretation. The plan will, if possible, in coordination with the organizations involved. The plan will be reviewed and approved by the incident commander. Once the plan is implemented, it will be periodically examined and modified, if necessary, to reflect any changes in information, scene and conditions. All personnel involved at the scene must be familiar with the plan, or the parts that pertain to their specific activities. At a minimum the site safety plan will include; Atmospheric monitoring requirements, specify any special training required, procedures for weather related problems. Weather conditions will affect the working scene. Temperature extremes, high winds, storms, etc. have impact on personnel safety.

Incident Action Plan Information:

Describe the known hazards and evaluate the risks associated with the incident and with each activity conducted.

List key personnel and alternatives responsible for incident safety, response operations, and for public protection.

Describe levels of protection to be worn by all personnel.

Delineate work areas.

Establish procedures to control scene access.

Describe decontamination procedures for personnel and equipment.

Establish site emergency procedures.

Address Emergency Medical care for injuries and toxicological problems.

Describe requirements for an environmental surveillance program.

Specify any special training required for responders or contractors.

Establish procedures for protecting personnel weather related problems.

Communication

The On-Scene Incident Commander shall be in charge of all communication when an emergency response situation is underway.

Outside companies may be contacted by the On-Scene Incident Commander for additional supplies such as absorbents, personal protective equipment, plug and dike, salvage drums and emulsifiers. Such as:

- Clean Harbors

The Barkhamsted Fire District Departments shall respond to Hazardous Materials incidents by following:

The Eight Step Process:

1. Site Management and Scene Control
2. Identifying the Problem
3. Risk and Hazard Evaluation
4. PPE Personal Protective Equipment
5. Resource and Information Coordination
6. Mitigation response
7. Decontamination
8. Terminating the Incident

Site Characterization and Analysis

The following factors shall be considered during the preliminary evaluation to assist in determining the appropriate plan of action:

1. Whether the incident could involve a fire, spill, release or leak;
2. The quantity of the material and its harmful nature;
3. The type of container and its condition;
4. The location, time and weather conditions;
5. Any exposures to life, property, and the environment; and
6. Available resources.

References

To determine the appropriate plan of action, the following reference materials are recommended:

1. Area blueprints;
2. Chemical inventory list;
3. Computerized MSDS system to help evaluate chemicals and materials present in the site area;
4. Poison Control Center to help evaluate chemicals and possible exposure effects to on-site victims and response personnel;
5. NIOSH Pocket Guide to Hazardous Materials;

6. National Fire Protection Association Handbook of Hazardous Materials;
7. Department of Transportation Emergency Response Guidebook

During an incident, a more detailed evaluation of the site's specific characteristics shall be performed by emergency response team members. The entry team (RECON)shall identify existing site hazards to the On-Scene Incident Commander. This information will aid in the selection of appropriate engineering, containment and clean-up controls, as well as the selection of personal protective equipment for remaining response team members and support staff members.

Site Control

Purpose: To prevent employee/visitor contamination and harm during emergency response activities, the following shall take place. Site control activities shall include the following information:

1. Site maps (e.g., blueprints, floor exit plans);
2. Designation of hot, warm and cold zones;
3. Communication Center (a central location where all communications and plans will originate); and
4. Emergency decontamination protocol.

The site shall be controlled and maintained by the Fire Department and/or with assistance with State Police Department personnel.

Emergency Response Zones:

The On-Scene Incident Commander shall use information provided from the site characterization and analysis survey to determine the three emergency response zones (Hot Zone, Warm Zone, and Cold Zone). The aforementioned zones shall be determined by using the following guidelines.

Hot Zone

The area containing the incident itself, including the product and its container. This area may be immediately dangerous to life and health (IDLH). Personnel permitted in this zone shall be dressed in the appropriate personal protective equipment.

Warm Zone

A larger geographical area surrounding the Hot Zone that is considered safe for workers to enter with limited personal protective equipment unless assigned a task requiring increased protection**.**

Cold Zone

The area adjacent to the Warm Zone that is restricted to administration and emergency response personnel. Minimum personal protective equipment may be required such as protective gloves and Tyvek coveralls.

Spill Control

Basic Control

Basic Control is the first step taken to prevent further release of the hazardous materials. Basic control may include shutting off a valve or shutting down a piece of machinery.

Extinguishment

When a hazardous material incident involves fire, the following procedure shall be initiated:

1. Determine the type of hazardous material in the fire;

2. Before attempting to extinguish the fire, determine if the hazardous material involved is compatible with the extinguishing media. The Material Safety Data Sheet and other references will assist you in determining what type of extinguisher can be used.

