

CAPITAL CITY FIRE/RESCUE

SOG NUMBER 12.0

STANDARD OPERATING GUIDELINES

DATE: August 28, 2006

REVISION DATES:

June 22, 2009

EMERGENCY RESPONSE - HAZARDOUS MATERIALS

OBJECTIVE:

To provide a standardized and safe response plan for incidents involving hazardous materials. Not every situation encountered can be addressed within this SOG. Some situations will require the command group and members of the response team to exercise judgment and initiative based upon the situation encountered.

GUIDELINE:

12.1 Capital City Fire / Rescue is the designated agency to be Incident Commander for hazardous materials incidents. All response personnel are trained to the Operations level. OSHA 29 CFR 1910.120 (q)(6)(ii)

12.1.1 Haz-Mat response team personnel operate at a Level A of hazardous materials response in accordance with OSHA 29 CFR 1910.120 (q)(6)(iii).

12.1.2 All CCF/R responders will receive annual Haz-Mat Operations and Technician level refresher training sufficient to demonstrate their ability to operate at this level.

12.1.3 All CCF/R members of the Level A response team will receive annual or biannual physicals as directed by the physician supervisor.

12.1.4 All CCF/R Operations or Technician level personnel will be medically cleared and adhere to all requirements of the CCF/R Respiratory Protection SOG # 60.

12.1.5 This guideline shall be supplemented by 29 CFR 1910.120. **See appendix 1.**

12.2.1 Trained personnel shall respond in conjunction with other city, state and federal response team members to incidents involving substances or materials which, when released in an uncontrolled manner, may pose a potential threat to life safety, the conservation of property, or to the environment. The Hazmat Annex to the CBJ Emergency Operations Plan shall also be used as a guide for Hazardous Materials response.

12.2.2 The Hazmat Response Team shall be supported by of CBJ Risk Management, CCF/R, Juneau Police, Public Works, Alaska Department of Environmental Conservation, US Coast Guard, and Environmental Protection Agency members. All responders shall operate using the Incident Command System and where necessary under the Unified Command principle.

12.2.3 CCF/R has only limited capability for spill/release containment and decontamination operations. Cleanup is the responsibility of the spiller/releaser. State and Federal regional teams may respond with equipment, resources and technical assistance upon request from the City Manager, the Mayor or their designee. Outside help may be from 4 to 10 hours away.

12.3 *Level I Incident: (First Responder)*

1. A Level I incident is when atmospheric contaminants, liquid splashes or other direct contact will not adversely affect exposed skin. Air contaminants and concentrations have been identified. An IDLH atmosphere does not exist.
2. The atmosphere contains at least 19.5% oxygen.
3. Most Level I incidents will be dispatched as investigations to an odor, gas leak, fuel spill, etc. Upon arrival, the CCF/R Incident Commander may upgrade to a Level II incident, if needed.
4. An upgrade from a Level I to a Level II will require the statement from the IC to "Upgrade the incident at (give address, location, etc.) to a Level II incident."
5. The appropriate level of protection is Level C but may be increased to Level B if deemed necessary by the incident commander. Level C personal protective equipment (PPE) may consist of hooded chemical resistant suit, chemical resistant boots and covers, inner and outer chemical resistant gloves, a hard hat with eye protection and positive pressure SCBA.

Bunker gear with positive pressure SCBA will provide some protection from liquid solid materials but is not designed to give protection against chemical permeation or degradation. It is also difficult to decontaminate and should not be worn where liquid splash by chemical agents is possible or where vapor protection is required.

Canister filter masks may be used only by trained personnel and when:

- Continuous air monitoring is provided in the area
- The product involved has been positively identified and canisters are available for that specific product
- Atmospheric oxygen is at least 19.5%

6. Personnel in level C PPE will not enter into the hot zone or warm zone of an incident with an unknown or suspicious substance leak, spill or release.
7. Air monitoring must be utilized on all Level I responses.

12.4 Level II Incident (Operations level)

1. Known products release present a significant respiratory hazard.
2. IDLH atmosphere exists or less than 19.5% oxygen concentrations
3. Direct skin contact with identified substance may pose a minor to moderate skin hazard
4. Initial investigation of an unknown or suspicious substance leaks, spills, or releases for identification; hot, warm, cold zone establishment,
5. Operations level personnel will **NOT** enter the hot zone established around an unknown or suspicious leak, spill or release.
6. Operations level personnel may enter and work in hot zones established around known substance spills that meet Level B PPE requirements.
7. HazMat incidents which require evacuation of citizens from the immediate vicinity of the spill or release are a level II incident at a minimum..
8. The CCF/R Incident Commander may request the haz-mat response team or assistance from regional response team(s) if there is a question in determining the nature or potential magnitude of the incident.
9. Upon arrival at the incident the IC may upgrade to a Level III incident with the statement, "Upgrade the incident at (give address, location, etc.) to a Level III incident."
10. Operations level II is equivalent to a Level B capability.
11. Air monitoring must be utilized on all level II incidents.
12. Level B personal protective equipment consists of
 - Positive pressure, full face-piece self contained breathing apparatus
 - Hooded chemical resistant clothing or non-vapor tight encapsulating chemical resistant suits.
 - Gloves, outer chemical resistant
 - Gloves, inner, chemical; resistant

