

POLSON City/Rural FIRE DEPARTMENT Operating Guidelines

Issued By: Chief Thomas J. Maloney

February 20, 2002

Revised By: Chief John Ed Fairchild

March 27, 2009

200.10 Hazardous Materials Response

Page 01 of 09

200.11 - Purpose

To establish guidelines for the control of hazardous materials release.

200.12 - Incident Management

The Incident Command System will be used.

Authority

The Polson Fire Department is the designated first response and incident command agency for hazardous materials incidents within the city limits of Polson and Polson Rural Fire District.

EXCEPTION: The Confederated Salish and Kootenai Tribes/Lake Office of Emergency Management are the designated incident command agency for Flathead Lake.

B. Duties and Responsibilities unique to hazardous materials incidents.

1. Incident Commander (Unified Command)
 - a. Establish command and control structure.
 - b. Establish initial hot, warm, and cold zones.
 - c. Establish the initial operational objectives.
 - d. Re-evaluate control zones and operational objectives.
 - e. Appoint a Safety Officer.
 - f. Begin product identification.
 - g. Establish Medical Group, Decon Group and Planning Group leaders.

NOTE: If Hazardous Materials Emergency Response Team (HMERT) has been requested, use the assigned HMERT Leader to assist with as many of the above steps as possible.

2. Safety Officer

- a. Prepare a Site Safety Plan.
- b. Ensure that all elements of safety are followed.
- c. Monitor activities in control zones and observe for hazards that may modify or terminate operations.

3. Hazardous Materials Emergency Response Team (HMERT) Leader will be in charge of the HMERT duties and shall work closely with the Incident Commander. (Haz-Mat Group Leader)

C. Command Post should be located uphill, upwind and a safe distance from the incident at known or suspected hazardous materials incidents. Notify Lake County Office of Emergency Management through Lake County Communications.

Initial Actions:

Make sure to use ERG Manual when deciding the below:

- A. Note wind direction and speed
- B. Approach scene uphill and upwind
- C. Stop apparatus at a safe distance from the incident.
- D. Short report (size-up) from first arriving unit, including classification as:
 1. Haz Mat 1: An incident controllable by the first response agencies.
 2. Haz Mat 2: Larger incident that may require limited evacuation and/or response of the state and/or private organizations.
 3. Haz Mat 3: Incident posing extreme threat, and/or covering large area, and/or requiring response of state/federal government and private organizations.

NOTE: Refer to DOT Emergency Response Guidebook's Initial Isolation and Protective Action Distance Table. When hazardous materials are suspected, do not approach closer than 250' before appropriate personal protective equipment is donned.

Identify If Hazardous Materials Are Present

Responders shall be aware of the following indicators when assessing the potential presence of hazardous materials: (maintain safe distance when making assessment.) (Notify TERC/LEPC Teams)

- A. Type of occupancy
- B. Information from bystanders, employees, drivers
- C. What is happening at the event?
- D. Types of containers
- E. Placards
- F. Labels
- G. Waybills and bills of lading (inside cab, driver's side)
- H. Train consists and wheel reports (inside locomotive or caboose)

Use of Combustible Gas Indicators

When indicated, on-scene personnel shall use the multi-gas detectors to determine the presence of flammable gases. The detectors will sound an alarm at 10%. When this level is found to be present, using the LEL (Lower Explosive Limits), it will identify the exclusion zone. All persons inside of this exclusion zone will be evacuated, and entry shall be denied. If 25% LEL is reached, STOP - WITHDRAW - GO NO CLOSER! This level has been determined to be the minimum concentration where NO entry is allowed. Regularly monitor the area, checking for changing levels.

NOTE: Use the conversion chart if the substance being sampled is known to ensure the correct percentage of LEL is identified.

Isolate and Deny Entry:

At known or suspected hazardous materials incidents, the Incident Commander shall keep the public and emergency personnel at a safe distance so that they do not become contaminated or suffer injury. Do not allow anyone near a hazardous material until it has been identified.