Containment

There are four types of procedures that can be taken to keep the involved material in its container this may require training at the Technician Level unless the work can be done with personnel at a safe distance.

1. **Shut-off Valves**: Shut-off valves may cause spills or releases. Ensure that all shut-off valves on the affected cylinder and/or drums are properly closed and secured.
2. **Plugging:** Plugging devices may be placed or pounded into a penetration to stop a leak. Pieces of wood, golf tees, soap or stakes wrapped with cloth may be used. Metal objects shall not be used for plugging purposes due to the possibility of sparking.
3. **Patching:** Materials like clay or putty may be used to patch a leak. Look for decomposition of the patching compound as well as the possibility of the build-up of internal pressure, which could cause the patch to fail.
4. **Overpacking**: Overpacking is accomplished by placing a damaged container into a larger undamaged container.

Confinement

There are three types of procedures, which can be used to keep a material in a confined area. This response is at an Operational Level training or higher.

1. **Diking**: Materials like sand, earth, straw or absorbent material can be placed around the perimeter of the leak. The type of diking material used shall be compatible with the spilled hazardous material.
2. **Blocking:** Drains, ditches or storm sewers shall be covered or diked to prevent run-off of spilled materials. Blocking can be accomplished with absorbent pads or a heavy piece of plastic.
3. **Absorption**: Run-off can sometimes be absorbed with dirt, sand, soda ash, saw dust, vermiculite or other absorbent materials. The absorbent material shall be positioned so that the spilled material runs into it. Care shall be taken to ensure that the absorbent is compatible with the spill.

Monitoring Equipment

Quantitative measurements (metering) of hazardous materials within the environment shall be made prior to any entry.

Monitoring shall be conducted at the completion of a response to determine if the area is safe for re-entry.

The following quantitative instruments may be required to determine hazardous atmospheric assessments.

1. An appropriate Combustible Gas Indicator CGI / oxygen meter to determine if the atmosphere is at an explosive level and if adequate oxygen is present;
2. Colorimetric Indicator Tubes (Drager / Sensidyne) to determine and/or identify the concentration of chemicals present in the atmosphere;
3. pH paper to determine the pH of a substance for proper neutralization; and

4. Other specific monitoring instruments may be used to measure toxic compounds and their concentrations.

Decontamination

All clothing, equipment or person(s) assigned to duties in the Hot or Warm Zones shall be decontaminated to remove the presence of any hazardous materials encountered. The decontamination area shall be set-up prior to the mitigation of the incident.

Decontamination can be accomplished by:

1. Physically removing contaminants (e.g., liquid rinse, evaporation);
2. Inactivating contaminants by chemical detoxification (e.g., neutralizing agents); and
3. Disinfecting/sterilizing infectious or biological materials (e.g., bleach solution).

The decontamination procedures shall be initiated by the On-Scene Incident Commander. To ensure that the proper decontamination procedures are initiated, the Incident Commander shall make reference to following:

1. Material Safety Data Sheets;
2. The National Fire Protection Association Hazardous Materials Handbook;
3. The chemical manufacturer;
4. Chemtrec; and
5. Other related reference materials.

Once the proper decontamination procedures are determined, the On-Scene Incident Commander shall designate an area within the Warm Zone to set up the decontamination process. The equipment shall consist of portable wash tubs, sprayers, heavy gauge plastic tarp and disposable scrub brushes.

The following steps constitute a possible decontamination process for personnel involved in the remediation of the incident. **(For additional details refer to Appendix A)**

1. All personnel exiting the Hot Zone shall place monitoring equipment, hand tools and other equipment in this area. A recovery drum and/or tarp shall be set in place so all tools and equipment can be put aside for further decontamination. All equipment and tools shall be decontaminated when work is concluded in accordance with the *Decontamination of Equipment* section in this policy. Personal protective clothing, self-contained breathing apparatus and/or respirators worn by personnel are excluded at this stage and shall remain worn by personnel.
2. After placing equipment and tools in the recovery drum or on tarps, all persons who have been within the Hot Zone shall be washed down with the appropriate solution, as determined by the Material Safety Data Sheet, while wearing all personal protective equipment. All water used in this step shall be contained in a recovery drum or decontamination pool while this process is carried out and treated as hazardous waste at the completion of the decontamination process.
3. After emergency response personnel are completely washed down, they shall remove their protective clothing. The protective clothing shall be placed in a recovery drum or approved bag and labeled with a tag as to their contents. Support personnel may be required to assist personnel being decontaminated with removing their protective clothing.