- Boots, outer, chemical resistant, steel toe / shank
- Boots cover, outer chemical resistant
- Hard hat

Worn when the highest level of respiratory protection is required but a lesser level of skin protection is required.

12.5 Level III Incident (Level A Technician/Specialist).

1. Hazardous materials incidents that can only be identified, tested, sampled, contained, extinguished and/or mitigated using the resources of the Haz-Mat response Team. (i.e., training, chemical protective suites, specialized equipment).
2. Fires involving hazardous materials that are allowed to burn due to the ineffectiveness or dangers in the use of extinguishing agents or the unavailability of water and/or there is a real threat of a large container failure, explosion, detonation, BLEVE or container failure has occurred.
3. Hazardous materials incidents that required evacuation of large numbers of citizens and/or where mass care and sheltering facilities are required.
4. Serious injuries or deaths may result as a result of the incident.
5. Identified products released present both a respiratory and significant skin contact hazard.
6. Entry into hot zones established around an incident with an unknown or suspicious substance leak, spill or release.
7. Level A PPE consists of:
 - Positive pressure, full face-piece self contained breathing apparatus .
 - Full encapsulating vapor tight chemical resistant suits.
 - Gloves, outer chemical resistant
 - Gloves, inner, chemical; resistant
 - Boots, outer, chemical resistant, steel toe / shank
 - Boots cover, outer chemical resistant
 - Hard hat

Worn when the highest level of respiratory protection and skin protection is required.

12.6 *Operational Considerations (See Appendix 2)*

1. Establish Command: **All incidents**
2. Assess Response and Initial Approach Security: **All incidents**
 - Upwind/Uphil/Upstreaml
 - Identify Safe Staging Areas
 - Identify product via placards, shipping papers, bills of lading if possible
 - Determine projected spread of product.
3. On-scene size-up: **All incidents**
 - Life Safety Threat to responders, victims and the public
 - Rescue, evacuate, protect in place
 - Determine available and needed resources
 - Identify damaged/affected surroundings
 - ❖ structural exposures
 - ❖ downwind exposures
 - ❖ environmental exposures
 - ❖ below grade occupancies
 - ❖ aviation/Air space hazards.
 - Estimate number of ambulatory and non-ambulatory victims
 - Interview victims and witnesses
 - Weather
 - Dead animals and vegetation
 - Unusual odors, color of smoke, vapor clouds
 - Secondary devices
4. Incident site management, safety and security: **Any Level II or III incidents**
 - Isolate area/deny entry
 - A written incident site safety plan will be made and each responder will be briefed. The plan will detail: (**See Appendix 2**)
 - A site description, (Cold, Warm and Hot zones)
 - On site organization (Assignment of Team Leaders, Back-up Team members, HazMat Safety Officer, Incident Commander),
 - Communications,
 - Hazard evaluation,
 - Personal Protective Equipment
 - Work Plan
 - Decon Plan
 - Emergency signals
 - Site safety and Medical Plan
 - Establish hot, warm and cold zones
 - Ensure the use of PPE
 - Time, distance, shielding

- Consider emergency egress routes
 - Personnel accountability
 - Assess command post security
5. Mass decontamination: **Any Level II or III incidents**
 - Symptomatic patient
 - Asymptomatic patients (contaminated or exposed)
 - Remote site operations (i.e., hospital emergency room)
 - Position decontamination area upwind and uphill
 6. Consider transition to unified command: **Any Level II or III incidents**
 7. Make appropriate notifications: **Any Level II or III incidents**
 - EOC/Emergency Management Coordinator
 - SitStat for Dispatch
 - Hospital
 - Utilities
 - Responsible party (i.e., spiller, transporter, etc.)
 8. Determine an appropriate evacuation signal: **Any Level II or III incidents**

12.6.1 CCF/R Operational level personnel will: Any Level II incident

- Using proper PPE, members will establish perimeters and work to contain any released product while staying in the cold or warm zones.
- Using proper PPE, members will dike, dam or take other defensive actions to contain the spill. CCF/R members will not attempt to plug leaks in materials that require Level A protection, or enter areas where products have been released requiring a Level A response.
- Once the warm zone is activated, decontaminate entry team personnel **provided** that the level of PPE required is Level B or less. Normally, PPE one step below that required for the entry team is appropriate for decon teams, however the safety officer or entry operations commander must determine what level PPE is required. If level A PPE is required for the decon process, operations personnel will not conduct the Level A decon.