Use the following methods for isolation:

- A. Barrier ribbon
- B. Road cones
- C. Firefighters
- D. Police
- E. Block entry with apparatus

Control zones shall always be established at Haz Mat incidents.

Control points shall limit access. The incident site shall be divided into three control zones:

HOT ZONE, WARM ZONE, COLD ZONE:**1. HOT ZONE**

The Hot Zone is the innermost of the three areas, and is where contamination could occur. All personnel entering this zone shall wear prescribed levels of personal protection. Personnel shall establish an access control point to regulate entry. The boundary line shall be well defined and established by one or more of the following methods:

- a. Visually surveying the area
- b. Air sampling
- c. Information from references
- d. Need to prevent fire
- e. Potential for airborne contamination

2. WARM ZONE:

The warm zone is where the Contamination Reduction Corridor (CRC) is located. This area provides a transition between contaminated and clean areas. The area needed for the CRC and the distance between the Hot Zone and the Command post dictates the size. All personnel entering this zone shall wear prescribed levels of personal protection. An access control point shall be established to control entry and exiting personnel. The boundary line shall be well defined.

3. COLD ZONE:

The Cold Zone is the outermost part of the operation area at the incident site. It is considered a clean area. The Command Post is located here along with support personnel and equipment. This zone is restricted to authorized personnel only.

Identify Hazardous Material:

When it is determined that a known or suspected hazardous material is present, the Incident Commander shall attempt to identify the material using one or more of the following methods:

- A. Use the information gathered in the above sections (placards, labels, bills of lading, waybills, consist, wheel reports).
- B. Ask the owner, site specialist, or employee.
- C. Contact the shipper.
- D. Contact the manufacturer.
- E. Call CHEMTREC (You need to identify as much information as possible, including train or truck number and/or the manufacturer's name.)

Risk Analysis:

The Incident Commander shall assess the potential danger by estimating the amount of hazardous material that may be released and at what rate, where it will go, and what its effects will be. This information will help determine the need for evacuation, area to be evacuated, and what resources will be needed. Authority and responsibility to coordinate and implement emergency movement or evacuation is the responsibility of the law enforcement agency of the affected jurisdiction. Referring to reference materials, use the following methods to assess the potential:

- A. Container size and the amount inside
- B. Type of hazardous material
- C. Damage to the container and amount of material leaking
- D. Weather conditions
- E. Geographical location and demographics of the area where the incident has occurred
- F. Is fire involved?
- G. Is the hazardous material migrating by runoff or vapor cloud?
- I. Are there any contributing factors?

Consider probable benefits of planned actions in light of the hazards presented.

Selection of Personal Protective Equipment (PPE):

PPE shall be selected based on the protection it provides for the specific hazards to be encountered. Selections of specific PPE shall be based on the criteria of at least two (2) reference/resource sources. When in doubt, always go to the next higher level of protection. If the chemical involved cannot be determined, treat as highly toxic, violently reactive and highly explosive. **Caution:** If you are unsure your PPE is adequate, remain at a safe distance and take no intervention actions.

Rescue:

Rescue can only be successful if it can be accomplished without creating another victim. Notify the hospital and EMS agency that the potential of a hazardous materials rescue.

- A. Rescue only if you have the proper level of protection.
- B. Work in pairs.
- C. Consider urgency and reason for rescue.
- D. Is there a likelihood of a viable patient?

(DO NOT TAKE RISKS FOR A BODY RECOVERY)

- E. Consider non-chemical trauma the patient may have suffered.
- F. Prepare for decontamination of rescued patients and rescuers. Assume that gross contamination of rescuers will be high.

- G. Prepare for Paramedic support of field-decontaminated patient. Provide adequate level of protection to aid/transport personnel.
- H. Prepare transport vehicle for chemical incident transport. Be liberal with Visqueen.
- I. Notify hospital as soon as possible.

Exposure Control:

- A. Consider evacuation efforts to protect people. (Consult with Law Enforcement)
- B. Consider "writing off" property and environmental damage when lives are at risk.