4. After removing protective clothing, personnel being decontaminated shall remove their self-contained breathing apparatus or respirators. The breathing apparatus shall be placed on a tarp for further decontamination. For decontamination procedures of breathing apparatus and respirators, refer to the section in this policy for the Decontamination of Self-Contained Breathing Apparatus.
5. Upon removing the personal protective equipment, the emergency response personnel shall remove any clothing that may have become contaminated. The clothing shall be placed in recovery drums or approved bags and labeled as to its contents.
6. Emergency response personnel shall shower thoroughly if it has been determined that personal protective equipment has failed to protect the user.
7. Emergency response personnel and persons that were in the Hot Zone and Warm Zone shall receive a post-medical evaluation by a qualified individual if overexposure or injury occurs.
8. If it is determined that emergency response personnel or persons involved with the incident need further medical attention, transportation shall be arranged by the On-Scene Incident Commander.

Decontamination of Equipment

Decontamination of equipment shall be performed by using portable wash tubs, sprayers, and disposable scrub brushes. Any equipment that cannot be thoroughly decontaminated along with the contents from the wash tub shall be considered hazardous and shall be stored and disposed of in accordance with State and Federal guidelines

Monitoring Equipment

If monitoring equipment becomes contaminated, it shall require special cleaning techniques. Methods for decontamination shall be obtained from the DEP or EPA's or the equipment's manufacturer.

Hand Tools

Emergency response hand tools shall be cleaned as appropriate by chemical or physical means. The DEP may be consulted for specific methods of decontaminating the hand tools. At the end of the incident, if the hand tools cannot be decontaminated, they shall be disposed of as hazardous waste.The equipment shall be replaced immediately or as funding is secured.

SCBAs

Decontamination of Respirators and Self-Contained Breathing Apparatus

Personnel responsible for the decontamination of respirators shall follow the cleaning and maintenance of respirators section of the Barkhamsted Fire District Respiratory Protection Program.

Personal Protective Equipment

Emergency response personnel shall use appropriate personal protective equipment for each assigned job.

The following personal protective equipment if required must be available for use depending on the requirements of the situation and the training of the individual response personnel:

1. Positive pressure self-contained breathing apparatus;

2. Totally encapsulating chemical protective suits capable of maintaining positive air pressure and capable of preventing inward gas leakage of more than 0.5%;
3. Chemical resistant gloves and boots;
4. Air purifying half-mask or full-face respirator with appropriate cartridges;
5. Chemical resistant total body coverall Tyvek suits;
6. Chemical resistant goggles; and
7. Personal Alerting Safety System (PASS) device.

Medical Surveillance

- **The members of the Barkhamsted Fire District <u>do not</u> respond as an Emergency Response Hazardous Response Team.** The HazWhopper Standard 1910.120 requires members of an ERT to be placed in a medical surveillance program. Medical examinations and consultations are performed in accordance to the OSHA Respiratory Standard.

Termination

Incident termination will be conducted once stabilization of the emergency has occurred. The incident commander will seek the recommendation of the DEP Hazardous Materials Response Team and Hazardous Materials Clean- Up Contractor on proper termination of the incident.

Debriefing of personnel

1. Personnel shall be informed regarding what they may have been exposed to, and what the symptoms of this exposure may be. Log exposure levels and arrange for follow-up evaluations.

2. Equipment and apparatus exposure review- ensure that equipment and apparatus that is unfit for service is clearly marked and plans made for special cleaning or disposal. Personnel will be specifically assigned to laundering and decontamination efforts.

3. The incident historian (scribe) will assign information-gathering responsibilities to specific personnel (who will report to the incident historian) for later use in the post incident analysis.

4. A summary will be made of the activities of each sector. Identification will be made of problems needing follow-up and any legal or pressing safety, personal, equipment failures or potential legal problems. In depth analysis will be saved for the critique.

5. The incident commander will thank personnel who have worked hard and done their job.

6. Provision for "Critical Incident Stress Debriefing" shall be made for personnel who have viewed dead bodies at an incident and/or have been injured or seen others seriously injured.

Post Incident Analysis-

Verification of shipping papers and /or MSDS's

Owner/operator information

Chemical hazard information from checklists, computer printouts etc.

Cassette tapes from the command post

Notes by sector officers and IC staff

Photographs and sketches

Records on levels of contamination or exposures from decontamination and EMS personnel

Incident reports

Incident command charts

Business cards or notes from agency, organization or company representatives.

Appendix A

DECONTAMINATION:

The Incident commander shall appoint a decontamination team leader, whose job it shall be to execute the procedures outlined herein.