12.6.2 CCF/R will decontaminate persons on site before transporting them to Bartlett Regional Hospital. Contamination of ambulances is to be avoided.

12.6.3 Primary decontamination may be accomplished with hose streams, the decontamination trailer and/or dry decontamination methods.

12.7 Incident Termination / Debriefing

12.7.1 Proper termination of the incident is vital to the overall management of the incident.

It is during this phase that proper securing of materials used, decontamination of equipment, and logistic gathering is put together. Careful termination procedures will facilitate the remainder of the operation, assisting in development of Review, Critique, and Billing processes.

12.7.1.1 Verify units have completed functions/assignments.

12.7.1.2 Coordinate with DEC/Responsible Party (RP) proper handling/disposal of Decon waste water/solution.

12.7.1.3 Coordinate with IC and Incident Liaison Officer for agreement that incident has been mitigated.

12.7.1.4 Ensure that contaminated tools, equipment, and disposables are properly overpacked, bagged/segregated, marked, or adequately deconed.

12.7.1.5 Develop plan to identify agencies' continued responsibilities

12.7.1.5.1 Verify which agency will maintain control after HMRT departs.

12.7.1.5.2 Site access control.

12.7.1.5.3 Disposal disposition and clean-up.

12.7.1.5.4 Traffic control.

12.7.1.5.5 Contact persons: Has someone been specifically delegated as a single source of information for contact by clean-up contractors, and investigators and maintenance of all incident related documents?

12.7.1.6 Return apparatus and equipment to response status.

12.7.1.7 Units turn in reports to HM Group Supervisor.

12.7.2 Incident Debriefing

12.7.2.1 An incident debriefing is one of the phases of incident termination. The elements that should be addressed in the incident debriefing are identified in appendix 3.

12.7.2.1 A quick informal review of an incident immediately upon completion and prior to leaving the scene (if possible) allows valuable experience to be gathered from the participants. The review process should allow the participants to express how they performed their activities, the effects of decisions, usability of equipment, and overall command of the scene. Situations such as safety, acute hazardous conditions and anything unique or abnormal should be reviewed.

12.7.2.2 The HM Group Supervisor should initiate the review process by:

12.7.2.2.1 Outlining who was in charge of each division.

12.7.2.2.2 Stating the overall objective.

12.7.2.2.3 Describing the outcome of mitigation procedures.

12.7.2.3 An effort should be made to allow all participants an opportunity to express themselves. Particular attention should be paid to areas where problems or delays were encountered as well as those situations that were efficiently performed. It is essential that the review process bring forward on-site observations by those who performed specific duties.

12.7.2.4 The key elements of this incident review shall be recorded on the Team Unit Log.

12.8 *POST INCIDENT GUIDELINES*

12.8.1 All equipment, tools, and PPE shall be accounted for.

12.8.2 See that all persons responsible for filling out portions of the team "Operations Packet" have done so. Has all the information for billing purposes been collected?

12.8.3 Return to home quarters. Restock response unit. Check, test, and provide maintenance for all equipment, tools, and PPE used. Document testing and maintenance as necessary.

12.8.4 Obtain a Hazmat Incident Report number from DEC, and provide an estimate of costs, and submit required reports to DEC. Be sure to retain a copy of the report in your files.

12.8.5 Hold a critique of the incident. The elements that should be addressed in the post-incident critique are identified in appendix 3. Document all aspects of the critique. If there are valuable lessons to be learned, share the information with other regional response teams.

12.8.6 Double check that all exposure forms have been filled out, and that the records are correct. If additional medical monitoring is indicated, insure that the follow-up is done.

Appendix 1.

The senior emergency response official responding to an emergency shall become the individual in charge of a site-specific Incident Command System (ICS). All emergency responders and their communications shall be coordinated and controlled through the individual in charge of the ICS assisted by the senior official present for each employer.

NOTE TO PARAGRAPH (q)(3)(i). - The "senior official" at an emergency response is the most senior official on the site who has the responsibility for controlling the operations at the site. Initially it is the senior officer on the first-due piece of responding emergency apparatus to arrive on the incident scene. As more senior officers arrive (i.e. , battalion chief, fire chief, state law enforcement official, site coordinator, etc.) the position is passed up the line of authority which has been previously established.