Extinguishment:

It is possible when fire is involved at a Haz Mat incident that a decision will have to be made on attacking or letting a fire burnout. The type of Haz Mat, life hazard, and the situation at hand will determine your action. Always check the references before extinguishment.

- For any fire attack to be successful, a sufficient supply of agent must be available.
- Extinguishing agents applied to some Haz Mats may become contaminated and be considered hazardous. An effort shall be made to contain runoff for later cleanup.
- Sometimes the best way to stop a fire will be to shut off the flow of Haz Mat. In other situations, the fire will have to burn itself out due to the possible contaminated runoff or the Haz Mat may be so reactive that putting out the fire is impossible. If a fire is allowed to burn, an effort shall be made to protect the exposures.
- Should fire impinge on other containers of hazardous materials and it is safe to approach, personnel shall protect the containers from rupture by cooling with water streams.

Confinement and Containment:

Confinement and containment are those actions and/or operations that limit the size of the initial release.

A. Confinement:

Confinement efforts such as damming, diverting, and catching are defensive actions within the realm of performance for members with operations level training.

B. Containment:

Containment efforts such as capping and patching are considered to be offensive actions and are often beyond the operations level of training. Proper Mutual Aid must be called for this operation to take place. Only those Certified at the Technician Level may perform these activities.

EXCEPTION: Because petroleum products are familiar and abundant, offensive actions like plugging a leak, transferring fuel from one container to another, are acceptable, provided such actions are within our scope of training, involve a small quantity (i.e., motor vehicle fuel-tanks) and can be accomplished in what is determined to be a safe environment.

Call for Help:

- Hazardous Materials Emergency Response Team

If the Incident Commander determines that an incident exceeds the capabilities of personnel on scene, The Incident Commander shall call for the Hazardous Materials Emergency Response Team

- Other Resources

The Incident Commander may determine that Mutual Aid help is needed. Assistance can come from both emergency and non-emergency organizations. The need for assistance can be associated with requirements for additional manpower, equipment and technical experts.

Resources may come from, but are not limited to, the following areas and/or organizations:

1. Fire Agencies
 2. Confederated Salish and Kootenai Tribes
 3. Lake County Office of Emergency Management
 4. Police (crowd control and/or evacuation)
 5. City and/or County Public Works (Only for technical expertise, equipment, dirt, sand, and road barricades)
 6. Environmental Protection Agency (cleanup assistance and information on environmental concerns)
 7. Department of Transportation (spills involving State roadways)
 8. Chemists and/or Industrial Hygienists
 9. Public Health
 10. Private hazardous materials cleanup contractors
 11. Red Cross (human services)
 12. Polson School District (busses for mass transport)
- In the event outside contractors enter the incident:
 1. The on-scene commander shall retain command.
 2. The command agency will not assume responsibility (financially) for cleanup. The company, transporter or owner shall take full responsibility for actions of private contractors and cleanup agencies.

Flammable Gas Incidents:**Purpose:**

To establish procedures to safely and effectively control and/of extinguish flammable gas releases and fires.

Operations:**A. Propane Gas Leak or Fire:**

1. Evacuate, isolate the area, and deny entry.
2. Notify the gas company immediately. Attempt to shut off gas flow via existing valves.
3. Locate a continuous water supply.
4. Lay initial hose lines.
5. If inside a structure, ventilate. Do not use electrical switches.
6. Remove ignition sources.
7. Keep exposures wet and cool.
8. Do not attempt to extinguish the gas flame until the flow has been stopped. Only extinguish exposure fires.

B. LPG Tank - No Fire:

1. Evacuate, isolate the area, and deny entry. Check all depressions and enclosures for residual hazards (unlike natural gas, which is lighter than air, LPG will collect in depressions).
2. Locate a continuous water supply.
3. Lay hose lines.
4. Attempt to shut off flammable gas flow. Consult plant personnel or vehicle driver.
5. If inside a structure, ventilate. Do not use electrical switches.
6. Remove ignition sources.
7. Keep exposures wet and cool.
8. Use straight or solid streams to help in vaporizing spilled liquid.
9. Use spray streams to help disperse the vapor cloud.