The prime objective of the decontamination team leader is to avoid the contamination of anyone or anything beyond the decontamination corridor.

The decontamination area will be established within the Contamination Reduction (Warm) Zone.

Personnel shall not be allowed to leave the decontamination area without permission from the decontamination team leader.

The decontamination zone will provide a corridor leading away from the source of contamination toward the Exit, with stations along the way for the deposit of tools, equipment, protective clothing and other items. Monitoring personnel and equipment will be appropriately placed along the path. A person traveling along the path will experience a decreasing level of contamination along the way.

Specific decontamination procedures shall be adopted to meet the requirements of the incident at hand.

Decontamination is the process of rendering personnel, equipment and supplies safe by eliminating harmful substances. Four techniques are involved...

Dilution

Absorption

Chemical Degradation

Isolation.

A Decontamination Checklist is recommended to be used during decontamination operations.

The decontamination checklist should include provision for removal, identification and secure storage of non-essential private items (rings, watches, wallets, jewelry etc.) from entry team members.

Step 1- Establish an Entry point-

An entry point to the decontamination corridor shall be established.
This entry point should be easily visible for HAZMAT Team members wearing Personal Protective Gear. Any tools that might be needed by personnel in the Exclusion (Hot) Zone should be left at the entrance to the decontamination area.

Step 2- Primary Decontamination-

The objective here is the removal of as much solid or liquid contaminant as possible from contaminated persons. Protective clothing and SCBA are left on.

Decontamination personnel shall place as much distance between themselves and the contaminated personnel as possible.

Overspray shall be minimized, through use of low pressures, and all runoff shall be contained.

When working with Class B poisons, all Decon crews shall wear SCBA and be wearing a level of protection equal to those being decontaminated.

All decon crew members will undergo decontamination, with the last team member washing themselves.

Step 3- SCBA removal-

Contaminated SCBA should be removed for thorough decontamination at a later time. These units should be placed in individual plastic bags, or on a tarpaulin for later bagging.

When HAZMAT crew members are to re-enter the Exclusion (Hot) zone during low-risk operations, it will be acceptable to just change the SCBA bottle.

During high-risk operations, the entire SCBA shall be changed rather than merely the bottle. Decon crew members shall pass a clean and serviced unit over the isolation line to entry team members.

Adequate replacement SCBA units shall be on hand to replace all entry team units at least once. If Exclusion zone operations exceeding 15 minutes are anticipated, more SCBA units should be requested.

If compressor units are utilized to recharge SCBA units in the field, the compressor shall be run at a sufficient distance, and in an appropriate spot, so as to eliminate the possibility of contaminated air entering the cylinders.

Decon crew members shall not participate in the reservicing of air cylinders.

All SCBA removed shall be logged by decontamination personnel and their location tracked.

Step 4- Removal and Isolation of Protective Clothing-

Outside clothing removal is especially important for absorbent Structural Fire Fighting gear.

Contaminated coats helmets, turnouts, boots, gloves and other gear are to be placed in containers to isolate contaminants.

Plastic garbage bags provide adequate temporary protection. Bags should be sealed with tape and transported elsewhere for laundering.

When disposal is required, the bags should be placed in a properly marked recovery drum.

Many pesticides have no practical detoxification technique. Incineration or burials at appropriate landfills may be the only alternative.

All protective clothing removed shall be logged and their location tracked by decontamination personnel.

Step 5- Removal of personal clothing-

Removal of all personal clothing, including undergarments and personal items shall be performed when necessary.

Items shall be bagged, labeled and laundered/disposed of, as appropriate.

All personal clothing removed shall be logged by decontamination personnel and their location tracked.

Step 6- Decontaminating the body

An overhead shower shall be used to provide water to personnel. All runoff shall be contained. Ample soap should be applied to all areas of the body, including the head and groin. Assistance can be provided when requested or appropriate.

Liquid surgical soap in squeeze bottles, sponges and brushes shall be provided. All cleaning items are to be bagged and marked for disposal.

Anyone wearing contact lenses should be re-evaluated for discomfort or irritation. The lenses should be removed and the eyes flushed with copious amounts of water if needed.

Step 7- Drying off and providing clean clothing-

Towels or sheets should be used to dry off. Each item is to be used once and placed in labels plastic bags for removal.

Disposable coveralls and/or hospital gowns and slippers shall be provided.

Step 8- Medical Evaluation

After decontamination, personnel will be evaluated by EMS personnel. EMS personnel shall have access to base-line information for HAZMAT personnel.