1910.120(q)(3)(ii)

The individual in charge of the ICS shall identify, to the extent possible, all hazardous substances or conditions present and shall address as appropriate site analysis, use of engineering controls, maximum exposure limits, hazardous substance handling procedures, and use of any new technologies.

1910.120(q)(3)(iii)

Based on the hazardous substances and/or conditions present, the individual in charge of the ICS shall implement appropriate emergency operations, and assure that the personal protective equipment worn is appropriate for the hazards to be encountered. However, personal protective equipment shall meet, at a minimum, the criteria contained in 29 CFR 1910.156(e) when worn while performing fire fighting operations beyond the incipient stage for any incident.

1910.120(q)(3)(iv)

Employees engaged in emergency response and exposed to hazardous substances presenting an inhalation hazard or potential inhalation hazard shall wear positive pressure self-contained breathing apparatus while engaged in emergency response, until such time that the individual in charge of the ICS determines through the use of air monitoring that a decreased level of respiratory protection will not result in hazardous exposures to employees.

1910.120(q)(3)(v)

The individual in charge of the ICS shall limit the number of emergency response personnel at the emergency site, in those areas of potential or actual exposure to incident or site hazards, to those who are actively performing emergency operations. However, operations in hazardous areas shall be performed using the buddy system in groups of two or more.

1910.120(q)(3)(vi)

Back-up personnel shall be standing by with equipment ready to provide assistance or rescue. Qualified basic life support personnel, as a minimum, shall also be standing by with medical equipment and transportation capability.

1910.120(q)(3)(vii)

The individual in charge of the ICS shall designate a safety officer, who is knowledgeable in the operations being implemented at the emergency response site, with specific responsibility to identify and evaluate hazards and to provide direction with respect to the safety of operations for the emergency at hand.

1910.120(q)(3)(viii)

When activities are judged by the safety officer to be an IDLH and/or to involve an imminent danger condition, the safety officer shall have the authority to alter, suspend, or terminate those activities. The safety official shall immediately inform the individual in charge of the ICS of any actions needed to be taken to correct these hazards at the emergency scene.

1910.120(q)(3)(ix)

After emergency operations have terminated, the individual in charge of the ICS shall implement appropriate decontamination procedures.

1910.120(q)(3)(x)

When deemed necessary for meeting the tasks at hand, approved self-contained compressed air breathing apparatus may be used with approved cylinders from other approved self-contained compressed air breathing apparatus provided that such cylinders are of the same capacity and pressure rating. All compressed air cylinders used with self-contained breathing apparatus shall meet U.S. Department of Transportation and National Institute for Occupational Safety and Health criteria.

1910.120(q)(4)

Skilled support personnel. Personnel, not necessarily an employer's own employees, who are skilled in the operation of certain equipment, such as mechanized earth moving or digging equipment or crane and hoisting equipment, and who are needed temporarily to perform immediate emergency support work that cannot reasonably be performed in a timely fashion by an employer's own employees, and who will be or may be exposed to the hazards at an emergency response scene, are not required to meet the training required in this paragraph for the employer's regular employees. However, these personnel shall be given an initial briefing at the site prior to their participation in any emergency response. The initial briefing shall include instruction in the wearing of appropriate personal protective equipment, what chemical hazards are involved, and what duties are to be performed. All other appropriate safety and health precautions provided to the employer's own employees shall be used to assure the safety and health of these personnel.

1910.120(q)(5)

Specialist employees. Employees who, in the course of their regular job duties, work with and are trained in the hazards of specific hazardous substances, and who will be called upon to provide technical advice or assistance at a hazardous substance release incident to the individual in charge, shall receive training or demonstrate competency in the area of their specialization annually.

1910.120(q)(6)

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:

1910.120(q)(6)(i)

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 proper authorities of the release. They would 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:

1910.120(q)(6)(i)(A)

An understanding of what hazardous substances are, and the risks associated with them in an incident.

1910.120(q)(6)(i)(B)

An understanding of the potential outcomes associated with an emergency created when hazardous substances are present.

1910.120(q)(6)(i)(C)

The ability to recognize the presence of hazardous substances in an emergency.

1910.120(q)(6)(i)(D)

The ability to identify the hazardous substances, if possible.

1910.120(q)(6)(i)(E)

An understanding of the role of the first responder awareness individual in the employer's emergency response plan including site security and control and the U.S. Department of Transportation's Emergency Response Guidebook.

1910.120(q)(6)(i)(F)

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

1910.120(q)(6)(ii)

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:

1910.120(q)(6)(ii)(A)

Knowledge of the basic hazard and risk assessment techniques.

1910.120(q)(6)(ii)(B)

Know how to select and use proper personal protective equipment provided to the first responder operational level.