C. LPG Tank - Involved in Fire:

1. Perform operations as described above.
2. If fire is impinging on the tank shell then:
 - Determine liquid level in the tank from the frost line.
 - Cool the tank shell above the liquid level to reduce the internal pressure. Also cool the tank at the point of flame impingement to reduce the possibility of tank shell failure. Never extinguish fire coming from the vent or pressure relief valve on a pressurized tank.
 - If good cooling is being accomplished (noise and flame at the pressure relief valve diminish), nozzles should be adjusted to fog and an approach to the tank should be started. Consider whether or not extinguishment will create a greater hazard than letting it burn.
 - 1) Always approach from the sides, never from the ends.
 - 2) If shut off valve is engulfed in fire, use two fog stream lines with one backup line (from a different water source is preferred) to advance and shut down fuel source. If this cannot be done, continue to cool the tank until the fuel burns itself out.
 - If cooling is not being accomplished and conditions worsen, withdraw to a distance not less than 1000 feet.

Flammable Liquid Incident:

Purpose:

To establish guidelines to safely and effectively control and/or extinguish flammable liquid spills or fires.

Fires:

1. Lay hose lines and establish a continuous water supply.
2. Control the flow of fuel. Dike and channel or dam the flowing liquid away from the incident scene and exposures.
3. If the spill is not involved in fire, secure the vapors with a blanket of foam.
4. Cover exposures.
5. Extinguish the fire.
- F. Shut off fuel source, if possible.

Extinguishing Suggestions:

Use AFFF

Use water on flammable liquids with flash points above 100 degrees F.

Dry Chemical extinguishers are extremely effective on flammable liquid fires if the surface area is not too great.

Do not extinguish fire coming from the vent or pressure relief valve on a flammable liquid tank.

Petroleum Spills – General:

Members trained to the Operations level for hazardous materials responses have the authority to take limited Technician level "offensive" actions at small petroleum spills.

1. Provide fire suppression capability, minimum of two dry chemical extinguishers on any spill. Consider using foam extinguisher or foam line to cover spill.
2. Consider donning Tyvek clean up suit over turnout gear when there is likelihood protective clothing will be contaminated.
3. Contain the spill using catch basins, floor dry, and absorbent pads.
4. Stop the leak by tilting the tank, siphoning the product, or plugging.
5. If you think a vehicle will continue to leak fuel, and the driver is not available, ask for the police to impound the vehicle.
6. Stop all leaks before turning a vehicle over to a tow company.
7. Deliver all contaminated control and clean up items to the hazardous waste container at the Shop.

Vessel Fuel Spills:

In the event of a Class I flammable liquids (gasoline) spill contained within a boat or dock facility, we will work with CS&KT Shoreline Protection, Lake County Office of Emergency Management and/or the EPA to resolve the incident. We will generally not take action on spills involving Class II and III flammable liquids unless there is a fire or threat of a spill to the water.

- The I.C. shall call CS&KT Shoreline Protection, Lake County Office of Emergency Management and decide; with their approval what action will be taken. Secure the isolation area from traffic.

- Only contractors approved by the EPA can clean up a spill - at the vessel owner's expense.

Clandestine Drug Laboratories:

Purpose:

To establish guidelines for operations at suspected or known clandestine drug laboratories.

Inadvertent Discovery of a Drug Lab:

- Members should be aware of the indications of potential clandestine laboratories when responding to any call.
- Should a member find him/herself in a drug lab:
- Immediately withdraw all people from the area.
- Do not touch anything, including light switches.
- Request a law enforcement and hazardous materials response.

Drug Lab Discovery during a Medical Incident:

1. Immediately withdraw from area.
2. Request a law enforcement and hazardous materials response.
3. If members must return for rescue, full PPE, including SCBA, must be worn.

Drug Lab Discovery during a Fire Incident:

1. Immediately withdraw from area.
2. Request a law enforcement and hazardous materials response.
3. Control the incident in a Defensive operations mode.