Vital signs will be noted for each person leaving the decontamination area, using the same type EMS worksheet used upon entry. Any breaks in skin or open wounds will be immediately reported to EMS personnel. All open wounds will be cleaned at the scene. The EMS section is to be alerted to all contamination hazards as soon as they become evident to incident command.

A personal exposure report is to be filled out by attending EMS personnel, with copies to the administration, station file and the examined individual.

Step 9- Transportation

Whenever all nine steps are activated because of high-risk contaminants, contaminated personnel shall be taken to an appropriate hospital for further evaluation and monitoring. This additional attention may include blood tests, EKG, an overnight stay or other treatment as directed by the Emergency MD at the facility.

Documentation of regarding the treatment of each person shall be included in the termination activity report. Choice of vehicle for transport shall be based upon it's ability to move all persons at one time, thus eliminating decontamination of many vehicles.

Life threatening emergencies shall be transported via EMS vehicle. This vehicle shall preferably be a back-up ambulance, so as not to decommission an on-line EMS vehicle.

HAZMAT personnel shall take all reusable items and tag them with "decontamination in progress" tags. These items will be monitored by HAZMAT personnel for 24 hours to ensure proper decontamination procedures are executed.

Appendix B

LEVELS OF HAZARDOUS MATERIALS INCIDENTS:

RESPONSE LEVEL	DESCRIPTION	RESOURCES	EXAMPLES
I	Incident can be controlled by First Responders. Does not require evacuation. The incident is confined to a small area, which causes no immediate threat to life and property.	• Fire department • Emergency Medical Services • Law Enforcement • Information Officer • Chemtrec • National Response Center	500- gallon fuel oil spill Inadvertent mixture of chemicals Natural gas leak in a structure
II	Incident poses a greater hazard than Level I. Poses a threat to life and property	• Resources required are beyond the initial local response • All of the Level I	Minor chemical release in an industrial facility A gasoline tank truck roll over A Chlorine leak at a water treatment facility

		agencies • Haz Mat Response Team • Public Works Dept • Red Cross • State Police • Public Utilities	
III	Incident involves a severe hazard, which poses extreme threat to life and property. Incident may require a large-scale protective action operation.	• Requires all Level I and Level II agencies • State Emergency Management • Department of Health • Environmental Protection Agency • U.S. Coast Guard • Federal Emergency Management Agency	Major train derailment Explosion or toxicity hazard A migrating vapor cloud

Appendix C
EPA Levels of Chemical Protection

LEVEL A: protection worn when the highest level of respiratory, skin, eye and mucous membrane protection is needed.

Personal Protection Equipment:

- Positive Pressure SCBA (NIOSH Approved)
- Fully encapsulating chemical resistant suit
- Gloves, inner and outer chemical resistant
- Boots, chemical resistant
- Hard hat
- Coveralls
- Intrinsically safe two-way radio communication

LEVEL B: Protection worn when the highest level of respiratory is required but lesser level required for skin and eye protection. This is the minimum level required for site entries.
Personal Protection Equipment:

- Positive Pressure SCBA (NIOSH Approved)
- Fully encapsulating chemical resistant suit (Two piece suit)
- Gloves, inner and outer chemical resistant
- Boots, chemical resistant, steel toe
- Hard hat
- Coveralls (disposable chemical resistant)
- Intrinsically safe two-way radio communication

LEVEL C: Protection selected when the type of airborne substance is known, and meets the criteria for wearing and air-purifying respirator. Periodic air monitoring must be performed.
Personal Protection Equipment:

- Full face air-purifying respirator.(NIOSH Approved)
- Chemical resistant clothing (one piece coverall with hood, or two piece chemical splash suit.
- Chemical resistant hood and apron (disposable chemical resistant coveralls)
- Gloves, inner and outer chemical resistant
- Boots, chemical resistant, steel toe
- Hard hat
- Escape mask
- Intrinsically safe two-way radio communication

LEVEL D: Work uniform only. No skin or respiratory hazards present.

Appendix D

Incident Follow-up
After each incident, the incident and Emergency Response Plan shall be reviewed and revised as necessary. This review shall involve answering the following questions:

- Cause: What caused the emergency?
- Prevention: Was it preventable? If so, how?
- Procedures: Were inadequate or incorrect orders given or actions taken? Were these the result of bad judgment, wrong or insufficient information, or poor procedures? Can procedures or training be improved?
- Site profile: How does the incident affect the site profile? How are other site cleanup activities affected?
- Community: How is community safety affected?

Liability: Who is liable for damage payments?