1910.120(q)(6)(ii)(C)

An understanding of basic hazardous materials terms.

1910.120(q)(6)(ii)(D)

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.

1910.120(q)(6)(ii)(E)

Know how to implement basic decontamination procedures.

1910.120(q)(6)(ii)(F)

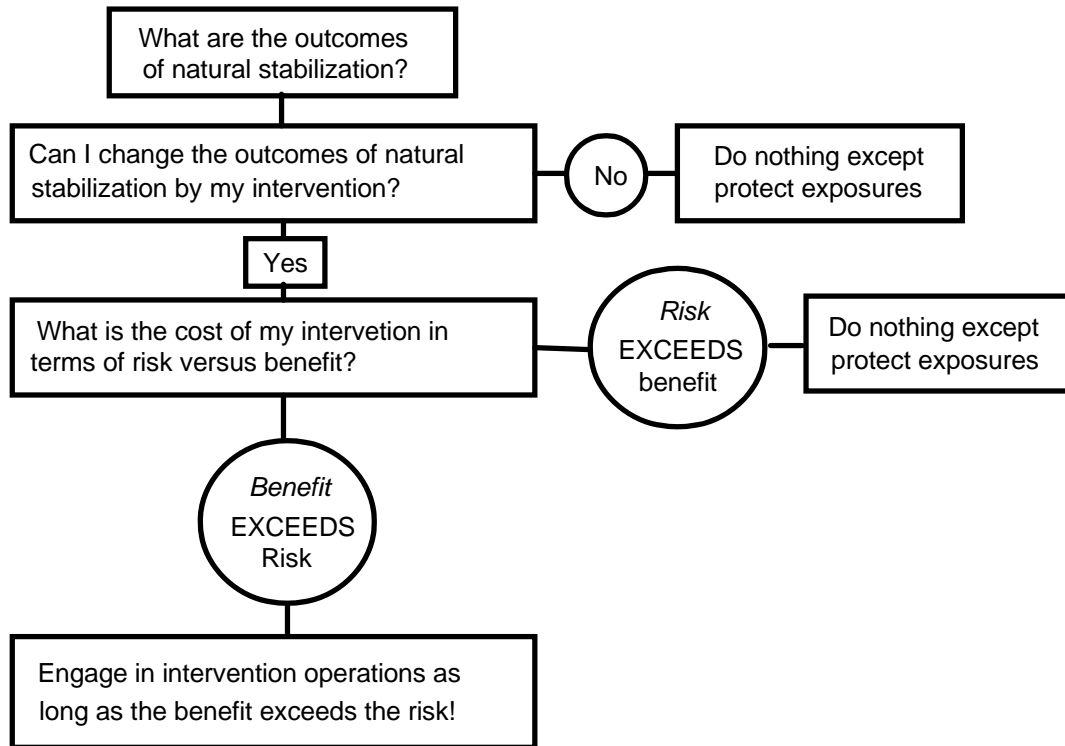
An understanding of the relevant standard operating procedures and termination procedures.

1910.120(q)(6)(iii)

Appendix 2:

Operational Guidelines:

Risk Versus Benefit Analysis



For more information on Risk Benefit Analysis, see the following publications:

Risk Assessment, Management, Communication - A Guide to Selected Sources - Volume 3, Number 2. Published by United State Environmental Protection Agency, Pesticides and Toxic Substances (TS-793) / # EPA/560/7-90-007.

Exposure Factors Handbook - Published by United State Environmental Protection Agency, Office of Health and Environmental Assessment, Washington DC, # EPA 600/8-89/043 March 1990.

- 2.1 HM Group Supervisor shall report to the Incident Commander for all pertinent information regarding the incident. HM Group Supervisor may be the Incident Commander.

2.2 HM Group Supervisor shall have a team meeting to discuss the Incident Commanders briefing and to assign team roles. (May be multiple roles.)

2.2.1 Assign a Safety Officer – Hazmat who shall determine: the adequacy of decon, the level of personal protective equipment for entry and back-up teams, the limitations of PPE, the access control points for the scene, the adequacy of emergency signals and plans, (including escape routes), and the method of constantly monitoring personnel and the incident scene.

2.2.2 Assign a Decontamination Officer and set up decon stations prior to entry. The Decon Officer and the Safety Officer – Hazmat shall pre-determine the measures to be taken if equipment, tools, or clothing cannot be safely and thoroughly decontaminated. The Decon Officer shall enforce the access control points for the decon corridor.

2.2.3 Assign an Entry Team Leader for the team. The entry and backup team should: map the scene showing topographic features, wind direction, streams, ponds, sewers, property lines, exposures, and perimeters; review emergency signals and procedures; check tools, equipment and PPE for adequacy; track and document all items entering the Hot Zone; evaluate potential for fire, explosion or BLEVE; constantly assess the status of the incident for any changes; and monitor each other for safety. When all of the above have been done, and the team leader and safety officer authorize entry, then the entry team can mitigate the incident.

2.2.4 Assign the Hazmat Resource Unit which shall: establish communications with command and other applicable agencies; research/identify product(s); make necessary notifications; distribute team Incident Report Forms to assigned personnel; serve as contact point for the team; gather information for the team Incident Report Forms and billing report; assist with monitoring the incident and personnel; and prepare the final team Incident Report Form.

2.2.5 Assign a Medical Officer, if needed

2.2.6 Possible liaison with Incident Command

2.2.7 Discuss the following points with the team:

2.2.7.1 Does an emergency actually exist?

2.2.7.2 **IF NOTHING IS DONE, WHAT ARE THE CONSEQUENCES?**

- 2.2.7.3 What has been done by first responders?
- 2.2.7.4 Have Hot, Warm, and Cold Zones been identified?
Are they identified/marked?
Who is to maintain perimeter control?
- 2.2.7.5 Obtain available information on the product(s) involved.
- 2.2.7.6 What are the risks?
- 2.2.7.7 What level of response and personal protective equipment is needed?
- 2.2.7.8 Is the appropriate equipment available for the product(s) involved?
- 2.2.7.9 What resources are needed? (Technical advisors, chemists, industry response teams, medical, public works, sewer crews, highway crew, heavy equipment, etc.)
- 2.2.7.10 What are the objectives? Reconnaissance? Rescue? Evacuation? Containment? Control? Wait for additional help or resources.
- 2.2.7.11 Has the entire team had input into the incident mitigation plan?
- 2.2.7.12 Have all the environmental, chemical, and physical hazards been evaluated and re-evaluated?
- 2.2.7.13 Do all personnel thoroughly know the incident objectives, tactics, and strategies?
- 2.2.7.14 Do all personnel thoroughly know the limitations of the personal protective clothing being worn?

2.2.8 Establish an Incident Site Safety Plan to include the following:

- 2.2.8.1 Site Description - This includes the information gathered during the off-site reconnaissance.
- 2.2.8.2 Entry Objectives - The objectives of the initial entry into the contaminated area must be identified PRIOR to committing personnel to the area.
The team should describe actions to be taken and tasks to be accomplished by entry personnel.

- 2.2.8.3 On-site Organization - Personnel are designated to carry out the stated job functions on site, such as Team Leader, Entry Unit, Back-Up Unit, Hazmat Safety Officer, Hazmat Resource Unit, etc.
- 2.2.8.4 On-Site Control - An individual or agency is designated to coordinate access control and security on site, including identifying perimeters, command post and staging area location, and prevailing wind conditions.
- 2.2.8.5 Hazard Evaluation - Identify substances known or suspected to be involved on the site, concentrations, primary hazards of the substances, and any site hazards like uneven terrain, etc.
- 2.2.8.6 Personal Protective Equipment - Based on the evaluation of potential hazards, designate PPE for the various work areas or tasks.
Once designated, NO changes to the specified levels of protection shall be made without the approval of the Safety Officer and the Hazmat Group Supervisor.
- 2.2.8.7 On-Site Work Plans - Identify the personnel assigned to each task by name and function and note the time each work party was briefed on the contents of the work plan.
- 2.2.8.8 Communication Procedures - Identify a radio frequency (channel) for personnel assigned to work in the Hot Zone, and one for all other on-site communications. Identify emergency signals to be used, such as air horn blasts or sirens, to indicate when all personnel should leave the Hot Zone. Identify emergency signals to be used in case of radio failure.
- 2.2.8.9 Decon Procedures - Identify the level of decon to be used, what decon stations to establish, decon equipment required, and the decon solutions to be used.
- 2.2.8.10 Site Safety and Health Plan - Identifies the Safety Officer-Hazmat, emergency medical care information, environmental monitoring equipment and intervals for conducting monitoring, emergency procedures, and personal monitoring requirements.
- 2.2.8.11 Ensures that the final Team Incident Report is completed.

- 2.3.1** HM Group Supervisor to recommend a mitigation plan to the Incident Commander.
- 2.3.2** Establish medical monitoring, if required. If available, order and stage advanced life support unit for the duration of the incident.
- 2.3.3** When the HM Group Supervisor determines that the HMRT's operations are no longer needed and that an acceptable level of risk remains for the requesting agency, the HMRT may start the formal process of "Incident Termination" only after agreement with the Incident Commander and/or DEC State on Scene Coordinator.

Appendix 3

Incident Debriefing

The incident debriefing elements that should be addressed include:

1. What hazardous materials were involved in the incident?
2. Were any personnel known to be exposed? If yes, enter on personal exposure records worksheets.
3. What are the accompanying signs and symptoms of exposure to these materials? (Is critical incident stress an issue with this incident?)
4. Was any equipment damaged?
5. Has any equipment and apparatus that is unfit for service been clearly marked?
6. Has someone been specifically delegated the responsibility for handling contaminated garments?
7. Do any unsafe conditions exist requiring immediate attention or isolation for further evaluation?
8. Who is responsible for gathering additional information for the post-incident analysis and critique?
9. Summarize the activities performed by each operational section, and identify any areas requiring follow-up.
10. Reinforce the positive aspects of the response and what went well.

Post-Incident Critique

The elements that should be addressed in the critique include:

1. What were the significant events that took place in this incident?
2. What could have been done differently to improve the overall response to this incident?
3. What changes in teamwork would have improved the overall response to this incident?
4. What changes in planning would have improved the overall response to this incident?
5. What changes in information sharing between agencies would have improved the overall response to this incident?
6. What changes in SOG's would have improved the overall response to this incident?
7. What additional training is required to improve response to this type of incident in the future?

Appendix 4 FORMS SECTION ONE: GENERAL HAZARD DATA

Form #1 INTELLEGENCE (Incident Comander)

General: The following questions assist the Command Group in assessing the current situation.

INCIDENT COMMANDER: _____ Phone # _____

LOCATION: _____ ALT Phone # _____

(1) What happened? (Who, what, when, where, why, how, size, quantity, container, and container integrity)

(2) * What do you want us to do? What are our objectives?

(ID substance, mitigate, modeling, sampling, commo support, ect)

(3) What other assets are on site or are enroute? HAZMAT FIRE POLICE EMS
 FBI EOD / BOMB EPA

(4) Have you established a Safe Route to the incident? **YES / NO**

What is the Route?

Have you established a staging area? **YES / NO** If yes, what is its location?

(5) Has a Isolation been established yet? **YES / NO** Stand off = _____
(500ft minimum for UNKNOWN (ERG Guide 111, 1800ft minimum UXO(suitcase))

(6) Have any assets entered the WARM or HOT zone? **YES / NO**

If so, what are the findings?

Can they draw us a site sketch or provide blueprints? **YES / NO**

Did they take pictures? **YES / NO**

What instruments did they use and what were their readings?

FORM #2 INCIDENT ACTION PLAN

1. Incident Commander: _____

2. Approach Direction: (uphill, up wind):

3. Staging area(s)

4. Command Post location / IC or UC established

5. Product Identification: (3 sources)
Odor/ Color/ State/ Placards / Papers

6. Potential spread of product / direction

7. Life Threat : High / Moderate / Low / Unknown (Secondary Devices?)
To whom?

8. Rescue Evacuate Protect in Place

Evacuate to?

9. Are sufficient resources on scene? Yes No
What else is needed?

10. Number of potential victims: _____ Decon required? Yes No

11. Hospital notified? YES NO N/A

12. Weather (briefing):

13. Safety Plan established and briefed? YES NO

Form #3 Scene Safety Plan

1. Organization:

Operations : (recorder/ accountability) _____

Safety: _____

Research: (medical/ decon/ safety) _____

Entry Team #1 Leader/ partner: _____

Entry Team #2 Leader/ partner: _____

Back Up team Leader / partner _____

Perimeter Team Leader / Partner _____

Breathing air monitoring _____

Air quality monitoring _____

Decon Team leader: _____

Decon team members _____

Medical team leader _____

PIO _____

Liaison _____

5. PPE:

Perimeter: Suits A B C Respiratory SCBA Canister (type _____)
Decon Suits A B C Respiratory SCBA Canister (type _____)
Entry Suits A B C Respiratory SCBA
Back Up Suits A B C Respiratory SCBA

6. Decon Plan briefed: Location / Steps / Air bottle change / Emergency

7. Medical plan:

8 Work Plan:

Perimeter: establish hot/warm / cold zones; Gather intelligence on products;
Monitor air quality; Containment

Decon: Determine if Level 1,2 or 3 decon line needed; Establish decon line; Brief
entry/back-up teams on emergency decon; air bottle change; full decon;

Entry: Investigation; Rescue; Photography; Sampling; Control leaks;

FORM #3 DECONTAMINATION

The section is to be completed by the decon leader. Hazard information must be Coordinated with the Safety Officer and HAZMAT Branch Director who will pass hazard information on to the Operation Officer.

Name(s) of hazardous Materials:

- 1. _____
- 2. _____
- 3. _____
- 4. _____
- 5. _____

Immediate health effects of exposure (include signs of symptoms):

- 1. _____
- 2. _____
- 3. _____
- 4. _____
- 5. _____

Effects of materials on equipment (corrosion, decomposition or degradation):

- 1. _____
- 2. _____
- 3. _____
- 4. _____

5.

Reactivity of materials with themselves or other materials:

- 1. Are any of the materials reactive with water? YES () NO ()
- 2. Are any of the materials reactive with other substance? YES () NO ()
- 3. Are any of these substances present in our equipment? YES () NO ()
- 4. Are any of these materials reactive with DECON Solutions? YES () NO ()
- 5. List specific reactions here:

Environmental problems associated with materials:

- 1. Will runoff contaminate ground water? YES () NO ()
- 2. Will runoff contaminate surface areas like soil or pavement? YES () NO ()
- 3. Will runoff damage plant life? YES () NO ()
- 4. List specific hazards to the environment here:

SECTION TWO: DECON SELECTION

Proximity to the hazard area:

- 1. The Decontamination Reduction Zone (CRZ) is located in the Warm Zone between the "HOT and "COLD" Zones.
- 2. Check wind direction and locate upwind from the "HOT" Zone.

Access to resources:

- 1. Is a water supply nearby? YES () NO ()
- 2. Can heavy equipment be moved into decon area? YES () NO ()
- 3. Can the Entry Team enter the decon area safely? YES () NO ()

Location of the Decon area:

- 1. What type of surface is the decon area located on, soil or hard surface?
- 2. Will runoff be controlled naturally? Yes () NO ()
- 3. Can barriers be constructed to contain runoff? YES () NO ()

SECTION THREE: PRE ENTRY CONSIDERATIONS

Protective clothing considerations:

- 1. Have DGS, IDGS and Safety Officer selected the proper PPC&E? YES () NO ()
- 2. Are there enough sets of PPC&E remaining after Entry Teams? have contaminated their PPC&E? YES () NO ()
- 3. Can PPC&E be safely decontaminated? YES () NO ()
- 4. Are breathing apparatus and Mobile air units available? YES () NO ()

Team Safety:

- | | |
|---|----------------|
| 1. Have team members been briefed on the hazards of Entry and Decon? | YES () NO () |
| 2. Is the Entry Team trained in the decontamination procedures? | YES () NO () |
| 3. Has the Entry Team been briefed on the decontamination is located? | YES () NO () |
| 4. Have ET, BUT, and MBD been briefed on the health hazards? | YES () NO () |
| 5. Has a MBD establish a medical team for Rehab? | YES () NO () |

SECTION FOUR: RESOURCE CHECKLIST

Emergency vehicles required for decontamination:

1. EMS Unit with EMT's:
2. Mobile Air Unit:
3. HAZMAT Support Units:
4. Engine for water supply:
5. Engine Company(s) for fire suppression:
6. Decon trailer:

Form # 4 Medical

1. () Briefing obtained from I.C. on incident action plan
2. () Chemical data reviewed if known
3. () Medical equipment/ supplies on scene
4. () Pre entry medical monitoring:

Incident Location	Page #	
Incident Date		
Incident Time		
Incident Number		
Responder's name	Responder's name	Responder's name
Assigned Task	Assigned Task	Assigned Task
Starting Blood pressure / Time	Starting Blood pressure / Time	Starting Blood pressure / Time
Ending Blood Pressure / Time	Ending Blood Pressure / Time	Ending Blood Pressure / Time
Starting Pulse / SPO2	Starting Pulse / SPO2	Starting Pulse / SPO2
Ending Pulse / SPO@	Ending Pulse / SPO@	Ending Pulse / SPO@
Starting Temperature	Starting Temperature	Starting Temperature
Ending Temperature	Ending Temperature	Ending Temperature
Skin Condition start	Skin Condition start	Skin Condition start
Skin Condition end	Skin Condition end	Skin Condition end
Medications used	Medications used	Medications used
Mental status check start	Mental status check start	Mental status check start
Mental status check end	Mental status check end	Mental status check end

Exclusion criteria

- Altered mental state
- Significant sunburn, open sores, open wounds
- Reactive airway diseases or upper respiratory infection
- BP > 160 mm HG systolic or >100 mm HG diastolic
- Heart rate > 120 after 5 minutes rest , irregular pulse, pulse >70% of maximum 220 minus age)
- Nausea, vomiting, diarrhea
- Respirations > 24 per minute
- New prescriptions or over the counter meds within 24 hours
- Core body temp >100.5 or <98 F Oral temp > 99.5 or < 97 F

